USE OF PUNJAB EMERGENCY SERVICE (RESCUE 1122)

FOR THE PATIENTS: STUDY OF GRATIFICATION

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DEPARTMENT OF SOCIOLOGY

FACULTY OF SOCIAL SCIENCES

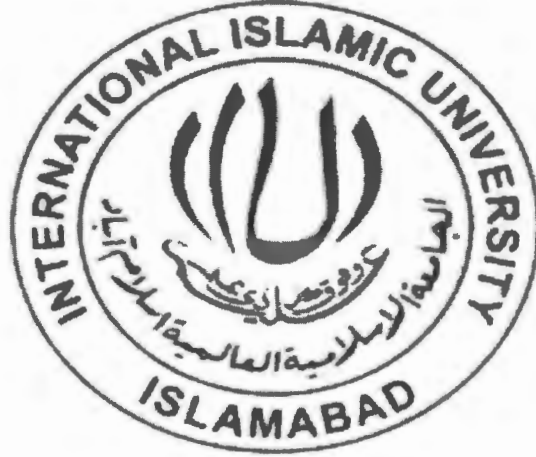## INTERNATIONAL ISLAMIC UNIVERSITY ISLAMABAD,

PAKISTAN

2016

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1. Emergency medical services

USE OF PUNJAB EMERGENCY SERVICE (RESCUE 1122)

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Zahid Abbas

Reg.no. 144-FSS/MSSOC/F13

Submitted in the partial fulfilment of the requirement for the degree of MS in Sociology, Department of Sociology, Faculty of Social Sciences, International Islamic University Islamabad

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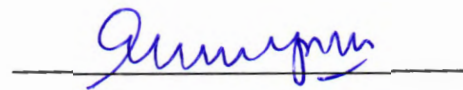## FACULTY OF SOCIAL SCIENCES
DEPARTMENT OF SOCIOLOGY

It is certified that thesis submitted by **Zahid Abbas Reg**. No **144 FSS/MSCSOC/F13** titled **"Use of Punjab Emergency Service (Rescue1122) for the Patients: Study of Gratification"** has been evaluated by the following viva voce committee and found that thesis has sufficient material and meets the prescribed standard for the award of degree of **MS** in the discipline of Sociology.

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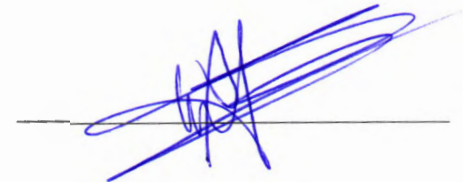
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بسم الله الرحمن الرحيم

DEDICATION

This humble effort is dedicated to my beloved mother (late)

Zahid Abbas

Abstract

Prehospital Emergency Service is an important part of Emergency Health System. It is playing a key role for improving the health system in the world. The key element of measuring the quality of Prehospital Emergency Services is patients' gratification. This study was conducted to investigate the patients' gratification from the Ambulance Service of Punjab Emergency Service Rescue (1122) in Tehsil Chiniot, Punjab. A sample of 340 patients conscious at the time of emergency was taken by applying systematic sampling technique. Interview schedule was used for the collection of data. The data was analyzed by applying percentage and correlation tests. It was found that 70% respondents were male. There were 67.7% belonged to rural area. Most of (56.8%) of the respondents belonged to age group 16-30 years. Majority (75%) of the respondents were the victims of the road traffic accidents. There were 88.5% of the respondents showed very high level of gratification from ambulance and behaviour of staff respectively. Majority (84.5%) of the respondents revealed very high level of gratification from professionalism of the rescue team. Two third (75%) of the respondents who showed very high level of gratification from the efficiency of service. There were 94.7% of the respondents who showed very high level of preference to reuse service in future in case of emergencies. The lowest level of gratification was with efficiency of service and highest was with the behaviour of the rescue team. It was found that there was strong negative relationship between response time and the gratification of the patients.

Key Words: Prehospital Emergency Service, Patients' gratification

ACKNOWLEDGEMENTS

Table of Contents

List of Tables

List of Acronyms

BUMS	Basheer University of Medical Sciences
EFRTV	European Federation of Road Traffic Victims
ILO	International Labour Organization
NBH	National Board of Health
NHPC	National Health Performance Committee
PAOH	Pan American Health Organization
UNDP	United Nations Development Programme
UNECE	United Nations Economic Commission for Europe
UNISDR	United Nations International Strategy for Disaster Reduction
USA	United States of America
W H O	World Health Organization

CHAPTER ONE

INTRODUCTION

Accidents, dangers and threats are universal problem. No one can avoid these problems from his/her life. People often face some critical situation which can never be denied. Keeping in view these realities, man is always concerned about his safety, security and protection. Sometimes emergency arises in sudden conditions. There may be danger to anybody's life at home and may require rescue efforts without loss of time. Some might be injured at road through accident. In these situations people need fast rescue services to be provided to handle such difficulties.

1.1: Emergency and Disaster

According to World Health Organisation (2011a) an emergency is a critical situation, which arises instantly and extra-ordinary measures are needed instead of normal ways to control the situation and its negative effects on the victim. Emergencies happen mostly than disasters, instant and proper actions are needed to control and handle these emergencies. Failure to control these emergencies may result in a major disaster.

World Health Organisation defines 'disaster' as a condition when normal way of living is disturbed and level of negative effects of the happened condition are beyond the capacity of individual or community to control them. Disaster can be categorised as man-made and natural. Natural disasters are fire in forests, floods, earthquake and hurricanes. Man-made disasters include, war, nuclear accidents, mining accidents, release of chemical accidents and major road and air crashes. In such type of emergency, many lives are affected at once. Disaster shakes many people at once. It is a life threatening condition. It destroys the community at large scale. Post impacts of disasters are also difficult for the societies to bear. Its affects both the psychological and physical condition of the persons (Norris *et al.*, 2002).

1

1.2: Types of Emergencies

1.2.1: Natural Disasters

In 2004 the United Nations Development Programme (UNDP) published a report which stated that from 1980 to 2000 75% of the total population of the world is living in an area which is affected by a natural disaster such as flood, earthquake, drought or cyclone at once. From the beginning of 19th century, the number of natural disasters are increasing. A massive increase has been happened in 1960. According to United Nations International Strategy for Disaster Reduction (2009) that there were 588 natural disasters occurred in the world in 1960. From 1970 to 2005, there were 5500 disasters happened in the world. In the future, natural disasters shall happen increasingly both in numbers and severity (UNISDR, 2008). The number of affected people will also increase because of increasing world population and urbanisation (Schulte & Chun, 2009). There were 91,963 people died in 2005 in natural disasters worldwide and 34% in Asia (UNISDR, 2009).

1.2.2: Man-made Disasters

The disasters that are caused by as a result of any human error is called man-made disasters. Following are the man-made disasters.

1.2.2.1 Industrial and Fire Accidents

According to Centre for Disease Control and Prevention (2009), most of industrial accidents are caused by igneous and fiery materials or building collapsed. In nuclear or chemical plants, accidents are caused by the discharge of poisonous materials. When the discharge of these material occur at large scale, too many workers and surrounding population will be affected by the accident. It also affects the environment of the area where this accident happened. Any of human mistakes and side-effects of natural disasters may cause the industrial accidents. For example blast at the nuclear plant of Fukushima in Japan in 2011 was caused due to earthquake and tsunami in the area.

Most of the explosions in the coal mines are caused by the ignition of fire or poor use of systems. Some might have caused due to movement of labour from one place to another, falling of walls or rocks of the site area.

1.2.2.2 Road Accidents

According to a report of World Health Organization (2004) annually more than 1 million people are died because of road accidents in the world. While 50 million get injured in road accidents annually. According to an estimation more than 3000 persons die daily in road accidents daily in the world. Road traffic is considered as most dangerous mean of transportation. From 2006 to 2011, the number of deaths decreased in Europe. Ninety seven percent deaths are caused by the road accidents (Eurostat, 2008a, 2009).

1.2.2.3 Transportation of Dangerous Materials

Fire, blast or release of poisonous substances can be caused by the transportation of hazardous materials from one place to another. Transportation of dangerous goods by the pipelines can also become the cause of major accidents. According to a report 4.1% of total transported goods through road consists of dangerous material. Igneous liquid and gasses are two major forms of goods that are transported by road (Eurostat, 2008a, 2009).

1.3: Types of Emergency Forces

1.3.1: Fire Service

The task including in the working domain of fire fighters are protecting and handling fire. They work in major road traffic incidents, incidents of terrorism, natural and industrial disasters, where specific technical assistance is needed to control the situation. Fire-Fighters mostly have training of medical help in case of emergency (Deutscher, 2009).

1.3.2: Police Service

According to International Labour Organization (2009) that maintaining internal security of the country and protection of public against criminal activities are the main tasks of police service. It ensures the enforcement of law and civil order in the country.

1.3.3: Emergency Medical Service

The emergency health system consists of many types. Onè of the important among these is Emergency Medical Service. It is a vital block in the building of emergency health system. Without its inclusion, the system is paralysed. The main role of emergency health system is to deal with various kinds of emergencies. It works in disasters, industrial incidents, road traffic accidents, spread of infectious diseases, act of terrorism and other health related issues that required urgent response for their solutions. It responds quickly to serve the community in case of emergencies (Pan American Health Organization, 2003).

1.4: Prehospital Emergency Service

According to National Board of Health (2004) Prehospital Emergency Service (PES) consists of trained emergency medical technicians and the medical treatment which they provide to the patients at the place of emergency, during their transfer from place of emergency to the emergency department of the hospital in case of emergency diseases or accidents. The aim of this is to provide patients with best medical services instantly after the happening of the emergency. Its goal is to make the patients' condition as stable as possible. So that the patients can be shifted to the next phase of health system in a better condition (Jonasson & Wallman 1999; Bang, 2002). It involves the treatment of the patients, provision of medical care, shifting of seriously ill or victims of road accidents from place of emergency to hospital. The initial component of this system is an emergency call to the emergency dispatch centres of the ambulance (NBH, 2002).

4

Prehospital emergency service is playing a key role in making communities' safe, secure and healthy throughout the world. It emphasises on the preventive measures and community awareness about the health related problems. The provision of the Prehospital Emergency Service is the basic human right of the citizens of any country. It makes the public health system effective and efficient. Its goal is the provision of medical service in all kinds of emergencies. To maintain an efficient and effective response to deal disasters and emergencies at domestic and international level, the principle of prevention and preparedness is an important factor (Tang & Kellen, 2007).

1.4.1: Historical Review of Prehospital Emergency Care

During the period of revolution in France, first organised system for the transportation of severely injured and seriously ill patients was introduced. First person who developed this system was Baron Jean Larrey (1766-1842). He formulated a plan for the quick shifting of injured and ill soldiers from combating zones to the medical centres during battles by using mobile units known as ambulances volantes (Wiklund 1987; Skandalakis *et al.*, 2006). He formulated a system to treat the injured soldiers by trained medical personnel. This system played a key role in decreasing deaths among injured soldiers. The injured soldiers were treated according to their medical emergency and nature of injury (Skandalakis *et al.*, 2006).

In 1910, first auto ambulance service was started in Stockholm (Wiklund, 1987). The first Swedish motor-driven ambulance was introduced in Stockholm. Till 1950, civilian population of the country was deprived from this service. Only in military setting, the progress was made in emergency medical services (Ponzer *et al.*, 2004). Fire brigade department was responsible for the provision of ambulance service to the ill and injured patients (Wiklund, 1987). The emergency personnel were trained in clinical skills, driving and maintenance of the vehicles (Jonasson & Wallman, 1999). In 1950, the improvements in first aid were made by the introduction of

5

anaesthesiology. By the provision of cardio-pulmonary treatment and intravenous, made the treatment out of the hospital more effective and useful for the health of the patients (Sefring & Weidringer, 1991). A new slogan was introduced "provision of care during the shifting, not shifting for the care" (Wiklund, 1987). In 1960, the treatment of the patients during the transportation from scene to hospital was started (Suserud, 1998).

1.5: An Overview of Prehospital Medical Services in the World

1.5.1: South Africa

Fire departments are responsible for the provision of pre hospital Emergency Medical Services in South Africa. In 1977, all the provincial governments were responsible for giving EMS to people of the country. In this period, there was no EMS in many cities specially the rural areas of the country. Training centres for medical staff were properly established in 1994. Federal government provides funds to the provinces to run the EMS in the country. Due to lack of funds and infrastructure rural areas of the country are not properly being served by the service.

Government provides free service to poor (MacFarlane *et al.*, 2005). To avail the EMS in case of emergency 10177 is calling number or 112 for the mobile phone users. Till 2005, there was no proper training programme for the call taker and dispatchers. There were specific method used for dispatching the ambulance by using software at call centres.

Emergency Medical Technicians with four different level of training work in South Africa. First level of EMTs have two months of training called Basic Ambulance Assistants (BAA), who give Basic Life Support (BLS) services to the patients. They are trained for performing Cardiac Pulmonary Resuscitation, basic trauma treatment on the scene or during the travelling in the ambulance. Second level of EMTs are trained for three months are called Ambulance Emergency

6

Assistants (AEA). They are trained for providing intravenous glucose and give nebulization in case of asthma.

Rescue workers at third level are called Critical Care Assistants (CCA), their training period is nine month and also called as paramedics. They treat patients in case of cardiovascular and trauma with advance clinical skills. By their certification, the CCAs can administer a selected range of pre-hospital medications and perform advanced airway management (MacFarlane *et al.*, *2005*). EMTs having 4th level of training complete a three year training session at post graduate technical college and they are well trained to handle the emergency situation of any level. (MacFarlane *et al.*, 2005).

1.5.2: Hong Kong

In Hong Kong ambulances are dispatched from ambulance depots. Hong Kong pre hospital emergency system consists of 30 ambulance depots. Since Hong Kong being the part of British colonial system, ambulance service can be approached by dialling 999, it is a permanent number for the entire masses of the Hong Kong in case of any emergency. Ambulances are well equipped and have all the necessary articles to deal the emergency. Rescue team consists of three members, one of them is EMT with second level of clinical training. Motor bikes are also used in Hong Kong for the assistance of ambulance in case of emergency for the quick response. For any mass incidents or disaster, there are four mobile causality treatment centres in the country (Graham *et al.*, 2009).

1.5.3: China

Rapid growth in economic condition of the country gave rise to urbanization. Urbanization at large scale causes high demand for advanced emergency medical services. In 1980, Ministry of Health made many policies for the development of the pre hospital emergency service in the country.

With the help and coordination of local healthcare system, the central government made an emergency medical service system for the provision of services in case of emergency to the public. To make the system efficient, it has been divided into further three wings, pre-hospital emergency service, emergency departments and the intensive care units in the hospitals. Prehospital care and ambulance service are the major components of the pre-hospital emergency services. Provincial and city bureaus of Public Health are responsible for the provision of funds to run these services. Due to local funding system for the provision of pre-hospital emergency services, most of the rural areas of the country have not capacity to provide services according to the Chinese regulatory standards. The local system of funding causes lack of funds for the construction of centres and provision of equipment (Hung *et al.*, 2009).

Most of the patients pay charges for receiving emergency treatment and ambulance service. One fourth of the urban citizens of the country receive these services free of cost due to their medical insurance policy (Hung et al., 2009). There is 120 emergency dialling number to approach Pre-hospital emergency services in China, but in most of the rural areas and smaller cities, this system is not available. Calls at 120 are attended by a regional centre, who forward request to a nearby ambulance dispatch centre in the area (Hung *et al.*, 2009).

There are two types of the ambulances in metropolitan cities. First type of ambulance is used for the patients in critical condition, which has advance medical equipment and monitoring system to give proper treatment in the ambulance. Second type is a general ambulance, only used to transfer the patient from scene to hospital. Two ways radio system is used to keep communication between ambulance and dispatch centre (Hung *et al.*, 2009).

