ACQUIRED LIMB AMPUTATION: AN INTERRELATIONSHIP OF FAMILIAL-SOCIAL SUPPORT, SELF-ESTEEM AND PSYCHOLOGICAL ADJUSTMENT

By

SHAISTA ALI

COLLEGE OF HOME ECONOMICS,
UNIVERSITY OF PESHAWAR
2015

ACQUIRED LIMB AMPUTATION: AN INTERRELATIONSHIP OF FAMILIAL-SOCIAL SUPPORT, SELF-ESTEEM AND PSYCHOLOGICAL ADJUSTMENT

By

SHAISTA ALI

A Dissertation Submitted to the University of Peshawar for the partial fulfillment of the requirement for the Degree of

DOCTOR OF PHILOSOPHY

in

Home Economics (Human Development and Family Studies)

COLLEGE OF HOME ECONOMICS,
UNIVERSITY OF PESHAWAR
2015

APPROVAL CERTIFICATE

The dissertation entitled "Acquired Limb Amputation: An Interrelationship of Familial-Social Support, Self-esteem and Psychological Adjustment" submitted to University of Peshawar by Shaista Ali, is hereby approved and recommended as partial fulfillment for the award of Degree of Philosophy in Home Economics with specialization in Human Development and Family Studies.

APPROVED BY:

Research Supervisor

Prof. Dr. Syeda Kaniz Fatima Haider
Head
Department of Human Development and Family Studies
College of Home Economics
University of Peshawar

External Examiner

Principal

Prof. Dr. Syeda Kaniz Fatima Haider
College of Home Economics
University of Peshawar

Dated 10-02-2017

DIRECTORATE OF QUALITY ENHANCEMENT
University of Peshawar, Peshawar, Pakistan

No:1568/DQE

November 26, 2015

Anti-Plagiarism Test Certificate
For MPhil/PhD Thesis/Synopsis

Plagiarism Detection Software Used:	Turnitin (HEC Recommended)
Name of Scholar:	Ms. Shaista Ali
Level of Thesis/Synopsis:	PhD. Thesis
Department/Institute/Centre:	College of Home Economics, University of Peshawar
Title of Thesis /Synopsis:	Acquired Limb Amputation: an Interrelationship of Familial Social Support, Self-Esteem and Psychological Adjustment
Turnitin Paper ID:	606169222 (report generated on Nov 26, 2015)
Matching (Similarity) Index Found:	05 % (Five Percent Only)
Comments: (Plagiarized/Not Plagiarized)	Not Plagiarized
Name & Signature of Supervisor:	Prof. Dr. Kaniz Fatima
Head of Department/Institute/Centre: Office seal:	

Deputy Director (DQE)
University of Peshawar

E-mail: qec@upesh.edu.pk, website: qec.upesh.edu.pk, Ph: ++92-91-9218236 Ext.3089

DEDICATED
TO
M Y PARENTS

ACKNOWLEDGEMENT

Learning by experience is often painful,

and the more it hurts the more you learn

To err is human and no one in this world is perfect. We find ourselves always in need of someone for help in achieving our life goals and ambitions. And as such, no doubt, in the compilation of this work I was helped by many people whose assistance, guidance and encouragement made it possible for me to achieve this task in a timely manner. I have worked with a number of people whose contribution to this research in various ways deserved special recognition. It is a pleasure to convey my gratitude to all of them in my humble acknowledgment.

First and Foremost I offer my sincere acknowledgement to Allah Almighty for being so generous with me. Praise and thanks be to Allah, first and last, Lord and Cherisher of all the worlds who taught humankind everything it knew not. It gives me immense pleasure to acknowledge my supervisor Prof. Dr. Syeda Kaniz-e- Fatima Haider, who tirelessly helped me in completion of this thesis. She supported me throughout with patience and knowledge whilst allowing me the room to work in my own way. I attribute the level of my work to her encouragement and effort and without her this thesis would not have been completed. The sincerity and enthusiasm she has for research was contagious and motivational for me, even during tough times in the Ph.D. pursuit. One simply could not wish for a better or friendlier supervisor.

I am also grateful to my family without whom I would not be able to reached this stage of life. My parents deserve special mention for their inseparable support and prayers. In the first place, my father is the person who put the fundament of my learning character, showing me the joy of intellectual pursuit ever since I was a child. My Mother, the one who sincerely raised me with her caring and gentle love and my siblings whose love, support and encouragement gave me strength to complete this task. I am thankful to all of them for supporting me throughout my studies and for providing a home environment in which it's a pleasure to live.