1.5.4: Germany

In 19th century emergency medical services were started in Germany. Initially Johann Friedrich von Esmarch's programme was started to educate people in first aid. In Berlin, a pre-hospital EMS was established by Ernst von Bergmann in late 19th century. In first four decades of the 20th century the EMS was used only for the transferring patients from scene to hospital. The country was divided in to two parts after World War II in to East and West Germany. In East Germany a trauma patient was brought to hospital by a "Rapid Help" in 1960. After 1966, to handle both medical and trauma patients the "Urgent Medical Help" was established in the country. It was renamed as the "Rapid Medical Help" system in 1976. The directors were appointed in the area having population more than eighty thousand to run the system efficiently in the East Germany (Roessler & Zuzan, 2006).

In 1957 Clinomobil was established by Karl Heinrich Bauer in West Germany. It started work as mobile operating room, but this was very expensive. A similar system was created by Vicktor Hoffmann which worked only for the patients with life threatening injuries and needed instantly medical help. Rules and procedures were made for the working of EMS in 1974. Standards for training were created by the government in 1989. East and West Germany were reunified in 1990, during this period, most of the EMS practices of East Germany were replaced by those were in West Germany (Roessler & Zuzan, 2006).

Local towns and municipalities are responsible for providing EMS. Each federal state has its own laws to govern EMS. Response time of the ambulance is maximum 15 minutes. Emergency dialling number is '112'. There are 320 ambulance dispatch centre in Germany (Roessler & Zuzan, 2006). In case of an emergency, which needs a physician on the scene, there are two ways for the transportation of the physician. These are Rendezvous and stationary. In rendezvous the physician

uses a vehicle specified for the quick response having important supplies to approach the ambulance on the scene. In this system physician does not move with the patients from scene to hospital. In the stationary system, the physician moves in the ambulance from dispatch centre to scene and then from scene to hospital (Roessler & Zuzan, 2006).

According to level of training EMTs are divided in to three categories. These categories are "Rettungshelfer", "Rettungssanitäter" and "Rettungsassistent". Rettungshelfer receive 10 days training of the emergency medicine and they do not work during emergency transportation. Rettungssanitäter are trained for 10 days both in hospital and ambulance. In 1989 Rettungassistent, was introduced to serve in the emergency situation. They have one month training both in hospital and ambulance. Rescue team consists of one Rettungssanitäter and one Rettungsassistent. Provision of intravenous medicine is done by emergency physician instead of EMT. In case of non-availability of physician the EMTs are responsible for the provision of intravenous medicine (Roessler & Zuzan, 2006).

1.5.5: England

In United Kingdom, Emergency Medical Services can be approached throughout the country by dialling '112' or '999'. There are 38 National Health Service ambulance stations in the country. Emergency call is received at one of these centres and after confirmation of the patient location, an ambulance is dispatched to approach the patient (Black & Davies 1999). For approaching the emergency place, two kinds of vehicles are used in the country. One of these is ambulance. There are two rescue workers in each ambulance to handle the emergency situation. The other is motor bikes which are also known as rapid response vehicles. Only one paramedic or ambulance technician travels with this vehicle.

These vehicles are mostly used in a situation, where roads are congested or at long distance in case of rural areas. To avoid the late response to an emergency these are very useful. Two types of EMTs work in the UK. One is ambulance technician and other is paramedic. After completing the one year diploma and passing the examination the ambulance technician is allowed to work independently. Paramedic receive training for two months about many medical and trauma emergencies. They are also trained in advance cardiac care. They also participate in practical work for 6 months to receive certificate (Black &Davies, 1999).

1.5.6: Canada

In Canada Emergency Medical Services function under the umbrella of Canada Health Act. It is motivated by Universal Health Insurance Plan also known as Medicare. There are many models of EMS delivery operates in Canada. These models are supported by provincially, regionally and municipally funding. Some EMS models work independently. Many of them run either by fire department or hospitals. These services are available in the whole country and can be accessed by dialling emergency number '911'.Mostly EMS are publically supported.

A few of them are controlled by public-private partnership. The old models of classification of rescue workers based on level I, II, and III are changed by the Canadian Medical Association. Now the new level of rescue workers according to their training are launched such as Primary Care Paramedic (PCP), Advance Care Paramedic (ACP) and Critical Care Paramedic (CCP). The basic invasive processes and blood glucose monitoring are included in the training of PCPs. They also have knowledge about a small number of medication. Deep study about injuries and other diseases are included in the training of ACPs. The CCP are well trained level of rescue workers. They have training about recording electrocardiogram (ECGs). They are also capable of

interpreting laboratory test results and x-ray results of various fractures such as chest, back and spinal etc. (Symons & Shuster, 2004).

1.5.7: United States of America

A union military Surgeon General Jonatha Letterman successfully launched first system of treating and shifting of injured soldiers during the war. Very soon after the successful implementation of military launched system, the civilian sector also stepped forward and launched its own emergency service. In 1865, the first civil ambulance by a private hospital of Cincinatti. During the World War 1 (WWI) and (WWII) military EMS made very positive progress. The first medical technician training programme was started by the SAM bank. The first aid course for medical technician was developed by JD Farrigion. There were two systems of EMS in the U.S.A. during the 1960. One of them was consisted on paramedics. The other was especially introduced for heart attack patients, including a physician and nurses. By National Academy of Science a paper discussing the deficiencies of EMS was published. In this paper 24 points are presented to improve the EMS. In 1973, the U.S government paid special attention for the improvement of EMS. Heavy budget of millions of dollars was reserved for the training, equipment and research in the field of EMS. Both government and private sectors are working in the field of EMS (Pozner *et al.*, 2004).

Most of the times, a municipally service with a private partner runs a small pre-hospital service. In U.S.A police and fire-fighters work as first responder to an emergency. The EMS in the U.S.A can be accessed by dialling '911'. In rural areas of the country, the service can be approached by various other numbers. There are five level or steps for the education and training of emergency medical technician. These are first responder, the basic EMT, intermediate EMT, the paramedics and the Prehospital care provider. First responder provides basic first aid and wound management treatment. They are also trained to handle cardiopulmonary resuscitation,

fracture and other injuries caused by any accident. Their training duration is 2-3 months. Identification of level of emergency, provision of oxygen and transfer from scene to hospital are done by basic emergency medical technician. The provision of intravenous medicine and intubation are done by the intermediate medical technician (Pozner *et al.,* 2004).

1.5.8: Iran

In Iran, EMS delivery is free of charge. The systems of Prehospital medical emergency or emergency 115 are divided into two groups: Franco-German and Americo-England. In the Franco-German system, equipment and facilities are taken to the scene of the accident, and a physician attends to the patient in the ambulance. In the Americo-England system (Iran system during the early days), trained technicians provide care for the patient at the scene of the accident and then transfer the patient to a well-equipped medical centre.

At the present time, the medical emergency used in Iran is a blend of the two above-mentioned systems. In some cases, a physician may be present at the scene of the accident and provide care for the patient in cooperation with the medical emergency technicians, but, in other cases, the physician may remain at the communication centre while technicians at the scene of the accident provide care for the patient based on their consultations with the physician. Established standards call for a response time of less than eight minutes in cities and less than 15 minutes in suburban areas for 80% of the cases, and this standard has been met everywhere in the country except for Tehran city (Nasiri, 2008).

During the last few years, many activities have been implemented that have resulted in improving medical emergency transfers in Iran. Some of them are using Sprinter 314 ambulances, encouraging medical emergency technicians to obtain a degree from the junior college of anaesthesia or a bachelor's degree in nursing. We can also add the use of helicopters to transport

seriously injured patients, providing continuous medical education programs for ambulance technicians and physicians, creating additional emergency bases and stations, and utilizing modern equipment in the ambulances to the above list. For transferring injured persons and patients to emergency medical centres in disasters 5% of all ambulances, including ambulances that support medical universities' emergency 115 operations have been equipped with Mobile Intensive Care Units (MICUs) (Basheer University of Medical Sciences, 2009).

The ambulances in Iran are either A-type ambulances, type B (mostly) or C. All medical universities have the advanced B type ambulances which are the ambulances equipped with Life Support. In all, there are 42 emergency 115 centres in the country, and each one is equipped either with B-type ambulances or C-type ambulances (Equipped with Advanced life Support). The so called A-type ambulances are only used to transfer patients who are not having a medical emergency. Private ambulance services centres can transfer ordinary patients based on medical universities' health deputy's agreements and rules.

These centres are not allowed to provide drugs, medical equipment, or nurses. Also, there are 10 helicopters available for transporting emergency patients. Tehran, which has the most active helicopter services, has a helicopter which operates and provides services for patients in the Tehran suburban roads and highways where the helicopter can land and take off during daylight hours. The equipment of these helicopters is the same as the equipment in the ambulances.

The majority of Iran's helicopters are military helicopters utilized for both organizational measures and transferring medical emergency patients. These are not medical helicopters, but they have medical emergency equipment. Therefore, although they are efficient and effective, they cannot be classified as ambulances. However, some efforts are being made to provide medicopters to fulfil needs (Ghafari, 2006).

1.5.9: India

Dial 108 is a free ambulance service provided in public-private partnership with respective state governments for medical, police, and fire emergencies. Dial 1298 is similar to 108 in its operational aspects; the only difference is that 1298 is a paid service while 108 is free. A toll-free 108/1298 call is received by a communications officer who collects and records all facts regarding the emergency. The information is then transferred to the dispatch officer who identifies the closest Global Positioning System-enabled ambulance to the scene of emergency and gives instructions for dispatch of the ambulance (Ramanujam & Aschkenasy, 2007).

Medical emergencies such as fracture, fever, and syncope are responded to by Basic Life Support (BLS) ambulances; emergencies such as cardiac arrest, seizures, snake bite, unconsciousness, burns, and pregnancy-related emergencies are usually managed by an Advanced Life Support (ALS) ambulance (Ambulance Service Project 108). In some cases, the caller is placed in a conference call with an emergency medical technician (EMT), or a physician in the Emergency Response Centre (ERC) who supports EMTs when required.   Prehospital   care records are maintained, and include details of drugs and disposables consumed. The time or receipt of call, time of arrival at the site, and time of hospital arrival is captured either manually or automatically in a log register or dispatch software. The medical equipment on board for a BLS ambulance is an oxygen cylinder, blood pressure apparatus, and a stethoscope. For ALS ambulances, in addition to the above equipment, there is a defibrillator-monitor, electrocardiogram, syringe pump, pulse oximeter, resuscitation kit, suction machine, and nebulizer (Malhotra *et al.*, 2003).

Centralized Accident and Trauma Services (CATS) is funded by the Delhi government and was conceived in 1984 with plans of expansion throughout the country. Pilot operations were

started in 1991 but the services have not yet become fully operational. The government is planning to run CATS on a public private partnership model (like 108). Centralized Accident and Trauma Services receives calls from the toll free numbers "102" and "1099." Additionally, first responders (on motorcycles) are expected to be part of the CATS ambulance model (Centralized Accident and Trauma Services, 2014).

1.6: Major Ambulance Services in Pakistan

1.6.1: Edhi Ambulance Service

Edhi foundation was established in 1951 by Abdu Sattar Edhi. It is a one of best social welfare providers across the world. It is playing its role in diversified fields. It is saving the lives of thousands of new-born babies by placing the Cradles Centres outside of Edhi Centres, fostering the abandoned babies and children, free nurturing to disabled and handicapped people, free caring and feeding of women and elderly people, free supporting of ailing people by providing free medication and medicine through its mobile dispensaries, hospitals and diabetic centres. First and the most important among its services, is ambulance service. This service can be accessed by dialling 115. Edhi Land Ambulance Service was initially started by including a second hand Hillman Pickup Truck and that was refurbished into the first ambulance, thereby coining "Poor Patient Ambulance". Now of the sixty years, the Edhi ambulance has reached to the stage of largest fleet of ambulances in the world, thereby providing with a tantalizing number of ambulances such as 1800 vehicles, all over our country – Pakistan. Edhi Air Ambulance Service have 2 aircrafts and 1 helicopter to provide relief and assistance during the natural disasters, with a view to provide airlift services to the stranded or those who are injured to immediately shift to the nearby hospital, during any expected natural debacle (www.Edhi.org.pk)

16

1.6.2: Chippa Ambulance Service

Chippa Welfare Association was started by Dr Muhammad Ramzan Chippa in 2007. The service can be approached by dialling 1020. Presently his welfare organization has a big fleet of Chippa ambulances, spread over Chippa ambulance emergency centres in prominent places, on various roundabouts and near Government Hospitals across Karachi city for providing immediate help and assistance to the needy, sick, suffering people and emergency patients while the responding time is within 05 minutes. Chhipa Ambulances are always on the alert and ready to meet any emergency situation. In frequent road accidents, sudden disaster, heat stroke, bomb blast, firing, stamped, heavy rain, train collision, building and bridge collapse, unexpected event and emergency, his Chhipa Ambulances equipped with first-aid box, oxygen cylinder and paramedics hurriedly rush and always reach the spots first to rescue the suffering people and for providing them immediate help. Normally Chhipa Ambulances day and night 24 hours remain engaged on roads every day in lifting and shifting the seriously wounded, accidentally injured, needy, sick, burnt out and cut off victims, emergency patients, partially decomposed bodies and dead bodies to hospitals & medical centres in attempts to save the valuable lives. The Rescue Team of his Chhipa Ambulance daily saves a number of precious human lives (www.chippa.org.pk)

1.7: History of Punjab Emergency Service Rescue 1122

In 2004 the government of Punjab launched the Rescue 1122 pilot project from the provincial capital of the Punjab, Lahore, with the aim of providing professional pre-hospital emergency modern and organized services for the urban citizens of the province. Punjab Emergency Service Rescue 1122 is the first successfully implemented model of skilled Emergency Service in Pakistan. This department works through an emergency toll free number, 1122, which can be easily accessed through landline and mobile phones. After the success of the Rescue 1122 pilot project, the service

has been expanded to all 36 districts of Punjab and is now being adopted by other provinces of Pakistan as well.

1.8: Punjab Emergency Service ACT, 2006

Punjab Emergency Service Act, 2006 was unanimously passed by the Punjab Assembly to establish the Punjab Emergency Service for professional management of emergencies by maintaining a state of preparedness to deal with emergencies, providing timely response, Rescue and emergency medical treatment to the persons affected by emergencies. The Punjab Emergency Council and District Emergency Boards were also constituted for prevention, effective management of emergencies and mitigation of hazards enduring public safety.

1.9: Punjab Emergency Service Rescue 1122 in District Chiniot

District Chiniot is situated immediately North West of the Chenab River, The city is well connected by road to the major cities Lahore (160 Km), Faisalabad (30 Km), Sargodha (58 Km) and Jhang (86 km). It consists of three tehsils Chiniot, Bhowana and Lalian. The population of district Chiniot is 1156,000 with an area of 2,643 km². Chiniot is the largest tehsil of the district. Its population is 522,000. The population of urban and rural areas of tehsil Chiniot is 259,000 and 263,000 respectively. Punjab Emergency Service Rescue 1122 was started in district Chiniot on 17 October, 2012. There is only one centre in the district situated in Chiniot city. It is working under District Emergency Officer. There are 155 rescue workers are providing emergency services in the district along with four ambulances, two fire vehicles, one rescue vehicle and one water bowser.

1.10: Services of Punjab Emergency Service Rescue 1122

Punjab Emergency Service Rescue 1122 provides four major types of services.

i. **Ambulance Service**

ii. **Rescue Service**

iii. **Fire Service**

iv. **Community Safety**

1.10.1: Ambulance Service

This is the most important function of Rescue 1122 as over 97% emergency calls are related to Emergency Ambulance Service. The Service has so far rescued millions of victims of road traffic crashes, medical emergencies and disasters while maintaining an average response time of 7 minutes and standards in all Districts & Tehsils of Punjab. The Punjab Emergency Service (Rescue 1122) was initially started as an Emergency Ambulance Service on 14th October 2004 as a pilot project from Lahore. After the success of this pilot project, Emergency Ambulance Service was established in 12 major cities of Punjab and subsequently in all Districts of the Punjab province with a population of over 80 million. In spite of the fact that Rescue & Fire Services were also established subsequently, over 97% emergency calls are still related to Emergency Ambulance Service. The main beneficiaries of this Service have been the victims of road traffic accidents whom earlier people were afraid to help due to medico-legal reasons.

It was for the first time that emergency medical technicians were trained for this emergency ambulance service and emergency ambulances of international standards were manufactured in Pakistan. This training and indigenous fabrication of ambulances made the project cost effective and sustainable resulting in success of Rescue 1122. As most of the beneficiaries of this Service

include young bread-winners of the society hence it has had a favourable socio-economic impact (Five Years Performance Report, 2009).

1.10.2: Rescue Service

The main functions of Rescue teams include urban search & rescue in collapsed structures, rescue from depth & confined spaces or height and water rescue. These rescue teams have also been providing Animal Rescue as no other specialized animal rescue teams are available in the Districts. In short the Rescue team in order to facilitate the public responds to all rescue calls apart from medical emergencies or fire incidents. The Rescue teams have been provided with Rescue vehicles equipped with essential rescue equipment in all Districts for quick response (Five Years Performance Report, 2009).

1.10.3: Fire Service

After failure of repeated attempts to improve and modernize the existing municipal fire brigades, Rescue 1122 also accepted challenge of establishing first modern Fire Service in Pakistan. The establishment of this modern fire service would not have been possible without the support from Strathclyde Fire & Rescue Serice of Scotland, United Kingdom which trained the first batch of officers. Subsequently, as a result of the twinning agreement between Lahore and Glasgow Cities, a Memorandum of Understanding (MoU) for collaboration was also signed between Strathclyde Fire & Rescue Service and Punjab Emergency Service. The first trained modern Fire Service was established on pilot basis from Lahore in June, 2007, which was subsequently replicated in all Districts of Punjab. In short span of time, the Rescue 1122 Fire Services working in all Districts of Punjab have responded to thousands of fire calls and saved lives & losses worth billions rupees

by providing timely response and professional fire-fighting on modern lines (Five Years Performance Report, 2009).

1.10.4: Community Safety

Rescue 1122 is not just providing the emergency victims with the basic right to timely emergency care but believes in "saving lives and changing minds". This is vividly reflected in the mission statement of the Service which is "development of Safer Communities through establishment of an effective system for emergency preparedness, response and prevention. In order to establish safer communities, Rescue 1122 is implementing the Community Safety Program which includes capacity building of community emergency response teams, school safety program, training of citizens in life saving skills and collaboration with Chamber of Commerce & Industries for fire and work safety (Five Years Performance Report, 2009).

1.11: Emergency Service Academy

In order to ensure sustainable human resource development Emergency Service Academy has been established. Although academy was started with limited resources in April 2006. The sustainability of this training process was great challenge and to meet this challenge all faculty members of the academy went through a process of international certification by USAID programme for enhancement of emergency response. This training was instrumented for achieving instructor's certification for trainer of the academy to conduct Medical first responder and Collapsed Structure Search and Rescue (CSSR) courses.

At present academy is mainly conducting a four months rescue course which includes emergency medical, rescue fire and physical fitness training followed by one month training in

emergency departments of the teaching hospitals. The academy also conducts specialized courses like Medical first responder, Collapsed structure search and rescue, training for instructors, several short courses and refresher courses for the career development of the rescuers and training for personnel from other provinces including Sindh and KPK. The service has so far trained 6112 rescuers.

1.12: Training Procedure of Rescuers

The reason behind the success of the service has been the quality of training imparted to rescuers on modern lines for first in Pakistan. The training of newly recruited staff was great challenge as there was no emergency staff in the emergency departments of teaching hospitals or in existing emergency services like fire, and rescue services. New rescue staff recruited and trained to provide swift response rescue and emergency medical treatment to the victims.

The theoretical training and simulations are designed by Dr. Rizwan Naseer, Project Director, Punjab Emergency service which has been internationally monitored by foreign trainers from Asian Disaster Preparedness Centre and Instructors from Australia for quality assurance. Rescuers are also imparted rescue and physical training to ensure their physical fitness and discipline. The specialised CPR training is practised repeatedly on manikins and rescuers and finally sent to emergency departments of teaching hospitals for hands on experience in managing emergency practices and understandings the protocol for smooth shifting of the patients (Five Years Performance Report, 2009).

1.12.1: Medical Training

Emergency paramedics are imparted knowledge and skills required for provision of Prehospital Emergency Care to the victims of medical emergencies, road traffic accidents and disasters. The training contents include role and responsibilities of Medical first responder, anatomical reference

points, vital signs, patient assessment and physical examination, infectious diseases and precautions, basic life support, cardio pulmonary resuscitation, haemorrhage and shock, oxygen therapy, management of soft injuries to skull spine and chest, burns and environmental emergencies and poisoning. The application of the ambulance equipment including automated external defibrillator have been installed for rescuers to teach them practical handling of all equipment. Fire rescuers, disaster responders and drivers are also imparted with basic medical training for effective management of medical emergencies (Five Years Performance Report, 2009).

1.12.2: Fire Training

The training courses have been designed to laydown strong foundation for professional excellence of fire rescuers. During the training enhancement of sound professional knowledge, practical skills and professional ethics are ensured. Emphasis is made on understanding of fire chemistry, fire hazardous and prevention measures, causes and spread of fire, different types of fire, hazardous materials, fire-fighting techniques, and above all practical skills involving the proper use of related equipment, tools and personal protective equipment. The training methodology includes lectures, practical training and video clips of fire incidents, scenario base fire drills, group discussions, case studies and fire rescue movies (Five Years Performance Report, 2009).

1.12.3: Rescue Training

The specialized rescue training imparted to the rescuers include training of urban search and rescue, road traffic accidents management, high angle rescue and confined space entry and rescue. The training programme includes study of building construction, collapsed patterns and moving heavy objects, emergency building shoring, stabilization and breaching to gain to access to trapped victims. Rope rescue training provides rescuers with rope "self- rescue" skills and confidence to

escape from blocked exits, scenario and safe descent to the ground (Five Years Performance Report, 2009).

1.12.4: Water Rescue Training

Rescuers are imparted water rescue training to manage emergencies like flood, drowning in deep well and rivers. Training contents include handling of specialized water rescue equipment, swimming, approaches and strategies of water rescue, methodology of gaining access, stabilization, preparation and transportation of drowned victims and reporting of the incident (Five Years Performance Report, 2009).

1.13: Statement of the Problem

Emergency medical services (EMS) both pre-hospital and hospital have long been neglected in Pakistan. Traditionally, patients have been brought to the emergency departments by relatives or bystanders, or at most in rudimentary patient transport vehicles. Even in major incidents, no on-site help or support has been available, and patients are often haphazardly collected and brought to the nearest Emergency Department. Considering the importance of patients' gratification with the services provided by Prehospital centre and also considering the fact that at the present time an exact and accurate attention to the gratification aspects of emergency patients and their special caring needs is felt at this stage between the domestic and foreign studies, the present study was conducted with the goal of evaluating the gratification level of patients with the ambulance service provided by the Punjab Emergency Service (Rescue 1122) in tehsil Chiniot.

1.14: Objectives of the Study

i.   To examine the patients' perception about Rescue 1122 services in study area

ii. To study the factors affecting patient's gratification from Rescue 1122 services

iii. To suggest some policy measures for the improvement of rescue 1122 services

1.15: Research Questions of the study

i.   What are the socio economic characteristics of most of the respondents who received help from Punjab Emergency Service Rescue 1122?

ii.   What type of emergency is mostly faced by the respondents?

iii.   What type of behaviour the respondents experienced from the rescue workers?

1.16: Hypotheses of the Study

i.   Lesser the time taken to respond an emergency higher will be the level of gratification of the beneficiaries

ii.   Better the outlook of ambulance higher will be the level of gratification of the beneficiaries

iii.   More the positive behaviour of the rescue team in dealing with patients more will be level of gratification of the beneficiaries

iv.   Higher level of efficiency of the service extended by the rescue 1122 higher will be the level of gratification of the beneficiaries

v.   Higher level of professionalism of the rescue team, higher will be the level of gratification of the beneficiaries

1.17: Significance of the Study

Pakistan is a developing country in the world with a struggling health-care infrastructure. Like many other third world countries, emergency medical services both pre-hospital and hospital have long been neglected in Pakistan. Everybody is in hurry now a days and hurry makes worry by occurring accidents. So many incidents occur daily which some time cause even death. Especially road accidents have become so often that now every state tries to overcome these issue. Human being should take positive steps to decrease and cover these accidents. For this purpose, in Punjab, Punjab Emergency Service Rescue 1122 is established that is rendering its services in a better way.

25

Many lives are saved daily due to their quick response, efficient performance and professional skill. So the researcher conducted the present research to investigate the patients' gratification regarding Rescue 1122 ambulance service and also to check the performance of Rescue 1122 in tehsil Chiniot.

1.18: Conceptualization and Operationalization

John (2011) described of a general idea corresponds to a description of a concept. According to John, a general idea is created by abstracting, drawing away, or removing the uncommon characteristic or characteristics from several particular ideas. The remaining common characteristic is that which is similar to all of the different individuals. For example, the abstract general idea or concept that is designated by the word "red" is that characteristic which is common to apples, cherries, and blood. Conceptualization is much more difficult in social cause as compared-to other discipline, because some concepts are sometimes used with different meanings by different researchers. Some of the concepts used in the present study are operationalized as under:

1.18.1: Age

Age is one of the important variables in any social research. It refers to the number of completed years lived by the respondents at the time of interview. It was clearly based upon the respondent's reply (Naveed, 2011). Age of the respondents was categorized as under;

      i.   16-30 Years
      ii.   31-45 Years
      iii.   46-60 Years

1.18.2: Education:

According to Francis (1970) education is a consciously controlled process whereby changes in behaviour are produced in the person and through the person within the group. Education of respondents creates a deep impression on their level of gratification. In the present study

education had been recognized as the total number of years of schooling completed by the respondents. Education of the respondents was categorized as under;

    i.   Illiterate

    ii.   Primary

    iii.   Middle

    iv.   Matric

    v.   Intermediate

    vi.   Graduation

    vii.   Master

1.18.3: Income:

Income is the sum of all the wages, salaries, profits, interests, payments, rents and other forms of earnings received in a given period of time (Case & Fair, 2007). Monthly income of the respondent's family was categorized as under;

    i.   Up to 10,000

    ii.   10,001-20,000

    iii.   20,001-30,000

1.18.4: Time

Hedges, 2003 expressed that time has been divided into three categories, i.e. initial response time, time consumed on scene and time taken in shifting the patient from scene to hospital. In this study time was taken as an important variable. Garney (1999) found that less time taken by the staff to response an emergency has a positive relation with the level of gratification. Time has been categorized in minutes as under;

Initial Response time,

    i.   1-7

    ii.   8-14

    iii.   15-21

Time spend on scene

i.	1-5
ii.	6-10
iii.	11-15
iv.	16-20

Time consumed from scene to hospital

i.	1-7
ii.	8-14
iii.	15-21

1.18.4: Patient's gratification

Patient's gratification is commonly defined as when an individual's expectations of treatment and care are met (Trout *et al.*, 2000). This definition is used in this study of patients 'gratification.

CHAPTER TWO

REVIEW OF LITERATURE

In case of severe illness and injuries, people want an efficient and urgent medical treatment by a well-trained and highly-qualified rescue team. In this situation, people dial an emergency calling number to approach the Prehospital Emergency Service. Emergency situation is a danger and threat to the life of the victim. This is mentally disturbing and worrying situation for every person present on the spot of emergency. In this situation the life of a person is in danger, so it becomes the responsibility of the rescue service to response the emergency urgently to save a valuable life.

The health-care system is built on meetings between those who need help and those who can provide help, as well as meetings between the many professional groups. The PEC phase is relatively short and the patients are in a vulnerable and dependent position making the interaction between patient and PEC personnel and interaction among the professionals. It is a brief interpersonal encounter and the PEC personnel must care for the patient's needs under uncertain circumstances (French, 2006).

Prehospital Emergency Care involves the early-qualified first aid and treatment given on site or during transportation to the hospital due to accident or illness (NBH, 1994; Mistowitch *et al.,* 2004). The goal for PEC is to create the best possible circumstances that will prepare the patient and put them in as good condition as possible for the next part of the health-care chain (Jonasson & Wallman, 1999; Bang, 2002). It consists of medical treatment, emergency care and ambulance transportation of acutely ill or injured persons as well as rescue activities at the site of a disaster. The emergency calls to the EMD-centres are a part of PEC (NBH, 2002).

Naseer (2002) argued that PES is very important tyre of the health care system. The large portion of the population in the world is deprived of PES. According to him there are three

important tyres of the emergencies services. These are police, fire and ambulance service. These services play a key role to make the society safe and secure. And efficient and well organized emergency service can play its role for saving the lives and property of the public. Razzak (2006) found that the epidemics disease are the major concern of the health system of the developing countries. For long time, both hospital and Prehospital emergency services are unloved in most of the developing world.

MacRorie (1998) argued that people want an easy and quick access to health providing services, especially PES. The basic health units are first source of medical services in rural areas. According to a study of rural Nepal, villagers often visit basic health centres in case of emergencies rather than for preventive health facilities. People visited the health centres for minimum time for availing family planning services. People showed a great thirst for the advance medical services at the district level.

Sodemann *et al*. (1997) noted that non availability of transportation services in case of emergency is a major hindrance to access the health care centres. There are many factors involved in this problem, lack of ambulances, poor facilities of roads and lack of money to pay for the transportation services. Many people lost their lives due to lack of transportation services in case of emergency especially in rural areas of the poor countries. Absence of the ambulance or any other vehicle in the time of emergency is like a grave for alive person.

Sodemann *et al*. (1997) conducted a study to determine the death rate among children in case of medical emergencies. The study revealed that 18% children died before reaching to hospital because of poor transportation. The availability of in time ambulance service for shifting the patients from scene to hospital in case of emergency is very important factor for life saving. If the proper ambulance service is present, it enhances the chances of survival of the patients and also

increases the utilization of health services. The study showed that 50% death decreases because of the timely provision of ambulance service.

Arreola *et al.* (2000) argued that by enhancing the infra-structure, such as doubling the dispatch centres in Mexico death decreased on scene and during journey to hospital. The basic training of trauma care for rescue team proved to be vital for the lifesaving of RTAs victims. Shehu *et al.* (1997) argued that the provision of PES in case of medical emergencies is very useful and effective for the health of the common people. The study revealed that the PES of Nigeria shifted 56 severely ill patients to the emergency departments of the hospital. Out of these 52% were female and 48% were male. The PES is proved as a lifesaving element for the masses.

According to Naseer *et al.* (2009) the timely emergency care is very important in the time of emergency. The provision of quick and efficient emergency service by the state to people is their basic rights. Before the establishment of the Punjab Emergency Service Rescue 1122, this right of the people was totally ignored by the state. The 95% victims of the emergencies including the RTAs in the Punjab had no timely access to hospital because of the unavailability of the means of transportation. But with establishment of PES Rescue1122, this problem has been solved to large extent.

According to Naseer (2009) Punjab Emergency Service Rescue 1122 is first trained and well equipped emergency service in the Pakistan. It is working under the supervision of the provincial government of the Punjab. It is regulated by the Home Ministry of the province. The aim of establishing this service was to help the people in case of emergency condition. He argued that before this service, there was no one to help the victims of the RTAs due to many legal complications. This service provides a quick response to emergency. The provision of on time medical treatment and safely shifting of the victims to the hospital is the main duty of this service.

Baqir & Ejaz (2011) stated that the other countries of the region can avail benefits from the experiences of rescue 1122. It proved itself a fast and economical service in the province. It is a novel service with effective response in the South Asia. Delegation of SAARC countries visited the rescue 1122. They appreciated the service and showed their will to learn from the experiences for the establishment of the Prehospital service in their counties.