Words fail me to express my special thanks and appreciation to my brother Prof. Dr. Muhammad Arif, who is not only an elder brother but also a role model and source of inspiration for me. His advices, guidance and support from the very early stages of my educational years inspired and enriched my growth as a student and provided me unflinching encouragement throughout my educational and professional career. His sincere support and persistent confidence in me, has taken the load off my shoulders. I am thankful to him for being unselfishly supportive through every phase of my life.

I would also like to thank my husband Dr. Satar, who occupies a special place among all who have helped and encouraged me during my journey of conducting this study. His moral support, continuous motivation and facilitation made it possible for me to conduct this research. I also owe an apology to my adorable daughter Zeenya Satar who bore my unintentional neglect during the course of research work. I can never compensate for the hours of love and affection lost during my research work, which I owed to her.

I wish to express my sincere gratitude to Dr Madiha Asghar, Ms Shazia Durrani and Ms Fariha Gul for their help, comments and suggestions throughout the research. Their enthusiasm, intense involvement and affection during the course of my research work are worth regarding. I would like to express my appreciation to all my other friends and colleagues, who assisted me in one way or another.

I am grateful to the administrations of all the hospitals for sharing heir hospital records and providing the required data. And the most of all, I am thankful to those without whose cooperation this research really would not have happened i.e. the amputee's, who were indeed the participants of my study. Despite all physical and psychosocial challenges and living a life with countless personal and social issues they were the ones, who showed enough courage by stepping forward to share their feelings and experiences and participated in the study. I shall always remain indebted to them for their understanding and concern for my work. I also cherish and admire the innocent support that they expressed for my effort through their tearful eyes; tears of their helplessness, or of joy and hope as I understood. It was just this glitter in their eyes that made it possible for me. Thank you indeed and thank you all.

SHAISTA ALI

ABSTRACT

The present study was designed to examine the nature and severity of psychological pain and distress associated with limb loss and explore its psychosocial consequences. The primary aim of the study was to determine the predictive relationship between familial social support, self-esteem and psychological adjustment of amputees. The study further attempted to evaluate the role of various psychosocial and demographic factors in the process of successful adjustment to amputation. In order to answer the formulated research questions and test the study hypotheses Familial-Social Support Scale for Patients (Nousheen and Kamal 2001), Self-Esteem Scale (Rifai and Tariq, 1999) and Psychological Adjustment Scale (Sabir, 1999) were used. The data was gathered from the surgical and orthopedic wards of different government and private hospitals of district Peshawar, Khyber Pakhtunkhwa. The findings of linear regression analyses revealed significant prediction of successful psychological adjustment due to positive self-esteem and adequate familial social support. Result confirmed that support tends to increase an amputee's ability to perceive positively the reality of this tragic incidence and also help them to cope with the stress and anxiety produced by limb loss. Moreover, familial-social support increases an amputee's level of self-acceptance, self-competence and self-esteem which in turns helps them to adjust successfully to the terrible incidence of amputation. Analyses of variance and t-test analysis demonstrated significant differences in an amputee's level of self-esteem and psychological adjustment on the bases of gender, age, educational status, cause, time since amputation and ability to do

normal routine tasks. The present study affirmed that one of the greatest difficulties for an individual experiencing limb loss is not only to triumph over the physical pain of amputation surgery but also to overcome the psychological and social stigma associated with loss of limb. Amputees need assurances and support from family and community in order to overcome their post amputation fears and doubts. It emphasizes that psychological intervention is very essential for the amputees to bring them out of their shell and make them adjust in society by letting go off their amputation trauma feelings. The current research suggested that an enrich and stimulating environment should be provided to these people in order to help them to adjust to their disability in a positive growth promoting way and become productive and contributing members of the society