Schmid *et al.* (2001) reported that in Western Europe and North America the existing models of PES can't be replicated in the low income countries. These models are very expensive for poor countries. These countries have no proper infrastructure i.e roads and lack of funds for purchasing of fuels to run the emergency vehicles. One of the example of this is Republic of Tanzania, where the improper means of transportation are being used for shifting of the patients. These means include two or three vehicles motor vehicles, bicycles and boats.

Emergency operators at the Emergency Medical Dispatch-centre are to prioritise emergency medical calls after they have made assessments and come to a decision based on the health related and medical information they are given. Additionally, they should give advice to the caller and keep the ambulance personnel adequately informed (NBH, 1997). The emergency operators are often confronted with and have the responsibility to handle the difficult situations, where time is crucial and decisions and prioritisations must be made rapidly. Giving advice and instructions by telephone can be a demanding task (Wahlberg, 2004). The communication between all actors in the Prehospital phase of the health-care system is very important for those involved, since lives are at stake and the situations are often stressful. Trauma, acute chest pain or other heart problems are the most common causes for assigning the highest priority to alarms and alerting the ambulance (Hjalte, 2005).

During the emergency call it is important that the caller is understood within a few seconds. The patients need to be understood and confirmed that their problems are taken seriously (Nystrom, 2003). The emergency operator's information is the starting point of each case and the information may not be complete (Mistowitch *et al.*, 2004). Ambulance care has been evolved from what was just the transportation of the sick or injured to the hospital, to the performance of advanced emergency care and medical treatment in addition to the transport (Suserud, 1998).

Daily work for the ambulance personnel can range from advanced lifesaving PEC to less complicated care and transportation of patients (Jonsson, 2004). The ambulance personnel need to quickly assess the patient's condition in order to promptly decide on the necessary measures that need to be taken. Within PEC it is important to be flexible and adaptable with regards to the patients' medical condition while also being flexible and adaptable with fellow colleagues and other professional groups (Wireklint-Sundstrom, 2005).

Emergency care interventions have become increasingly important and specialized procedures can be done on site or during transportation to the hospital. Demands for medical and nursing qualifications for the ambulance personnel have been increased during the last few years and since 2005 at least one member in the ambulance team must be an EMT. About 4,000 persons are employed as ambulance personnel, and the numbers of RNs in this group are increasing due to the demands for increased emergency medical and nursing competence (NBH, 2004).

Johansson *et al.* (2004) argued that Patients expect an optimal combination of medical and caring interventions that are based on theoretical as well as practical knowledge when their health is at stake. It happens that highly technical PEC with accompanying advanced medical interventions are administered under uncertain and stressful circumstances. In a possible acute myocardial emergency for example, the PEC intervention is the lifesaving care and treatment given

CPR, ECG tests, administration of pain relieving medications and other nursing procedures are possible interventions. At the EMD-centre the PEC intervention is the emergency call and all that it entails; a service that is given and received at the same time. There is a risk that mistakes can be made in these situations. The PEC intervention and the quality of it can be life-saving. The right intervention in a timely manner requires an optimally working PEC system. Uncertainties are obstacles that can lead to incorrect interventions that put patient safety and lives at stake

Nantulya & Muli-Musiime (2001) revealed that individual road users are only responsible of the RTAs according to traditional point of view. This view ignored many other factors that are responsible of road crashes. According to this, it is considered still today that the 90% of road crashes are caused by human careless behaviour while driving. The damaged roads and poor designed vehicles are also responsible for road crashes. It is believed that the number of road crashes could be decreased by creating awareness among the people about careful behaviour while driving. According to this view the campaigns should be launched for propagating awareness about careful driving.

Mohn (2002) expressed that because of increasing urbanization, number of RTAs in urban areas are more than in rural areas. Accidents occur in rural areas caused severe injuries as compared to those happen in urban areas. In urban areas due to heavy traffic rush, drivers usually drive on slow speed. But in rural areas, drivers drive on high speed due to less traffic on the roads. Accidents of rural areas have more effects on family of the victim as compared to urban areas. Mock et al. (2004) found that lives of many patients of trauma, pregnancy could be saved by providing quick and efficient pre hospital emergency services. In developing countries the Prehospital services are mostly used by trauma patients. The main reason is that the injury accounts the 16% of the total world disease. The major effects of injury is on the poor section of the society.

Peden *et al.* (2003) conducted a study to find the type of injuries in RTAs. He found that 25% of the victim who are severely injured and need to get admission in a hospital have head injury. One fifth of the total victims received fractures to lower arm and leg parts. 10% received cut and open wound.

According to World Health Organization (2003) the use of motor vehicles in Asian countries is increasing. This increase noticed mainly in motorcycles and rickshaws. It is estimated that the motorcycles are 70% of the total motor vehicles in east and south Asian countries. The increase in the use of motorcycles and rickshaws is directly proportional to the RTAs. These numbers in Cambodia, Lao people's Democratic Republic, Malaysia and Viet Nam are 75%, 79%, 51% and 95% respectively.

Chiu (2000) conducted a study to determine the relationship between use of motorcycles and road traffic injuries. It showed that an increase in the use of motorcycles has a positive relationship with the road traffic injuries. In Taiwan, motorcycles are 65% of total registered motor vehicles. Hurt *et al.* (1981) found that motorcycles are less visible due to their size and design. This is the reason, motorcycles are more involved in RTAs than other motor vehicles. According to Radin (1982) in Malaysia mostly motorbikes RTAs occurred in daytime. Those motorbikes that have proper indicator lights are less involved in road crashes.

Schoon (1996) conducted a study and found that the road traffic crashes among cars and motorcycles are because of the poor visibility of motorcycles. Poor visibility was the factor among 65% of the road traffic crashes. Peden *et al.* (2003) explained that mortality rate caused by road crashes is more than 50% among the people aged between 15-44 years. The injury rate in road crashes is more for young adults in countries with poor and middle income countries. Over 50% of the global mortality due to road traffic injury occurs among young adults aged between 15 and

44 years, and the rates for this age group are higher in low-income and middle-income countries. In 2002, the death rate for male was 73% in road crashes. It was three times more than the female death rate. It was estimated that out of 100000, 28 male and 11 female were expired in RTAs respectively. Road traffic death rate is greater and higher in males as compared to females all over the world.

Mayhew & Simpson (1990) described that the leading cause of death among youth population of the world is road traffic injuries. Young have greater risk of RTAs than older people. Lack of driving experience is the major cause of road traffic accidents among youth. Cerrelli (1998) studied that young males have more chances of RTAs than young females. Less experienced male drivers are involved more in RTAs than unexperienced female drivers. McLean (1990) conducted a study to determine the injury risk among motorcyclists. It was found that the injury risk among young drivers was high than old drivers. This was because of lack of experience. Most of the young drivers faced injuries during their first year of motorcycles riding.

Haegi (2002) argued mostly the major injuries are caused by the RTAs. Road traffic accidents is a major cause of deaths. By providing quick and efficient emergency medical services, many lives could be saved. Zlatoper (1989) explained that the people of rural areas has to cover long distance approaching to urban areas. Due to this long travelling distance the rural people are at higher risk of road traffic accidents than urban people. Whitlock (2003) found that there is relationship between RTAs and poverty. Poor people had greater risks of RTAs. According to his study, driver belonging to poor families with low level of education had a higher risk of injuries.

LaFlamme (1998) also found the relationship between road crashes injuries and low level of income. The number of injuries among the children of labourers was higher than the children of the people having high level of income. This difference of injury is between 20 to 30%.

36

Nantulya & Reich (2002) argued that socioeconomic factors such as education and income affect the public choice to use the different means of transportation. Twenty seven percent people who are illiterate most likely to travel on foot in Kenya, eight percent use their own cars for travelling, while 55% use public transport such a buses or coasters. On the other side, 19% of people having matriculation level of education use public transport and 81% use their own vehicles for travelling.

Bernard *et al.* (2003) showed that RTAs have different effects on poor and low income societies as compared to high income societies. Poor people are treated harshly. Their role in policy and decision making is very poor. Even in developed countries, children belonging to poor families are at higher risk than the children of the elite families. Poor people become more victims of RTAs. Nantulya & Reich (2002) expressed that the poor countries of Africa and Eastern Mediterranean regions of WHO have greater rate of road traffic deaths and injuries. More males than females are expired in road traffic crashes all over the world. Even the residents of poor areas of high income countries are at greater risk as compared to the people living in advanced areas of the country.

Mock C.N. (2003) conducted a study to find the effects of RTAs on the employed people. He found that 16% of the victim did not return to their jobs after the accident. 33% victims reported feeling of restlessness in post-accident period. As a result of disability person becomes burden on the family and friends. It affects the family both socially and economically. Andersson *et al.* (1997) conducted a study and found that the victims of RTAs showed mental problems in post-accident period. These problems have been found in the victims even with minor injuries. Fifty percent reported anxiety and restlessness during traveling after two years of accident. The pain, fear of travelling and stomach problems are common among the victims.

Mohan (2002) argued that poor people have no proper access to the public health services after the happening of RTA. In many low income countries, due to long period of medical care,

disability, earning members of family and the expenses of funeral push the family in poor economic conditions. Mayou *et al.* (2003) conducted a study to find out the relationship between injury and psychological effects on victims. It was revealed that sometimes minor injuries cause severe psychological effects on victims. Most of the victims reported restlessness, anxiety and fear during travelling.

According to Europeans Federation (1997) in RTAs 400 hundred people lost their lives and 150 thousand people are disabled for life every year in Europe. And nearly 200 thousands families suffered from the RTAs. A study was conducted to find out the difficulties of families to handle the problems of the victims of RTAs. It has been seen that one of the family members is reserved to serve the disabled person. He has to change his routine work for the sake of the victim. This study found that due to the problems of the victim, children have to leave their schools. Ninety percent families of those died and 85% families of those disabled in RTAs reported severe economic problems. Because of decline in income, family has to experience poor life quality.

Bolen *et al.* (1997) explained that out of all the things and systems to which people have to interact on daily basis, means of transportation are more complicated and threatening. There are 1.2 million people lost their lives in RTAs every year. The number of injured persons as the result of RTAs is up to 50 million per year, it is equal to almost one fourth of the total population of Pakistan. These huge number of causalities and injuries in the world do not attract media attraction as much as it requires. Media treats these tragedies with less importance. If the serious efforts and measures are not taken, the number of injuries and deaths caused by RTAs will increase to 65% between 2000 and 2020, and in poor and low income countries these numbers will increase to 80%. Hussain & Redmond (1994) described that the injuries caused by RTAs is a major public

health problem in the world. But it is widely neglected by the countries. It needs serious and effective measures for the sustainable protection.

According to Cooke (1999) there are different opinions about providing the medical treatment to the patients on scene. One group of experts favour the non-provision of on scene treatment to patients. They argued that the provision of treatment may cause delay in transferring the patient from scene to hospital. Other group is in the favour of provision of treatment to the patient on scene. They argued that the necessary and immediate medical treatment on the scene may increase the chances of the survival of the patients. Honigman *et al.* (1993) described that the patients with severe cardiac injuries received on scene treatment in not more than 10 minutes had high survival rate. According to this study the on scene treatment increases the survival rate.

Razzak (2001) reported that in Pakistan few of the victims received medical treatment on the scene. Most of them are shifted to the hospital without receiving treatment at the scene. Patients are shifted to hospital by using different means of transportation such as ambulance, private car and taxis. Patients of rural areas transferred to the hospital of major cities are in more poor condition because of long distance. Sometime people do not find any vehicle to shift the patients to the hospital. In Karachi, most of the patients (58%) transferred to hospital by using taxi. There are many barriers in the use of ambulance for the patients in Karachi, such as high cost, lack of awareness about the ambulance service, late response by the ambulance service and no information about the symptoms of the severity of the disease.

Hedges (2003) expressed that the major injuries are caused by the road traffic accidents. In response to these accidents the time period for emergency medical services has not been defined. It is recommended that the minimum amount of time should be spent to handle these cases. Time has been divided into three categories, i.e initial response time, time consumed on scene and time

taken in shifting the patient from scene to hospital. The rescue workers are instructed to spend least amount of time to perform basic clinical procedures before reaching the emergency department of the hospital.

Gervin & Fischer (1987) studied the thirteen patients out of hospital who had severe cardiac injuries and were in serious condition at the scene. The patients who are treated by rescue team just to shift in ambulance and transferred to hospital without spending time on scene were survived. All the other patients who are treated with ALS on scene and had the scene time more than 25 minutes were expired.

Ivatury *et al.* (1987) studied two different groups of patients who had the severe thoracic injuries. Both groups were shifted to hospital by different means of transportation. One group of patient's was shifted by ambulance and other was by the police or any other private vehicle. The survival rate among both groups was different. The patients shifted by police had very high survival rate as compared to those shifted by the ambulance. The transfer time taken by police to shift the patients into hospital was 8.4 minutes. The total time out of hospital for the patients shifted by the ambulance service was more than 20 minutes. The survival rate among the patients shifted by police was high because they spent minimum amount of time to reach of hospital.

According to United Nations Economic Commission for Europe (2000) there are many changes required to promote awareness among the public about careful driving behaviour. It is also required to improve the quality of roads. One of the important factor that could be proved vital in decreasing death caused by the Road Traffic Accidents (RTAs) is the quick and instant response by the rescue teams. In England out of total patients of RTAs 50% died at scene or during their journey from scene to hospital within less than 60 minutes after the happening of the accidents.

Clark & Cushing (1999; 2002) expressed that the road traffic accidents is a major problem in the United States. For last many years the death rate caused by the road traffic accidents has been decreasing in the United States. Still in the rural areas of the country the death rate is very high caused by motor vehicle accidents as compared to urban area. This is because of the long response time by the rescue teams in approaching the accidents place in the rural areas. The time from scene to emergency department of the hospital is also high for the rural areas than the urban areas.

Sampalis *et al.* (1993) conducted a case control study. According to this study, the death rate for the patients had more than 60 minutes out of hospital time was very high within 6 days of admission in trauma centre. For the caller, spouse or patient, time seemed to stand still while waiting for help to arrive, for the PEC personnel time flies. Prehospital Emergency Care is a time sensitive activity, but for the patients and spouses interviewed, their sense of time was obscured. For them the seconds they waited for the emergency operator to answer the call felt like minutes, and the minutes they waited for the ambulance to arrive felt like hours.

Davis (2005) writes that time has an impact on patients' health care expectations. People categorise time as being in the past, present and future. They identify it as being measured time or lived time depending upon their present perspective. The experience of time is individual and can be experienced objectively in exact time, or subjectively as qualitative time or 'internal' phenomenological time. The patients or spouses cognitively understood that the ambulance would be there shortly, but the experience of waiting was prolonged and intensified by their or their spouses' serious illness. Even though time is of an essence the PEC personnel must take time to understand the patient's problem and decide on the action (Shattell *et al.*, 2006).

ALShaqsi (2010) argued that response time of Prehospital emergency service is a key indicator of the patients' satisfaction. People who call for emergency help, expect a short response

time for approaching the ambulance at the scene. Every PES has set an average response time to measure and evaluate the performance of the service. People and the administration of the service expect from the rescue team to response every emergency within that prescribed average response time. The timely response from these services minimizes the losses caused by the different kinds of emergencies.

Pricel (2006) proved that one of the key elements of measuring the quality of the service is the response time. But to achieve the target of the short response time, over speed is not allowed. The lives of the ambulance crew could not be sacrificed for meeting the target of the average response time. Bahrami *et al.* (2011) argued that lives could be saved by quick and short response time. But other factors such as unskilled crew and deficiency of the equipment may affect the effectiveness of response time.

MacFarlane & Benn (2003) argued that there are many scales are used to measure the performance of the PES in the globe. The most frequently used indicators for measuring the performance level of the services include, time consumed from centre to scene, time taken by the rescue team in shifting the patient from scene to hospital and gratification of the patients with the behaviour and professional skill of the crew of the ambulance. Pricel (2006) argued that instead of focusing on short response time, the rescue team should focus on the provision of quality medical treatment to the patients. Quality medical treatment may prove vital and lifesaving for the patient. If the short response time disturbs the medical treatment, then it will leave negative effects on the health condition of the patient.