TABLE OF CONTENTS

Acknowledgement i

Abstract iv

Table of Contents vi

List of Tables ix

List of Figures xii

List of Appendices xiii

CHAPTER-1 1

INTRODUCTION 1

1.1 History of Limb Amputation 4

1.2 Cultural Perspective of Amputation in Ancient Times 6

1.3 Amputations: At present. 8

1.3.1 Skin 8

1.3.2 Muscle 8

1.3.3 Nerves 9

1.3.4 Blood Vessels 9

1.3.5 Bones 9

1.4 Causes of Acquired Limb Amputation 10

1.4.1 Trauma 10

1.4.2 Tumor 11

1.4.3 Diabetes 11

1.4.4 Peripheral Vascular Disease 12

1.5 Types of Acquired Limb Amputation 13

1.5.1 Lower Limb Amputation 13

1.5.2 Upper Limb Amputations 15

1.6 Psychological aspect of amputation 16

1.7 Psycho-Social consequences of Acquired Limb Amputation 19

1.8 Impact of Amputation on the Family 20

1.9 Determinants of Psychological Response to Amputation 21

1.9.1 Age: 21

1.9.2 Gender:.....21
1.9.3 Personality Style:.....22
1.9.4 Economic and Vocational Variables:.....22
1.9.5 Nature of amputation.....22
1.9.6 Health status.....23
1.10 Amputation and Familial-Social Support.....23
1.11 Self-esteem and Amputation.....25
1.11.1 Shock.....26
1.11.2 Defensive retreat.....27
1.11.3 Acknowledgement:.....27
1.11.4 Adaptation.....27
1.12 Psychosocial adjustment to Amputation.....28
1.12.1 Challenges.....31
1.13 Rationale of the study:.....33
CHAPTER 2.....38
RESEARCH DESIGN, OBJECTIVES, HYPOTHESES AND OPERATIONAL DEFINITIONS OF THE VARIABLES.....38
2.1 Statement of the Problem.....38
2.2 Nature of the Study.....38
2.3 Objectives.....38
2.4 Hypotheses.....39
2.5 Operational definitions.....41
2.6 Research design.....45
CHAPTER 3.....46
METHODOLOGY.....46
3.1 Sample.....46
3.2 Mode of Data collection.....47
3.2.1 Inclusion Criteria.....48
3.2.2 Exclusion Criteria.....49
3.3 Instruments.....50
3.3.1 Demographic Data Sheet.....50

3.3.2 Familial Social Support Scale for Patients (FSSSP) 50
3.3.3 Self-Esteem Scale 51
3.3.4 Psychological Adjustment Scale 52
CHAPTER-4 63
RESULTS 63
4.1 Nature and cause of amputation surgery 74
4.2 Differences in cause of amputation and level of Psychological adjustment and self-esteem 76
CHAPTER 5 92
DISCUSSION 92
CHAPTER-6 118
SUMMARY, CONCLUSION, LIMITATIONS AND RECOMMENDATIONS 118
6.1 Summary 118
6.2 Conclusion 121
6.3 Limitations 122
6.4 Recommendations 123
6.4.1 Practical Implications 125
6.4.2 Educational and Action Plans 129
REFERENCES 131
APPENDICES 143

LIST OF TABLES

Table-1.1: Some Facts about Disability Rate in Pakistan 3

Table-1.2: Historical Summary of Researches on Psychological aspects of Amputation 17

Table-1.3: Disabilities in Khyber Pakhtunkhwa 35

Table-3.1: Describing number of respondents from each hospital (N=100) 48

Table-3.2: Gender, Age and Educational and occupational status of Respondents (N = 100) 54

Table-3.3: Income Status &Sources, Area Of Residence And Family System Of Respondents. (N=100) 56

Table-3.4: Cause, time since amputation and ability to do routine tasks (N=100) 58

Table-4.1: Cross Tabulation between Gender and cause of amputation (N=100) 64

Table-4.2: Cross Tabulation between ability to do routine tasks and time period since amputation (N = 100) 65

Table-4.3: Cross Tabulation between area of residence and cause of amputation (N=100) 66

Table-4.4: Cross Tabulation between Age group and Gender of amputees (N=100) 67

Table-4.5: Cross Tabulation between Age group and cause of amputation (N=100) 68

Figure-4.5: Cylindrical bar chart describing differences in the cause of amputation on the bases of Age group (N=100).....68

Table-4.6: Descriptive statistics and reliability estimates of all scales (N=100).....69

Table-4.7: Descriptive Statistics and reliability estimates of Subscales of Self-Esteem Scale (N=100) & Psychological Adjustment scale (N = 100).....70

Table-4.8: Alpha Reliability of Male (N = 80) and female participants (N = 20). 72

Table-4.9: Correlation Matrix of all the Scales and Subscales (n= 100).....73

Table-4.10: Nature of amputation surgery (N=100) 74

Table-4.11: Means, Standard Deviations & t-Values for unplanned and planned causes of amputation (N=100) 76

Table-4.12: Analyses of variance of Psychological adjustment, self-esteem and educational status (N = 100) 77

Table-4.13: Analyses of variance of Psychological adjustment, self-esteem and Age groups (N = 100) 79

Table-4.14: Means, Standard Deviations & t-Values on level of Psychological Adjustment and Self Esteem for less and more time since amputation (N = 100) 81

Table-4.15: Means, Standard Deviations & t-Values on level of Psychological Adjustment and Self-esteem for ability to do routine work or not (N = 100).....82