42

2.1: Patients' Gratification

Patient's gratification is commonly defined as when an individual's expectations of treatment and care are met (Trout et al., 2000). Customer gratification is a function of the Customer's assessment of service quality, product quality and price (Zeithaml *et al.*, 1993).

2.2: Determinants of Patients' Gratification

There are many elements that affect the patients' gratification level about the medical service. These are mentioned below.

2.2.1: Age – Aged patients showed more gratification with their treatment given by medical services. (DiMatteo *et al.*, 1993). They argued that this may be result of longer period of time than average they spent along with services.

2.2.2: Gender - Lieberman (1989) found that men are less satisfied than women with medical services. Women had higher satisfaction levels than men. This is opposite of their earlier research. Gray (1980) and Greenley & Schoenherr (1981) found that there is no difference based on gender regarding the gratification.

2.2.3: Income - Many studies showed that poor patients are less gratified with medical services as compared to rich. (Chaska, 1980; Patrick, Scrivens and Charlton, 1983; Calnan, 1988). The factors behind this is that the poor patients are ignored by the doctors and not treated well. The main reason is the lack of resources.

2.2.4: Staff - Many studies showed that the elements related to staff have an effect on overall level of gratification and also affect the patient's level of preference to suggest other people to use these services. (Quint and Fergusson, 1997; Garney, 1998; Press and Garney, 1998; Weinsing et *al.;* 1998, Brown *et al.,* 1999). The interpersonal relation of the staff with patents has very much importance in affection the level of gratification of the patients with medical services.

According to Quint and Fergusson (1997) in their study of patients of Victorian public hospitals found that the important elements of higher level of patient's gratification were way of communication and contact, availability of staff, empathy, encouraging behaviour and politeness. Press & Garney (1998) reported that staff attention to deal the emergency was most important influencing factor to suggest others to use the service. According to them keeping privacy of patients and attitude of nurses are less important factors for gratification of the patients.

Weinsing *et al.* (1998) found that information and updates about the health condition of the patients and kindness are important for the gratification of the patients with services. Garney (1999) found that the most important factors affecting the patients' gratification and level of recommendation to other to use the service were urgency to handle the emergency condition, attentiveness and friendliness of staff in dealing with patients and keeping privacy about the health condition of the patients. Dale and Howanitz (1996) found that the positive attitude of the staff highly affects the patient's level of gratification.

Some authors reported that the patient's perception about the way of communication and contact of staff is an important element of patient's gratification. (Rowland-Morin and Carroll, 1990; Hall *et al.*, 1994; Frederickson, 1995; Roter *et al.*, 1997). Brown *et al.* (1999) found that short courses to increase the communication skills of staff have no effect on patient gratification. According to them the longer courses and training sessions can improve the communication skills, which affect the gratification of the patients.

2.2.5: Response Time – Garney (1999) found that less time taken by the staff to respond to emergency has a positive relation with the level of gratification. It also affects the patients' views about suggesting service to others. Wait for the treatment by the doctor in the hospital is also an important factor affecting the gratification of the patients Quint and Fergusson (1997). Dale &

Howanitz (1996) also reported that the less time taken to responsd an emergency has positive relation with the gratification of the patients.

2.2.6: Clinical Skill – It is very difficult for the patients to measure the medical skills and training of the staff. (Berry, 1995). Quint and Fergusson (1997) stated that generally the skills and training of the staff is considered good and it plays an important role in the gratification of the patients. Other studies also found that training of the staff is very important. Baker (1991) reported that the level of clinical skills of the medical staff is an important factor of the satisfaction of the patients. Dale & Howanitz (1996) found that professional treatment and discomfort has a relation with higher satisfaction rates less than expectation. Weinsing *et al.* (1998) reported that competency and efficiency of the staff is very important for the patient's satisfaction. Garney (1999) found that the technical skill of nurses affect the level of gratification of the patient.

2.2.7: Other Determinates – Other factors that patients found influenced their gratification with medical services were accessibility, continuity, availability, premises where patients were involved in decisions, time for care, accessibility and availability (Baker, 1991; Baker and Streatfield, 1995; Weinsing *et al.,* 1998).

The principle that is generally used to measure the satisfaction of the customers is also applicable in the medical field. People who are satisfied with a specific service, will return to reuse the service. The same case is in the field of medical. The patients who are satisfied with the services of a particular hospital or ambulance service will prefer to use again the same services instead of others for their problems. (Ware and Hays, 1988; Stelber and Krowinski, 1990). Patients show better medical results regarding their health who are satisfied with the services. Because they achieve mentally calmness regarding their health. (Greenfield, 1985; Rubin, 1989; Kaplan, Greenfield and Ware, 1989; Hauck, 1990; DiMatteo *et al.,* 1993).

Welch *et al.* (1999) argued that the treatment given by the medical service is an important element to measure the quality of service. In the treatment the element of care is very vital. They said that to measure the quality of medical service, the patients satisfaction is an important tool particularly in the aged patients.

Medical outcome affects the overall level of gratification of the patients. (O'Connor *et al.*, 1999). As discussed above interpersonal factors play an important role. Lumley *et al.* (1993) found that the patients treated shortly after they faced an emergency showed higher level of satisfaction. They also concluded that the patients are surveyed within short period after the emergency it shows higher response rates.

Quint & Fergusson's (1997) survey of Victorian Hospital recorded high levels of satisfaction. Quint and Fergusson found that in regard to overall satisfaction, 77% of the patients were "very satisfied" and 19% "fairly satisfied". A high majority (97%) of patients said they would suggest the service to friends and family. In terms of treatment and care, 56% rated it as excellent, 30% as very good and 10% as good. Esmaeili *et al.* (2011) argued that prehospital emergency care is a subpart of the public health system. First interaction of acute ill or injured patients happened to the PEC. The first interaction of the patient with PEC also affects the patient's perception about the other parts of the health system. If the patient experienced well performance of PEC, then he will be satisfied with the performance of the other parts of the health system.

Vuori (1991) argued that the only single indicator to measure the level of patients' satisfaction and quality of care was 'treatment' in the past decades. But with the passage of time other indicators were developed to measure the patients' satisfaction. These were communication of medical personnel to the patients, availability of medical staff and equipment and the betterment in the health condition of the patient. Oluwadiya *et al.* (2010) proved that satisfaction plays a key

role in the improvement of patients' mental and physical health condition. There are many factors that affect the patients' satisfaction with medical services. It includes that how medical personnel communicated and interacted with the patients. The other is that how much mental and physical needs and expectations of the patients have been met. Rodbari *et al.* (2009) found that the patients of age between 15-30 years old were more satisfied because of their high level of tolerance of bearing pain. According to this study, there was a positive relation between age and satisfaction level. Stewart (2001) found that there is positive relationship between severity of illness and satisfaction level. He proved that the patients who were severely ill or injured showed higher level of satisfaction as compared to others. Abedi *et al.* (2008) conducted a study to determine a relationship between professionalism of rescue team and satisfaction level of the patients. He found a positive relationship. Patients showed a very high level of satisfaction with the professionalism of the rescue team.

Audit Office of New South Wales (2001) reported that there was a conference of executives of the PES held in Australia. In this conference a committee of experts was formulated to define standard and manuscript of the new rules and scales for measuring the performance and quality of the PES. According to Steering Committee for the Review of Commonwealth (2000) there is only one and single criteria for measuring the quality and performance of the PES and it is the satisfaction of the patients from the service. The authorities most frequently used the patients' satisfaction to find the performance level of their services. Carr-Hill (1992) argued that the satisfaction level of patients with service is highly dependent on the positive behaviour and level of training of the rescue team to handle the emergency condition of the patients. There is a positive relation exists among these factors.

Maio *et al.* (1999) argued that the patients' satisfaction is very important tool for measuring the performance of the PES throughout the world. The satisfaction is described as the fulfilment of the needs and demand of the patients themselves and their families. Spaite *et al.* (2001) said that the needs of the patients are urgently met by the services, then they show high level of satisfaction from the services. If the patients are highly satisfied with a service, then the service is frequently used by the community members. According to National Health Performance Committee (2000) the patients and the families of them have many expectations with the services. These includes availability of the ambulance 24/7, low cost or free of cost, quick response, well trained and educated rescue team and well maintained and well equipped ambulances. If most of these expectations of the clients are met by the service, then they will be highly satisfied.

O'Meara (2001) argued that in case of studying the level of satisfaction of the patients, the expectations of the patients either met or not have very much importance. McKinley (2002) studied to determine the level of satisfaction of the patients with the ambulance service in different cities of Australia. The results of the study showed that the satisfaction level among the user of the service was very high i.e. 90% as compared to the non-users of the service. The results of the study are very positive and supportive for the rescue workers. These results can be used to build a friendly environment between rescue services and the community. French (2006) studied that the patients and the spouses are dependent on the PEC personnel and are in a situation where there is a risk for errors especially when uncertainties can be involved. Meetings that are based on dignity, respect and a caring attitude will have a better level of communication. A good meeting between different actors will increase satisfaction. Sharifi *et al* (2012) found that majority of the beneficiary's i.e. 37.3% of the Prehospital service in Iran were between age group of 15-30 years,

and 26.8% were 31 to 45 years old. Slightly above half of the Prehospital users (53.6%) were women, while 46.4% were men.

Rodbari *et al*. (2009) conducted a study to determine the patients' satisfaction with PES. He found that the satisfaction level among the people with lower educational qualification was more than the people with higher level of educational qualification. Sharifi *et al*. (2012) found that men were more satisfied than women, because of the absence of the female nurses in the rescue team. They found that majority of the beneficiary's i.e. 37.3% of the Prehospital service in Iran were between age group of 15-30 years. 26.8% were 31 to 45 years old. Slightly above half of the prehospital users 53.6% were women. 46.4% were men.

Sharifi *et al*. (2012) found that men were more satisfied than women. Because of the absence of the female nurses in the rescue team. Patient satisfaction is one of the important measures in quality control process of delivered EMS systems. Considering the patients' recommendations can improve the respective processes, outcomes and their satisfaction. Moreover, patient satisfaction reduces the employees' complaints, leading to the feeling of satisfaction (Omidvari, 2002).

Patient satisfaction is a quality indicator which has impressive importance in health care system; furthermore, its enhancement is one of the vital goals and priorities in health organizations. One of the important aspects in high quality health care system is delivering health services in an appropriate way which can lead to systems development. In fact, evaluation of patient satisfaction, assessment of the impressive factors and determination of the reasons why patients become unsatisfied can improve the quality of health services delivery (Harir *et al.,* 2003).

There are several factors which can influence the patient satisfaction; the most important of which are: the time waiting for ambulance, respectful behaviour toward patients, patient involvement in decision making and getting feedback from their visits, follow-up treatments, confidentiality, and effective patient-provider relationships and so on. But sometimes because patients do not know their rights (asymmetric information), patients' problems are ignored and medical standards are not met (Qidwai et al., 2003).

In 2005, Qidwai et al. (2005) surveyed 100 patients who were mostly young, married and highly educated. The results showed that they were mostly dissatisfied with the long waiting time and the inadequate skill of emergency room staff. Besides, patients had more expectations from the clinical staff to be treated with dignity and respect. Accordingly, it is important to survey patients' expectations from emergency medical services. The results of the study about measuring impressive factors on patient satisfaction from patients' view point demonstrated that equipment and facilities 68%, human resources 68%, physical environment of hospitals 66%, and managerial factors %47 are the most influential key factors of their satisfaction.

The findings of Billings & Kolton (1999) revealed that 37% of patients criticized the way medical services were delivered to them and 30% of other patients were dissatisfied because medical staff did not show respectful manner toward them. However, 34% of the patients complained about contacting issues and 6% were not satisfied with the follow-up program. In a study done by (Bernard et al., 2007) on patient satisfaction from EMS system, the patients who were surveyed via telephone, were 99.5% satisfied with emergency medical services system in USA (847 patients out of 851), while 3 patients believed EMS system.

2.2: Theoretical Framework

2.2.1: Uses and Gratifications Theory (UGT)

It attempts to explain the gratification consumers seek in a particular service and their perceptions of and affinity for that service. UGT acknowledges individual use and choice .It describes why consumers choose to continue their use of a specific service. Researchers argue that, whereas people's initial encounters with a service might be accidental, reuse would be more likely if the medium provided them with specific benefits (Eighmey & McCord, 1998).

2.2.2: Performance Theory

Clients' gratification is directly related to the product or services' perceived performance characteristics. Performance is defined as the customers' perceived level of service (Brooks, 1995).

2.2.3: Expectancy Disconfirmation Theory

In this theory, customers form expectations of product performance characteristics prior to purchase. When the product is bought and used, the expectations are compared with actual performance using a better-than, worse-than heuristic. Positive disconfirmation results if the product is better than expected while worse than expected performance results in negative disconfirmation. Simple confirmation results when a product or service performs as expected. Satisfaction is expected to increase as positive disconfirmation increases (Liljander & Strandvik, 1995).

2.2.4: Gap Theory

In Gap theory Parasuraman & Berry (1988) suggested that expectations in the gratification literature have been used as predictions of service performance, while expectations in the service quality literature were viewed in terms of what the service provider should offer. Zeithaml & Parasuraman (1993) modified this distinction, introducing two different levels of expectations and

proposing the existence of a zone of tolerance between these levels. They argued that gratification is the function of the difference or gap between predicted service and perceived service, while perceived service quality is the function of the comparison of adequate or desired service with perceived service performance. It defines service quality in terms of the gap between what the service should provide and the customer's perception of what the service actually provides. It assumes smaller the gap, the higher the quality of service and higher will be level of satisfaction.

CHAPTER THREE

RESEARCH METHODOLOGY

Methodology defined as procedures, materials and methods used by the researcher to complete the process of data collection, analysis and interpretation (Nachmias & Nachmias, 1992). The scientific method is a logic process (Merton, 1957). The major objective of this chapter is to explain various tools and techniques employed for collection, analysis and interpretation of the data, relating to present problem under investigation.

3.1 Research Design

The research design is a logical sequence that links the empirical data to answer research questions .It is an action plan or blueprint for an empirical research study and includes the main ideas of the study like research method, sample, tools and procedures adopted for collecting and analysing information or data (Churchill, 1995; Nachmias & Nachmias, 1996, Gay, 1996).

A research design is a framework or blue print for conducting the research projects. It depicts the measures necessary for obtaining the information needed to construct and solve research problems (Malhotra, 2004). The quantitative research design was used to conduct this study. In a quantitative research design a set of a small number of structured questions are administered to a large number of respondents (Cresswell, 2003) and the data thus collected be statistically compared and contrasted. Moreover the findings are clear and exact which have broad generalizability (Aaker *et al.*, 1995).

3.2 Universe of the Study

The universe is commonly defined as the totality of everything that exists (WBI, 2010). The universe of the present study was Tehsil Chiniot of District Chiniot, Punjab.

3.3 Population of the Study

The abstract idea of a large group of many cases from which a researcher draws a sample and to which results from a samples are generalized. The population of the study was the conscious patients at the time of emergency rescued and shifted to hospital by ambulance service of Punjab Emergency Service Rescue 1122 in tehsil Chiniot. According to official data (Rescue 1122 Chiniot, 2015) from 25/01/2015 to 25/05/2015, total number of individuals who were in conscious state at the time of emergency rescued by 1122 in tehsil Chiniot were 2300.

This record had been considered as sampling frame of the study and obtained by Punjab Emergency Service Rescue 1122 Chiniot through an official request made by Department of Sociology International Islamic University Islamabad (IIUI). This sampling frame included patients name, gender, address, mobile number, patients' medical condition and type of emergency. This information was very helpful while contacting and locating respondents in data collection process.

3.4 Sampling technique and Sample Size

Systematic sampling technique was used to draw the sample from the targeted population of the study. For the calculation of sample size of this study, Taro Yamane's formula had been applied. The particulars are as under;

$$n = \frac{N}{1+N(e)^2}$$

$$= 2300/1+2300(0.05)^2$$

$$= 340$$

Where, n sample size, N total population 'e' margin of error (0.05)

The estimated sample size for this study was 340

By applying systematic sampling technique, the interval had been taken.

$$Interval\ (I) = \frac{N}{n}$$

$$Interval\ (I) = \frac{2300}{340}$$

First respondent was selected by applying simple random technique among first 7 respondents. Remaining respondents were selected by adding sampling interval of 7 until the completion of the sample size.