Table-4.16: Means, Standard Deviations & t-Values on level of Psychological Adjustment and Self Esteem for both genders (N = 100).....83

Table-4.17: Means, Standard Deviations & t-Values on level of Psychological Adjustment and Self-esteem for rural and urban areas (N = 100) 84

Table-4.18: Regression Analysis of perception of reality predicting self-Acceptance in amputees (N = 100) 85

Table-4.19 Regression Analysis of level of self-acceptance predicting psychologically adjustment of amputees (N = 100) 86

Table-4.20: Regression Analysis of Positive self-image predicting Self-Competence in amputees (N = 100) 87

Table-4.21: Regression Analysis of familial–social support predicting amputee's ability to cope with stress and anxiety (N = 100) 88

Table-4.22: Regression Analysis of Familial Social support predicting self-esteem (N = 100) 89

Table-4.23: Regression Analysis for self-esteem predicting psychological Adjustment (N = 100) 90

Table-4.24: Predictors of psychological Adjustment (N=100) 91

LIST OF FIGURES

Figure-1.2: Conceptual Framework of Relationship among Study Variables 37

Figure-4.1: Bar chart describing gender differences on the basis of cause. (N=100) 64

Figure-4.2: Bar chart describing ability to perform routine task on the basis of time period since amputation (N=100) 65

Figure-4.3: Bar char describing the causes of amputation on the basis of area of residence (N=100) 66

Figure-4.4: Cylindrical bar chart describing the incidence of amputation in different Age groups and Gender (N = 100) 67

Figure-4.5: Cylindrical bar chart describing differences in the cause of amputation on the bases of Age group (N=100) 68

Figure-4.6: Cubic bar chart describing Unplanned and Planned causes of Amputation (N=100) 75

LIST OF APPENDICES

Appendix-A: General Instructions 143

Appendix-B: Demographic Data Sheet 144

Appendix-C: Familial Social Support Scale for Patients 145

Appendix-D: Self-Esteem Scale 147

Appendix-E: Psychological Adjustment Scale 149

Appendix-F: Posthoc Analyses 151

CHAPTER-1

INTRODUCTION

Limb Amputation is indeed quite devastating and heart-breaking incidence both physically as well as emotionally. Cutting off limb from body is excruciating and the worst nightmare for every human being on earth (Pardasaney, Poonam, Sullivan, Patricia, Portney, Leslie, & Mankin, 2006). Therefore, it is quite apparent that any individual who goes through acquired limb amputation experiences most gloomy days of his life and it takes him some time before he can get over this shock.

Amputation in itself is a generic term which simply means removal or cutting off. Acquired limb amputation or surgical removal of any body part is a treatment strategy for the diseased, infected or injured limb. The person who gets any of his body part removed is called an amputee. In the English dictionary, the word limb has a literal meaning of "an arm or leg" of a person and the word "amputation" means "to cut off (all or part of body) by surgery" or "to prune, lop off or remove". In medical terminology, the term amputation means "the surgical removal of a limb due to complications associated with disease or trauma". Usually the amputation surgery is done to control pain and prevent further spread of infection or disease in the affected limb (Soomro, Bibi, Ahmed, Kamran, Minhas, Siddiqui, 2013)..

Amputation is gradually becoming a serious problem around the globe as the number of amputees is increasing at a rapid pace worldwide. At the

present time, the common reasons of growing amputation rate are road traffic accidents, gun-shot wounds, diabetes, vascular diseases, bomb blasts and natural disasters (Abou-Zamzam, 2003 & Aragon-Sanchez, 2009). Throughout the world a large number of studies have been conducted on different disabilities including amputation. In this respect, the first ever world report on the incidence of various disabilities was produced jointly by World Health Organization (WHO) and the World Bank. It was reported that more than a billion people experience different forms of disabilities around the world and proper implementation of rehabilitation programs was suggested to minimize its consequences as much as possible (WHO, June 2011).

According to the estimates of World Health Organization, almost 30 million people required prosthetic limbs, braces, or other devices in Latin America, Africa, and Asia combined, in the year 2006 (Aleccia, 2010). Similarly, studies showed that United States had people more than 110,000 who lost their limbs every year as a result of amputation and approximately 91.7% of such amputations was related to lower extremities (Dillingham, Pezzin, & MacKenzie, 2002). In addition to this, the national lower limb Information Center has estimated that on annual basis, 185,000 amputations took place in the United States and among them 75% of amputates were above 65 years of age. Furthermore, according to some past records, approximately 0.4% of the US population was living with limb loss in the United States in 1996. (Ehde, Czerniecki, Smith, Douglas, Campbell, Edwards, Jensen, Mark, & Robinson, 2000)..