3.5 Tool for Data Collection

The most important-art of statistical work is data collection. The data were collected by the researcher himself in a face to face situation. All the respondents were interviewed personally.

3.6 Interview Schedule

The interview schedule is considered as an appropriate tool for collecting requisite information. It was constructed in English language for academic purpose. But the questions were asked in Urdu and Punjabi according to the situation in order to get maximum information. However the translation was done very carefully so that the actual meaning of the question might not get lost. The interview schedule was consisted of both open and close ended questions.

3.7 Pre-testing

To determine the effectiveness of interview schedule, it is necessary to pre-test it before actually using it. Pretesting can help to determine the strengths and weaknesses of survey concerning

question format, wording and order. Interview schedule was pre-tested on 10 respondents before starting the actual research. After pre-testing, the option (iv) of question 9 was changed from "sleeping" to "rest".

3.8 Statistical Techniques

The following statistical techniques were used for data analysis:

1. Descriptive statistics, including frequencies and percentages were used to summarize different variables.

2. Inferential statistics and Pearson correlation was used to assess the relationship between independent and dependent variables.

3.8.1 Percentage

To describe the variables, Simple frequency tables were constructed out of data. To find out the frequency distribution of the variables, simple percentages were calculated.

The percentages were calculated by following formula:

$$p = \frac{F}{N} \times 100$$

Where,

        P   = Percentage

        F   = Frequency

        N   =Total Number of frequencies

3.8.2 Correlation

Bivariate correlation test was applied to check the relationship between independent and dependent variables. It shows how much strongly or weakly independent and dependent variables are associated. Formula for calculation of correlation is as follows;

$$r = \frac{n(\Sigma xy) - (\Sigma x)(\Sigma y)}{\sqrt{[\, n\Sigma x^2 - (\Sigma x)^2\,]\,[\, n\Sigma y^2 - (\Sigma y)^2\,]}}$$

3.9 Conceptual Framework

Background variables	Independent variables	Dependent variable

Background variables

- *Area of residence*
- *Age*
- *Gender*
- *Education*
- *Occupation*
- *income*

Independent variables

- **Vehicle**
  External
  Appearance
  Internal
  Cleanliness
  Equipment
  available
  Comfort of ride
  Feeling of Safety
- **Professionalism**
  Trained to handle
  the patient
  Medical
  treatment
  Explanation of
  actions
  Driving
- **Behaviour of staff**
  Politeness
  Friendliness
  Helpfulness
  Attentiveness
- **Efficiency of Service**
  Availability at all
  Time
  Response on
  Initial Call
  Response Time to
  an Emergency
  Time taken to
  transfer victim to
  Hospital

Patients' gratification

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1: Univariate Analysis

It is a method for analysing data on single variable. In Univariate analysis, each variable in any data set is explored separately

Table 4.1.1: Distribution of the respondents according to their gender and area of residence

Gender of the respondents			
S. No	**Characteristics**	**Frequency**	**Percentage**
i	Male	238	70.0
ii	Female	102	30.0
Total		340	100.0
Area of residence of the respondents			
i	Urban	110	32.4
ii	Rural	230	67.6
Total		340	100.0

Table 4.1.1 shows the gender and area of residence of the respondents. It shows that both male and female were included in the study. Majority of the respondents (70%) were male, and almost one third of the respondents (30%) were female. It clearly shows that male are more beneficiaries of the Punjab Emergency Service Rescue 1122 as compared to females. The table also shows the area of residence of the respondents. The present study was conducted in Tehsil Chiniot. Tehsil Chiniot consists of both urban and rural areas. Major portion of the population of Tehsil Chiniot lives in

59

the rural areas. The table depicts that majority of the respondents (67.6%) belonged to rural area. Whereas slightly less than one third of the total respondents (32.4%) belonged to urban area. The table shows that the rural people were using this service more as compared to urban people. Because rural areas are deprived of basic health facilities. So people use this service to approach the health facilities available in urban areas.

Table 4.1.2: Distribution of the respondents according to their age and marital status

Age of the respondents			
S. No	Characteristics	Frequency	Percentage
i	16-30	193	56.8
ii	31-45	95	27.9
iii	46-60	52	15.3
Total		340	100.0
Mean 32.91		Std. Deviation 0.742	
Marital status of the respondents			
i	Single	116	34.1
ii	Married	212	62.4
iii	widowed	12	3.5
Total		340	100.0

Table 4.1.2 presents the age and marital status of the respondents. The age is an important indicator of the present study. It determines the age at which people become more victims of the diseases and road traffic accidents. The table presents the age of the people in completed years at the time of the interview. It shows that majority of the respondents (56.8%) who were using the service

belonged to the age group 16-30 years, 27.9 % belonged to the age group 31-45 years and, only 15.3% belonged to the age group of 46-60 years. The mean age of the respondents was 32.91 and Std. Deviation was 0.742. The minimum age of the respondents was 16 years and maximum was 60 years. The table depicts that the youth uses Punjab Emergency Service Rescue 1122 more frequently as compared to the older people. The reason is that the youth has more awareness about the benefits of the service because the Community Wing of the Punjab Emergency Service Rescue 1122 visits educational institutions to create awareness and give information about the service. The table also presents the distribution of the respondents according to their marital status. It shows that more than half of the respondents (62.4%) were married, which are slightly more than one third of the total respondents (34.1%) were single and only 3.5% were widowed.

Table 4.1.3: Distribution of the respondents according to their family type

Family type of the respondents			
S. No	Characteristics	Frequency	Percentage
i	Nuclear	172	50.6
ii	Joint	70	20.6
iii	Extended	98	28.8
Total		340	100.0

Table 4.1.3 shows different patterns of the family. Due to industrialization people are moving to nuclear family system. The present study also confirmed this changing trend of the family system. The table shows that the half of the respondents (50.6) belonged to nuclear family system, 20.6% were living in joint family system and slightly more than one fourth (28.8%) of the total respondents were living in extended family system.

Table 4.1.4: Distribution of the respondents according to their level of educational qualification

Level of the educational qualification			
S. No	Characteristics	Frequency	Percentage
i	Illiterate	154	45.3
ii	Primary	86	25.3
iii	Middle	16	4.7
iv	Matric	27	7.9
v	Intermediate	27	7.9
vi	Graduation	20	5.9
vii	Master	10	2.9
Total		340	100.0
Mean 4.59		**Std. Deviation 1.755**	

Table 4.1.4 depicts the educational qualification of the respondents at the time of the interview. The table shows that the less than half of the respondents (45.3%) were illiterate who had been provided the ambulance service by the Punjab Emergency Service Rescue 1122 at the time of emergency situation faced by them. One fourth (25.3%), 4.7% and 7.9% had primary, middle and matric level educational qualification respectively. There were 7.9% of the respondents who had completed intermediate level. The respondents who had completed their graduation were 5.9%. And remaining only 2.9% of the total respondents had master level educational qualification. The mean level of the educational qualification of the respondents was 4.59 and the Std. Deviation was 1.755.

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Table 4.1.5: Distribution of the respondents according to their occupation

Occupation			
S. No	**Characteristics**	**Frequency**	**Percentage**
i	Government service	12	3.6
ii	Private service	9	2.5
iii	Self-employed	10	2.3
iv	Farmer	11	3.2
v	Skilled laborer	77	22.6
vi	Unskilled laborer	83	24.4
vii	Driver	16	4.7
viii	Student	47	13.8
ix	Housewife	75	22.1
Total		340	100.0

Table 4.1.5 shows the diversity in the occupation of the respondents. According to previous table 4.1.4 less than half of the respondents (45.3%) were illiterate. One fourth (25.3%) had primary level of education. Due to this, majority of the respondents of the study belonged to labour class. Table 4.5 shows that most of the respondents (24.4%) were unskilled labourer. There were 3.6%, 2.5%, 2.3%, 3.2 of the respondents were government servant, private servant, self–employed and farmers respectively. Driver and skilled labourer were 4.7% and 22.6% of the total respondents respectively, while 22.1% were housewives, and 13.8% were students.

Table 4.1.6: Distribution of the respondents according to their monthly income

Income of the respondents in Rupees			
S. No	Characteristics	Frequency	Percentage
i	Up to 10000	74	33.9
ii	10001-20000	134	61.5
iii	20001-30000	10	4.6
Total		218	100.0
Mean 13637.61	Std. Deviation 0.548		

Table 4.1.6 reveals that majority of the respondents (61.5%) had monthly income between 10001-20000. Slightly more than one third of the total respondents (33.9%) had income up to 10000. And remaining 4.6% had income between 20001- 30000. According to previous table 4.1.5 respondents were mostly belonged to the labour class, which is the reason of the low level of income of the respondents. The mean income of the respondents was 13637.65 which is less than the monthly income of a labourer 15000 fixed by the government of the Pakistan. The Std. Deviation was 0.548. Minimum and maximum income of the respondents was 9000 and 30000 respectively.

Table 4.1.7: Distribution of the respondents regarding, what were they doing at the time of emergency and the type of emergency

S. No	Characteristics	Frequency	Percentage
i	Working at work place	29	8.5
ii	Working at home	22	6.5
iii	Travelling	255	75
iv	Rest	34	10
Total		340	100.0
Type of emergency			
i	Medical	71	20.9
ii	Road traffic accident	255	75
iii	Cylinder explosion	9	2.6
iv	Fall from height	5	1.5
Total		340	100.0

Table 4.1.7 shows that 8.5 % of the respondents were working at work place at the time of emergency, 6.5% were working at home when they faced the emergency, while majority of the respondents (75%) were travelling when an emergency happened to them. Ten percent were taking rest at the time of the emergency. Bolen *et al.,* (1997) explained that out of all the things and systems to which people have to interact on daily basis, means of transportation are more complicated and threatening. The table depicts that almost one fifth of the total respondents (20.9%) faced medical emergency. Majority (75%) of the respondents faced road traffic accidents. The table shows that 75% of the respondents faced the emergency while they were travelling.

Because of this, majority of the respondents were the victims of road traffic accidents. Only 2.6% and 1.5% of the respondents became the victims of cylinder explosion and fall from height respectively. The table also shows that the majority of the users of Punjab Emergency Service Rescue 1122 were those people who got injured during a road traffic accident while travelling from one place to another for the sake of their day to day work.

Table 4.1.8: Distribution of the respondents according to type of medical emergency

S. No	Characteristics	Frequency	Percentage
i	Cardiac arrest	23	32.4
ii	Respiratory problem	7	9.9
iii	Severe pain in body	25	35.2
iv	Diabetes	2	2.8
v	Fever	7	9.9
vi	Vomiting	7	9.9
Total		71	100.0

Table 4.1.8 shows that little more than one third of the respondents (35.2%) who faced medical emergency because of severe pain in the body, 32.4% had heart problem, and 9.9, 2.8, 9.9 and 9.9 had faced the problem of shortness of breath, diabetes, vomiting and fever respectively.

Table 4.1.9: Distribution of the respondents who faced medical emergency according to their gender and area of residence

Gender of the respondents			
S. No	Characteristics	Frequency	Percentage
i	Male	32	45.08
ii	Female	39	54.92
Total		71	100.00
Area of residence of the respondents			
i	Urban	40	56.33
ii	Rural	31	43.67
Total		71	100.00

Table 4.1.9 shows that little more than half (54.92%) of the respondents who faced medical emergency were females, while less than half of the respondents (45.08%) who faced medical emergency were males. The table also shows that more than half of the respondents (56.33%) who faced medical emergency belonged to urban areas, while 43.67% were from the rural areas. It shows that in case of medical emergency the urban people use more the services of the Punjab Emergency Service Rescue 1122 more frequently as compared to the residents of the rural areas. The difference between table 4.1.1 and 4.1.9 is that the later table represents the gender and area of residence of only those respondents who faced medical emergency.

Table 4.1.10: Distribution of the respondents who faced road traffic accidents according to their gender, area of residence and age

Gender of the respondents			
S. No	Characteristics	Frequency	Percentage
i	Male	194	76.07
ii	Female	61	23.93
Total		255	100.00
Area of residence of the respondents			
i	Urban	67	26.27
ii	Rural	188	73.73
Total		255	100.00
Age of the respondents			
i	16-30	153	60
ii	31-45	75	29.41
ii	46-60	27	10.59
Total		255	100.00

Table 4.1.10 shows that majority (76.07%) of the respondents who became the victims of the road traffic accidents were males, and slightly less than one third (23.93%) of the respondents were females. Cerrelli (1998) found that males have more chances of road traffic accidents than females. The table also depicts that slightly more than one third (26.27%) of the victims of RTAs belonged to urban areas, while majority (73.73%) belonged to rural areas. Zlatoper (1989) explained that the people of rural areas has to cover long distance approaching to urban areas. Due to this long travelling distance the rural people are at higher risk of road traffic accidents than urban people.

The table presents the distribution of victims of road traffic accidents according to their age. It shows that most of the respondents (60%) were belonged to age group of 16-30 years, 29.41% of the respondents were between age of 31-45 years and only 10.59% of the respondents were 46-60 years old. McLean *et al.* 1990 conducted a study to determine the RTAs risks among people. It was found that the RTAs risk among young drivers was high than old drivers.

Table 4.1.11: Distribution of the road traffic accidents according to time of happening

S. No	Characteristics	Frequency	Percentage
i	08:00-11:59 AM	81	31.8
ii	12:00-03:59 PM	103	40.4
iii	04:00-07:59 PM	56	22.0
iv	08:00-11:59 PM	15	5.8
Total		255	100.0

Table 4.1.11 reveals that 31.8% of the Road Traffic Accidents happened at the time between 08:00-11:59 AM. Most (40.4%) of the RTAs happened between 12:00-03:59 PM, while 22% of RTAs happened between 04:00-07:59 PM. Only 5.9 were occurred between 08:00-11:59 PM. The table clearly depicts that most (72.2%) of road traffic accidents happened in the rush hours of the day.

Table 4.1.12: Distribution of the respondents according to type of vehicle of the victim, and vehicle that hit the victim in road traffic accident

Vehicle of the victim			
S. No	**Characteristics**	**Frequency**	**Percentage**
i	Bicycle	3	1.2
ii	Motorcycle	230	90.2
iii	Rickshaw	15	5.9
iv	Car	7	2.7
Total		255	100.0
Type of vehicle hit the victim			
i	Bicycle	2	.8
ii	Motorcycle	82	32.2
iii	Rickshaw	94	36.9
iv	Car	42	16.5
v	Truck	8	3.1
vi	Bus	14	5.5
vii	Tractor	13	5.3
Total		255	100.00

Table 4.1.12 reveals the type of vehicle of the victim and the vehicle that hit the victim. High majority (90.2%) of the respondents replied that they were riding on the motorcycles, at the time of the road traffic accident. In 1.2%, 5.95 and 2.7% road traffic accidents, the vehicle of the victims were bicycles, motorcycles and rickshaw respectively. The table also depicts about the types of vehicles that hit the victim. Most (36.9%) of the vehicles that hit the victim was motorcycle.

70

Slightly less than one third (32.2%) were rickshaw, 16.5% were cars, while Bicycles, truck, bus and tractor were .8%, 3.1%, 5.5% and 5.3% involved in RTAs respectively.

Table 4.1.13: Distribution of the respondents regarding type of injury

S. No	Characteristics	Frequency	Percentage
i	Head	41	15.2
ii	Spinal	4	1.5
iii	Fracture	112	41.6
iv	Abdominal	2	0.7
v	Burn	10	3.7
vi	Cut	100	37.2
Total		269	100.0

Table 4.1.13 shows that 15.2% and 1.5% of the respondents received head and spinal injury respectively. Most (41.6%) of the respondents had fracture, while 0.7% and 3.7% of the respondents had abdominal and burn injuries respectively, and 37.2% of the respondents had cut.

Table 4.1.14: Distribution of the respondents regarding place of emergency and who made call to rescue service

Place of emergency			
S. No	**Characteristics**	**Freqüency**	**Percentage**
i	At home	56	16.5
ii	At public place	255	75
iii	At work place	29	8.5
Total		255	100.0
Caller			
i	Yourself	3	0.9
ii	By passer	136	40.0
iii	By stander	201	59.1
Total		255	100.00

Table 4.1.14 shows 16.5% of the respondents were at home, when they faced the emergency. Most (55%) of the respondents were at public place at the time of emergency, while 8.5% were at work place during working hours when they faced emergency. The table also shows that 0.9% of the respondents called by themselves to the Punjab Emergency Service Rescue 1122 at the time of emergency and told about the situation. Forty percent of the respondents replied that someone who was there at the time of emergency made call for them. Most (59.1%) of the respondents said someone who was standing nearby them at the time of emergency called to the service about their emergency condition.

Table 4.1.15: Distribution of the respondents regarding distance of place of emergency from ambulance dispatch centre

Distance in KM			
S. No	Characteristics	Frequency	Percentage
i	1-7	257	75.6
ii	8-14	61	17.9
iii	15-21	22	6.5
Total		340	100
Mean 4.5		Std. Deviation 3.166	

Table 4.1.15 shows the distance of place of emergency from the ambulance dispatch centre. The table depicts that in majority (75.6%) emergency cases the distance from the centre to the place of emergency was between 1-7 Kilometres. There were only 17.9% cases, when the distance was between 8-14 Kilometres, while in remaining 6.5% cases the distance was between 15-21 Kilometres. The mean distance was 4.5 KM and Std. Deviation was 3.166

Table 4.1.16: Distribution of the respondents regarding response time

Response time in minutes			
S. No	Characteristics	Frequency	Percentage
i	1-7	295	86.8
ii	8-14	34	10.0
iii	15-21	11	3.2
Total		340	100
Mean 4.529		Std. Deviation 3.362	

Time is considered as an important indicator of patients' gratification from the Prehospital emergency services. Minimum response time enhances the patients' satisfaction from the service. Table 4.1.16 depicts majority (86.8%) of the respondents replied that the ambulance had reached at the scene within seven minutes. The average response time of the Punjab Emergency Service is seven minutes. The results of the study also confirms that service is successful in maintaining its average response time. Ten percent respondents who received an ambulance between 8-14 minutes, and 3.2% responded that ambulance reached at the spot between 15-21 minutes. The mean response time was 4.52 minutes and Std. Deviation was 3.362. The minimum response time was 2 minutes and maximum was 21 minutes.

Table 4.1.17: Distribution of the respondents regarding information to their relative about emergency from Rescue workers

Information to relatives			
S. No	**Characteristics**	**Frequency**	**Percentage**
i	Brother	84	24.7
ii	Cousin	9	2.6
iii	Friend	55	16.2
iv	None	192	56.5
Total		340	100

Table 4.1.17 reveals results regarding to the relatives of the victims about emergency situation. The table shows almost one fourth (24.7%) of the respondents said that the rescue team informed their brother about the emergency condition, 2.6% emergencies were informed to the cousins of the patient, while 16.2% of the respondents told that the rescue team informed their friends about their emergency condition. Most (56.5%) replied that none was informed about their condition by

the rescue team. They explained that their relatives or friend were already with them at the time of emergency, so the rescue team did not inform any other person about them.

Table 4.1.18: Distribution of the respondents regarding time consumed on scene by the rescue team

Time on scene in minutes			
S. No	Characteristics	Frequency	Percentage
i	1-5	23	6.8
ii	6-10	163	47.9
iii	11-15	122	35.9
iv	16-20	32	9.4
Total		340	100
Mean 12.41		Std. Deviation 3.878	

Table 4.1.18 depicts the time consumed by the rescue team on scene. The table shows that in 6.8% cases rescue team spent only 1-5 minutes on scene. Less than half (47.9%) of the respondents told that rescue team spent 6-10 minutes on scene to give them medical treatment, while 35.9% of the respondents treated by rescue team on scene between 11-15 minutes, in 9.4% respondents treated in 16-20 minutes by rescue team on scene. The mean time on scene was 12.41 minutes and Std. Deviation was 3.878. The minimum and maximum time spent on scene by rescue team was 5 and 20 minutes respectively.

Table 4.1.19: Distribution of the respondents according to transfer in the ambulance and explanation about hospitalization

Transfer in ambulance			
S. No	**Characteristics**	**Frequency**	**Percentage**
i	To great extent	290	85.3
ii	To some extent	50	14.7
Total		340	100.0
Explanation about hospitalization			
i	To great extent	306	90.0
ii	To some extent	34	10.0
Total		340	100.0

Table 4.1.19 shows that majority (85.3%) of the respondents were satisfied with the way they were transferred into ambulance by the recue team was appropriate to great extent, while 14.7% said the way by rescue team shifted them into ambulance was appropriate to some extent. Majority (90%) of the respondents said that rescue team explained them to great extent about the reason of hospitalization of them, while remaining 10% told that to some extent rescue team explained about shifting them to hospital.

Table 4.1.20: Distribution of the respondents according to attention provided by rescue team

Attention to needs of patients			
i	To great extent	338	99.4
ii	To some extent	2	0.6
Total		340	100.0

Table 4.1.20 shows that in almost all (99.4%) cases the patients received attention of the rescue team to great extent and in 0.6 cases the patients said that rescue paid attention to their needs to some extent.

Table 4.1.21: Distribution of the respondents according to comfort of journey

S. No	Characteristics	Frequency	Percentage
i	To great extent	310	91.2
ii	To some extent	30	8.8
Total		340	100.0

Table 4.1.21 shows that majority (91.2%) of the respondents reported their journey to hospital as comfortable to great extent, 8.8% told that their journey to hospital as comfortable to some extent.

Table 4.1.22: Distribution of the respondents according to time from scene to hospital and waiting time for doctor in hospital

S. No	Characteristics	Frequency	Percentage
Time consumed from scene to hospital in minutes			
i	1-7	296	87.1
ii	8-14	29	8.5
iii	15-21	15	4.4
Total		340	100
Mean 4.732	Std. Deviation 0.482		
Waiting time for doctor in hospital in minutes			
i	1-3	285	83.8
ii	4-6	55	16.2
Total		3	100.0
Mean 1.955	Std. Deviation 0.368		

Table 4.1.22 depicts the information about time consumed by the rescue team approaching to hospital from the scene of incident. It shows that majority (87.1%) of the respondents shifted from scene to hospital by the rescue team between 1-7 minutes, 8.5% of the respondents were transferred between 8-14 minutes to hospital, and while 4.4% respondents told that time consumed by rescue team from scene to hospital was between 15-21 minutes. The mean time of shifting the patient to the hospital was 4.732 and Std. Deviation was 0.482. The minimum and maximum time of shifting was 1 and 20 minutes respectively. The table also shows waiting time for the doctor. It shows that majority (83.8%) of the patients had to wait for a doctor in the emergency department of the

hospital for 1-3 minutes, while 16.2% cases patients waited for a doctor for 4-6 minutes. The mean time was 1.955 and Std. Deviation was 0.368.

Table 4.1.23: Distribution of the respondents according to treatment in the hospital

S. No	Characteristics	Frequency	Percentage
i	To great extent	303	89.1
ii	To some extent	37	10.9
Total		340	100.0

Table 4.1.23 shows that majority (89.1%) of the respondents told that their treatment in the hospital by the doctor was satisfactory to great extent. The treatment of only 10.9% of the respondents was satisfactory to some extent.

Table 4.1.24: Distribution of the respondents according to their hospitalization time and vehicle of shifting from hospital to home

Time of hospitalization in hours			
S. No	Characteristics	Frequency	Percentage
i	1-3	298	87.6
ii	4-6	42	12.4
Total		340	100.0
Mean 1.95		Std. Deviation 0.329	
Vehicle used for shifting from hospital to home			
i	Taxi	58	17.1
ii	Own vehicle	282	82.9
Total		340	100.0

Table 4.1.24 shows that majority (87.6%) of the respondents remained for 1-3 hours in the hospital. And only 12.4% admitted for the time of 4-6 hours in the hospital. The mean time of hospitalization was 1.95 hours and Std. Deviation was 0.329. The minimum and maximum time of the hospitalization was 1 and 6 hours respectively. The table also shows that 17.1% of the respondents used taxi to go to their homes after discharge from the hospital, while majority (82.9%) had their own vehicles for going home from hospital.

Table 4.1.25: Distribution of the respondents according to their views about the ambulance

S. No	Characteristics	Good	Very good	Total	Mean	Std. Deviation
i	External appearance	12.4%(42)	87.6%(289)	100%(340)	4.876	0.329
ii	Hygienic condition	12.9%(44)	87.1%(296)	100%(340)	4.870	0.336
iii	Stretcher	12.9%(44)	87.1%(296)	100%(340)	4.870	0.336
iv	Comfort of ride	14.1%(48)	85.9%(292)	100%(340)	4.858	0.348
v	Equipment	12.9%(44)	87.1%(296)	100%(340)	4.870	0.336
vi	Feeling of safety	11.8%(40)	88.2%(300)	100%(340)	4.882	0.322

Table 4.1.25 shows that 12.4% of the respondents rated the external appearance of the ambulance good, majority (87.6%) of the respondents replied that the external appearance of the ambulance as very good, only 12.9% of the respondents said that the hygienic condition of the ambulance was good, while 87.1% rated the internal hygienic condition of the ambulance as very good. According to 12.9% of the respondents the condition of the stretcher in the ambulance was good, while

majority (87.1%) rated the condition of the stretcher as very good. Only 12.9% of the respondents described that the adequacy of the equipment in the ambulance was good, while majority (87.1%) of the respondents described that the adequacy of the equipment in the ambulance was very good. There were only 11.8% of the respondents who said that the safety in the ambulance was good, while majority (88.2%) of the respondents said that the safety in the ambulance was very good.

Table 4.1.26: Distribution of the respondents according to their views about the efficiency of the service

o	Characteristics	Very poor	Poor	Average	Good	Very good	Total	Mean	Std. Deviation
	Response time	3.5%(12)	3.8%(13)	6.5%(22)	11.5%(39)	74.7%(254)	100%(340)	4.5	1.01
	Time from scene to hospital	2.6%(9)	3.8%(13)	6.8%(23)	11.8%(40)	75%(255)	100%(340)	4.52 6	0.966
i	Availability of the service	1.2%(4)	1.2%(4)	6.2%(21)	5.9%(20)	86.5%(291)	100%(340)	4.73 5	0.72

Table 4.1.26 depicts that there are only 3.5%, 3.8%, and 6.5% of the respondents rated the response time of Punjab Emergency Service Rescue 1122 as very poor, poor and average respectively. There were 11.5% of the respondents who rated the response time of the service as good, while majority (74.7%) of the respondents rated the response time as very good. The table shows that there were 2.6%, 3.8% and 6.8% of the respondents who expressed that the time consumed from scene to hospital by the rescue team was very poor, poor and average respectively. There were only 11.8% of the respondents who rated the time from scene to hospital as good, while majority (75%) of the respondents rated this characteristics of the service as very good. There were 1.2%, 1.2%, 6.2%

and 5.9% of the respondents who said that the availability of the service at the time of emergency was very poor, poor, average and good respectively. Most (86.5%) of the respondents rated the availability of the ambulance as very good at the time of emergency.

Table 4.1.27: Distribution of the respondents according to their views about the behaviour of the rescue team

S. No	Characteristics	Good	Very good	Total	Mean	Std. Deviation
i	Politeness	11.5%(39)	88.5%(301)	100%(340)	4.885	0.319
ii	Helpfulness	11.2%(38)	88.8%(302)	100%(340)	4.888	0.315
iii	Attentiveness	10.6%(36)	89.4%(304)	100%(340)	4.894	0.318
iv	Friendliness	10.9%(37)	89.1%(303)	100%(340)	4.891	0.311

Behaviour of the rescue team plays a vital role in determining the patients' satisfaction. Table 4.1.27 reveals that only 11.5% of the respondents rated the politeness of the rescue team during their interaction with them as good, majority (88.5%) of the respondents revealed that the politeness of the rescue team was very good. The table also shows that 11.2% of the respondents valued the helpfulness of the rescue team at the time of emergency as good. Most (88.8%) of the respondents rated the helpfulness of the staff as very good. Attentiveness of the rescue team felt good and very good by 10.6% and 89.4% of the respondents respectively. There were 10.9% respondents who described their views about the friendliness of the staff as good, while majority (89.1%) rated the friendliness of the rescue team with them at the time of emergency as very good.

Table 4.1.28: Distribution of the respondents according to their views about professionalism of the rescue team

S. No	Characteristics	Good	Very good	Total	Mean	Std. Deviation
i	Way of transfer in ambulance	1.8%(6)	98.2%(334)	100%(340)	4.982	0.131
ii	Level of training	7.6%(26)	92.4%(314)	100%(340)	4.923	0.266
iii	Treatment	2.1%(7)	97.9%(333)	100%(340)	4.979	0.142
iv	Explanation about health	1.5%(5)	98.5%(335)	100%(340)	4.985	0.120
v	Driving	1.2%(4)	98.8%(336)	100%(340)	4.988	0.107

The professionalism of the rescue team is a key factor of patients; gratification from the prehospital emergency services. Table 4.1.28 shows that only 1.8% of the respondents said that way of transfer the patient into ambulance by the rescue team was good. Almost all (98.2%) of the respondents rated the way of shifting into the ambulance was very good. Only 7.6% of the respondents rated the level of training of the rescue team good and majority (92.4%) rated it very good. Treatment given by the rescue team was good according to 2.1% of the respondents, and majority (97.9%) of the respondents rated it very good. Explanation about the health condition was rated good by 1.5% of the respondents and high majority (98.5%) of the respondents revealed that the explanation about their health condition by the rescue team was very good. Driving of the ambulance drivers rated good by 1.2% of the respondents, while majority (98.8%) of the respondents rated that the driving as very good.

Table 4.1.29: Distribution of the respondents according to their level of reuse the service and suggestion to their familiar people to use the service

S. No	Characteristics	High	Very high	Total	Mean	Std. Deviation
i	Preference for the reuse of the service	5.3%(18)	94.7%(322)	100%(340)	4.947	0.224
ii	Suggesting to familiar people	5%(17)	95%(323)	100%(340)	4.95	0.218

Table 4.1.29 depicts that only 5.3% of the respondents showed high level of their intention to reuse the service in future in case of emergency. Majority (94.7%) of the respondents showed very high level of intention to reuse the service in future. The table also shows that five percent of the respondents had high level of intention to suggest this service to familiar people in case of emergency. Majority (95%) of the respondents showed a very high level of intention to suggest this service to their familiar people. These highly positive results are because of the efficiency and quality of the service.

Table 4.1.30: Distribution of the respondents according to their level of gratification from ambulance, professionalism and behaviour of the rescue team

S. No	Characteristics	High	Very high	Total	Mean	Std. Deviation
i	Ambulance	11.5%(39)	88.5%(301)	100%(340)	4.885	0.319
ii	Professionalism	11.5%(39)	88.5%(301)	100%(340)	4.885	0.319
iii	Behavior	15.3%(52)	84.7%(288)	100%(340)	4.847	0.360

Table 4.1.30 shows that only 11.5% of the respondents showed high level of gratification from the ambulance. Majority (88.5%) of the respondents revealed very high level of gratification to the ambulance. There were 11.5% of the respondents who had high level of gratification from the professionalism of the rescue team and majority (88.5%) of the respondents showed very high level of satisfaction from the professionalism of the rescue team. There were 15.3% of the respondents who expressed their high level of the satisfaction with behaviour of the rescue team and majority (84.7%) had very high level of satisfaction from the behaviour of the rescue team, during the time of the emergency faced by the respondents.

Table 4.1.31: Distribution of the respondents according to their level of gratification with the efficiency of the service

S. No	Characteristics	Very low	Low	Average	High	Very high	Total	Mean	Std. Deviation
i	Efficiency of the service	0.9%(3)	5%(17)	20(5.9%)	13.2%(45)	75%(255)	100%(340)	4.564	0.878

Table 4.1.31 shows that only 0.9%, 5% and 5.9% of the respondents rated their level of gratification from the efficiency of the Punjab Emergency Service Rescue 1122 very low, low and average respectively. There were 13.2% of the respondents showed high level of satisfaction, while majority (75%) had very high level of gratification from the efficiency of the service.

4.2: Inferential Statistics

Inferential statistics is used to draw conclusion of the study. It is applied to find out the association between independent and dependent variables of the study. In this study bivariate correlation test was applied to test the hypotheses of the study.

4.3: Correlational analysis

Hypothesis 1: Relationship between response time and gratification of the patients

Null hypothesis: There is no inverse relationship between response time and level of gratification of the patients

Alternative hypothesis: There is an inverse relationship between the response time and the level of the gratification of the patients

Table 4.3.1: Relationship between response time and gratification of the patients

Variables	Correlation	P-Value
Response time & patients' gratification	-0.85**	0.000

Note: **P<0.01

Table 4.3.1 shows that the correlation (r = -0.85**) between response time and gratification of the patients was strongly negative. Response time is an important factor of patients' gratification from the Prehospital Emergency Services. It shows that less time taken by the rescue team approaching at the scene, higher is the level of gratification of the patients. The result of correlational analysis shows that the null hypothesis is rejected and alternative hypothesis is accepted.

Hypothesis 2: Relationship between better look of ambulance and gratification of the patients

Null hypothesis: There is no relationship between quality of ambulance and gratification of the patients

Alternative hypothesis: There is a relationship between quality of ambulance and the gratification of the patients

Table 4.3.2: Relationship between better outlook of ambulance and gratification of the patients

Variables	Correlation	P-Value
Outlook of ambulance & gratification of the patients	0.97**	0.000

Note: **P<0.01

Table 4.3.2 shows that there is a strong positive (r = o.97**) relationship between quality of ambulance and the gratification of the patients. The result of correlational analysis shows that the null hypothesis is rejected and alternative hypothesis is accepted.

Hypothesis 3: Relationship between efficiency of the service and the gratification of the patients

Null hypothesis: There is no relationship between efficiency of the service and gratification of the patients

Alternative hypothesis: There is a relationship between efficiency of the service and gratification of the patients

Table 4.3.3: Relationship between efficiency of the service and gratification of the patients

Variables	Correlation	P-Value
Efficiency of the service & patients' gratification	0.95**	0.000

Note: **P<0.01

Table 4.3.3 shows that there is a strong positive (r = 0.95**) relationship between efficiency of the service and gratification of the patients. The result of correlational analysis shows that the null hypothesis is rejected and alternative hypothesis is accepted.

Hypothesis 4: Relationship between behaviour of the rescue team and gratification of the patients

Null hypothesis: There is no relationship between behaviour of the rescue team and gratification of the patients

Alternative hypothesis: There is a relationship between behaviour of the rescue team and patients' gratification

Table4.3.4: Relationship between behaviour of the rescue team and gratification of the patients

Variables	Correlation	P-Value
Behavior of the rescue team & patients' gratification	0.81**	0.000

Note: **P<0.01

Table 4.3.4 reveals that there is a strong positive (r = 0.81**) relationship between behaviour of the rescue team and the gratification of the patients. The result of correlational analysis shows that the null hypothesis is rejected and alternative hypothesis is accepted.

Hypothesis 5: Relationship between professionalism of the rescue team and gratification of the patients

Null hypothesis: There is no relationship between professionalism of the rescue team and gratification of the patients

Alternative hypothesis: There is a relationship between professionalism of the rescue team and patients' gratification

Table 4.3.5: Relationship between professionalism of the rescue team and gratification of the patients

Variables	Correlation	P-Value
professionalism of the rescue team and patients' gratification	0.90**	0.000

Note: **P<0.01

Table 4.3.5 shows that there is a strong positive (r = 0.90**) relationship between professionalism of the rescue team and the patients' gratification. The result of correlational analysis shows that the null hypothesis is rejected and alternative hypothesis is accepted.

CHAPTER FIVE

FINDINGS, CONCLUSION AND RECOMMENDATIONS

After applying the statistics, and interpreting the results of analysis, the major findings of the study are following:

5.1 FINDINGS

- Majority (70%) of the respondents included in the study were male.

- Most (67.6%) of the respondents belonged to rural area.

- More than half 56.8% of the respondents belonged to age group 16-30 years.

- A great number of the respondents (62.4%) were married.

- Almost (50.6%) of the respondents were living in nuclear family system

- Less than half (45.3%) of the respondents were illiterate.

- Almost one fourth (24.4%) of the respondents were unskilled labourers.

- Majority (61.5%) of the respondents had income between 10001-20000 rupees.

- Majority (75%) of the respondents faced the emergency, while they were travelling.

- Two third (75%) of the respondents became the victims of the road traffic accidents.

- Almost one fifth (20.9%) of the respondents faced medical emergency.

- There were 35.2% of the respondents had severe pain in the body.

- More than half (54.92%) of the respondents who faced medical emergency were females.

- Most (56.33%) of the respondents who faced medical emergency belonged to urban area.

- Majority (76.07%) of the respondents who became the victims of the road traffic accidents were males.

- A great number (73.73%) of the respondents who faced road traffic accidents were from rural area.

- Sixty percent of the respondents belonged to age group 16-30 years in RTAs.

- Most (40.4%) of the road traffic accidents happened between 12:00-03:59 PM.

- Majority (90.2%) of the victims of the TRAs were riding on motorcycles.

- More than one third (36.9%) of the respondents who faced RTAs hit with rickshaw (a three wheelers vehicle).

- Most (41.6%) of the victims of RTAs had fracture.

- Two third (75%) of the respondents were at public place, when they faced the emergency.

- In 40% cases by passers called to the Punjab Emergency Service Rescue 1122.

- In majority (86.8%) of the emergencies ambulance reached on scene between 1-7 minutes.

- In more than half (56.5%) cases the rescue team did not inform to any of the familiar person of the patient.

- Slightly less than half (47.9%) of the respondents received medical treatment on scene within 6-10 minutes.

- All 100% respondents received medical treatment on scene.

- Majority (85.3%) of the respondents said the way they were transferred into ambulance by the rescue team was appropriate to great extent.

- A great number (90%) of the respondents said that to great extent they explained by the rescue team about their transfer to hospital.

- All 100% respondents received medical treatment during their journey in the ambulance.

- All 100% of the respondents said that the rescue team treated them with care.

- Almost all (99.4%) of the respondents received attention by the rescue team to great extent.

- Majority (91.2%) of the respondents felt comfort in ambulance during their journey to hospital to great extent.

- Majority (87.1%) of the respondents were shifted from scene to hospital between 1-7 minutes.

- Most (83.8%) of the respondents had to wait for doctor in the hospital for 1-3 minutes.

- Majority (89.1) of the respondents said that the treatment in the hospital was effective to great extent.

- A great number (87.6%) of the patients remained in the hospital for 1-3 hours.

- Majority (82.9%) of the respondents used their own vehicle to go back to home from hospital.

5.2: Conclusion

It is concluded from the study that male and people of the rural areas are main beneficiaries of the Punjab Emergency Service Rescue 1122 in Tehsil Chiniot. People belonging to age group of 16-30 mostly use the service mostly in the cases of emergencies. The study investigated that most of the users of the service were the victims of the Road Traffic Accidents as compared to the medical patients. The study showed that the victims of RTAs were mostly male and young. It is revealed by the study that the in case of emergency someone else called for the victims instead of victims themselves. The main aim of the Prehospital medical service is quick response to the emergency. Present study showed that in most of the emergency cases the ambulance approached at the scene within seven minutes. But in very few cases of emergency in the rural areas the ambulance spent more than 10 minutes due to long distance. The rescue team treated the victims both at scene and during their journey from scene to the hospital to stabilize their condition.

The rescue team treated the patients with care and paid attention to the needs of the patients very well. The study showed that treatment of the patients in the hospital was very good and patients remained in the hospital for a short time. The results of the study showed that the patients' gratification was strongly attached with quality of ambulance, behaviour and professionalism of the rescue team and the efficiency of the service. It is concluded from the present study that majority of the patients showed a very high level of gratification with quality of ambulance, behaviour and professionalism of the rescue team and efficiency of the service. The response time is a key element for gratification of the patients. It is investigated by the study that patients' showed very high level of gratification with response time, because in majority of the cases the rescue team reached at the scene of emergency within seven minutes.

5.3: Recommendations

In the light of the findings and conclusion of the current study, following suggestion are recommended

- The establishment of the substation near the rural areas may decrease the response time for emergencies happening in rural areas.

- By launching a campaign for creating awareness among people about following the traffic rules may decrease road traffic accidents.

- By informing people about the availability of the ambulance in case of medical emergencies may increase its use for medical patients.

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APPENDIX
INTERVIEW SCHEDULE

"USE OF PUNJAB EMERGENCY SERVICE (RESCUE 1122) FOR THE PATIENTS: STUDY OF GRATIFICATION"

PERSONAL

1. Gender of the respondent?   (i) Male   (ii) Female

2. What is your area of residence?   (i) Urban   (ii) Rural

3. What is your age? (In complete years) ————————

4. What is your marital status?   (i) Single (ii) Married   (iii) Widowed   (iv) Divorced

5. What type of family you are living in?   (i) Nuclear   (ii) Joint   (iii) Extended

6. What is your level of educational qualification?

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	16+

7. What is your occupation?

   (i) Government service (ii) Private service (iii) Self-employed (iv) Farmer (v) Skilled labourer (vi) Unskilled labourer (vii) Driver (viii) Student (ix) Housewife (x) Any other (please specify)____

8. What is your monthly income? (In Rupees) _____

EMERGENCY

9. What were you doing when you faced the emergency?

   (i) Working at work place (ii) Working at home (iii) Travelling (iv) Rest
   (v) Any other (Please specify) _____

10. What type of emergency did you face?

    (i) Medical (ii) Road traffic accident (iii) Fire at work place (iv) Fire at home (v) Building collapsed (vi) Criminal incident (vii) Drowning (viii) Bomb blast (ix) Cylinder explosion (x) Fall from height (xi) Any other (please specify)————

11. What type of medical emergency did you face? (Please specify) ————

12. What was the time, when the road traffic accident happened?

    (i) 12:00-3:59AM (ii)04:00-7:59AM (iii) 08:00-11:59AM (iv) 12:00-03:59PM

    (v) 04:00-07:59PM (vi) 08:59- 11:59PM

13. Which was the vehicle of the victim? (i) Bicycle (ii) Motorcycle (iii) Rickshaw (iv) Car
    (v) Bus (vi) Truck (vii) Tractor (viii) Any other (please specify)_____

14. Which vehicle, hit the victim? (i) Bicycle (ii) Motorcycle (iii) Rickshaw (iv) Car

    (v) Bus (vi) Truck (vii) Tractor (viii) Any other (please specify)_____

15. What type of injury did you receive?

    (i)   Head (ii) Spinal (iii) Fracture (iv) Chest (v) Abdominal (vi) Burn (vii) Cut

    (viii) Any other (Please specify) _____

SERVICE

16. Where were you when the ambulance service was called? (i) At home

    (ii) At a public place (iii) At work place (iv) Any other (please specify) _____

17. Who made call to (Rescue 1122)?
    (i) Yourself (ii) By Passer (iii) By Stander (iv) Any other (Please specify)_____
           If (i) ⟶ 18, else ⟶ 21

18. How much time was taken to connect with call taker? (In minutes)   _____

19. How much time did the call taker tell, for reaching the ambulance? (In minutes) _____

20. Was the call taker reassuring?   (i) Yes   (ii) No

21. How much distance was from ambulance dispatch centre to place of emergency?
          (In KM)_____

22. How much time was taken by the rescue team in approaching at scene?
          (In minutes)_____

23. Which relative was informed about your emergency by rescue team?

    (i)   Father (ii) Mother (iii) Brother (iv) Other relatives (v) Friend (vi) None

            (vii) Any other (Please specify —————

24. How much did rescue team spend time with you on the scene? (In minutes) _____

25. Did rescue team give you medical treatment on the scene?   (i) Yes   (ii) No

26. Was the way you transferred in to ambulance by rescue team appropriate?

    (i) To great extent (ii) To some extent   (iii) Not at all

27. How clearly rescue team explained, why were you taking to hospital?

    (i)   To great extent   (ii)   To some extent   (iii) Not at all

28. Did you receive any treatment during your journey in the ambulance? (i) Yes (ii) No

29. Did rescue team treat you with care?   (i) Yes   (ii) No

30. Did rescue team pay attention to your needs?

    (i) To great extent   (ii) To some extent   (iii) Not at all

31. Did driver of ambulance use siren while driving?   (i) Yes   (ii) No

32. Was your journey from scene to hospital comfortable?

    (i)   To great extent   (ii) To some extent   (iii) Not at all

33. How much time was consumed from scene to hospital? (In minutes) ——————

HOSPITALIZATION

34. How long did you wait to be seen by a doctor in the hospital? (In minutes)_____

35. How effectively did doctor treat you in the hospital?

    (i)   To great extent   (ii) To some extent   (iii) Not at all

36. How much time did you remain in the hospital? _____

37. How did you get home from the hospital? (i) Ambulance (ii) Taxi (iii) Own Vehicle

    (iv) Any other (please specify) _____

38. **Ambulance**

How would you rate the following statements about the quality of ambulance?

(Very poor 1, Poor 2, Average 3, Good 4, Very good 5)

	Statement	Very poor	Poor	Average	Good	Very good
i	External appearance of the ambulance	1	2	3	4	5
ii	Internal hygienic condition of the ambulance	1	2	3	4	5
iii	Condition of stretcher in the ambulance	1	2	3	4	5
iv	Comfort of ride in the ambulance	1	2	3	4	5
v	Adequacy of the equipment in the ambulance	1	2	3	4	5
vi	Your feelings of safety in the ambulance	1	2	3	4	5

39. **Efficiency of the service:** Please explain how the efficiency of service was?

	Statement	Very poor	Poor	Average	Good	Very good
i	To what extent ambulance arrived in timely manner	1	2	3	4	5
ii	Speed of admittance from scene to hospital by rescue team	1	2	3	4	5
iii	Degree to which availability of ambulance all the time	1	2	3	4	5

40-. **Behaviour of the staff**
How would you rate the following statements about the behaviour of staff?

	Statement	Very poor	Poor	Average	Good	Very good
i	Politeness of staff in communicating with you	1	2	3	4	5
ii	Helpfulness of staff to recover you from emergency	1	2	3	4	5
iii	Attentiveness of staff to listen your needs and problems	1	2	3	4	5
iv	Friendliness of the staff in dealing with you	1	2	3	4	5

41. **Professionalism and competency of the staff**

Now I want to get information from you about the professionalism and competency of staff

	Statement	Very poor	Poor	Average	good	Very good
i	The way you transferred in ambulance by rescue team	1	2	3	4	5
ii	Level of training of rescue team to handle the emergency situation	1	2	3	4	5
iii	Treatment given to you by rescue team	1	2	3	4	5
iv	Explanation of rescue team to you about your health situation	1	2	3	4	5
v	The way of driver, while driving	1	2	3	4	5

42. **Overall performance:**
Please give your comments about the overall performance of the service (Very low 1, Low 2, Average 3, High 4, Very high 5)

	Statement	Very low	Low	Average	High	Very high
i	Level of your preference to reuse service in future	1	2	3	4	5
ii	Level of your preference to suggest to your familiar people to use service	1	2	3	4	5
iii	Level of gratification from the condition of the ambulance	1	2	3	4	5
iv	Level of gratification from the professionalism of the staff	1	2	3	4	5
	Level of gratification from the behavior of the staff	1	2	3	4	5
v	Level of the efficiency of service	1	2	3	4	5