The rate of various pathologies leading to limb amputation varies from one place to the other. Trauma, diabetes, infections, and bone cancer are the pervasive cause of amputation in developing countries while peripheral vascular disease is the common cause of amputation in case of developed countries (Abou-Zamzam, Teruya, & Killeen, 2003: Olasinde, Oginni, & Bankole, 2002). Moreover, majority i.e. 80 to 90% of amputees in developed countries are mostly above 60 years of age while in the developing world, the mainstream amputees are of young age (Masood, ali, irfan., mustafa, ghulam, 2008). However in the underdeveloped countries like Pakistan, complications of diabetes is the leading cause of limb amputation followed by trauma or accidents (Jawaid, et al. 2008). According to the disability statistics of Research and Development Department of Pakistan (2012), physical disabilities including amputation is the most common type of disability among all the other forms of disabilities

Table-1.1: Some Facts about Disability Rate in Pakistan

• At national level the total population of disabled people	5.035 million
• The disability rate	2.65%
• Disabled population of rural areas	65.7%
• Disabled population of urban areas	34.3%
• Disabled male population	58.4%
• Disabled female population	41.6%
• Physically crippled population	19.2%
• Province with Highest disability rate (Punjab)	55. 9%

Source: People with disabilities (PWDs) statistics, 2012. Research and Development Department of Pakistan.

1.1 History of Limb Amputation

Looking at the historical research, we come to know that acquired limb amputation is being performed since ancient times and it is reckoned as one of the oldest specialties in the field of surgery when even proper surgical techniques were also not found to conduct safe surgeries. Archeological findings proved that amputation procedures were also conducted in ancient times. Similarly past studies showed that limb amputations were performed during Neolithic times as well (Davies & Datta, 2003).

The evidence of limb amputation was found from saws of stone or bone and also bone stumps of skeletons of that period. The book of "Vedas" revealed the first recorded amputation incident and prosthetic replacement. Rig-Veda was the oldest of all Vedas and its date of compilation go back to somewhere between 3500 and 1800 B.C. This book narrated the incident of a battlefield where Queen Vishpla amputated her leg and after her wound was healed, an iron leg was fitted to her bone stump through which she was able to walk and returned to the battlefield (Franchignoni, Orlandini, Duccio, Ferriero, Giorgio, & Moscato, 2004; Gallagher & MacLachlan, 2004).

Amputation was performed as the last option until 100 A.D. During that time, Archigenes and Heliodorus started to use this procedure for tumor, ulcers, injuries or deformities. But over the centuries, the techniques of the amputation did not change much and only the use of hot oil was introduced to prevent blood loss. However the surgeons in ancient Greece or Rome handled the problem of blood loss by using the technique of typing off and by legating

blood vessels during surgery. However, their techniques remained veiled for many centuries (Miller, William, Deathe, Barry, & Speechley, 2003).

While discussing about old days techniques, even though limb amputations existed however, they failed to obtain desired results. At that time, amputations were made only to remove dead tissues from the body. This limitation existed because the ancient doctors did not know the surgical techniques to control blood loss or hemorrhaging as a result of cutting healthy arteries while performing the surgery. Such complications were life threatening for the patients. However to avoid such complications as much as possible, doctors used to rely on speed, in order to minimize pain and obtain desirable outcomes (Mayfield, et al. 2001). However, the high mortality rate did not decrease until anesthesia and other techniques were introduced. With time, new operative techniques and better surgical instruments were introduced into the medical to avoid surgical complications in amputation surgeries

According to studies (Dettmers, et al 2001), major advancements in the field of limb amputation were made during wars. These studies showed that the major advancement in limb amputation surgery was the introduction of tourniquet by a French military surgeon Ambroise Pare in 1674. Due to the use of fatal weapons and injuries in the battlefield, Pare felt the need of more effective methods for treating his soldiers and was known for reintroducing the technique of legating blood vessels. It enabled the surgeons to control blood flow during the amputation procedure in a better way. Another

noteworthy technique introduced by Pare was the introduction of an artery forceps during sixteenth century (Kirkup, 2007).

The innovation of anesthesia was a remarkable improvement in the world of surgery which was developed in 1840s. All such developments were put into practice during the American civil war in which around 500,000 limb amputations were conducted. The bullets used in the wars during that era used to crush the tissue and in those cases amputation was the only solution to save the life of almost 75% of patients from battlefield (Tadmor, et al. 1997).

Comparing with today's standards, those amputations were performed following no hygiene and the fatality rate was quite high. In fact, one patient out of four used to die after limb amputation surgery as it was necessary to amputate patients from the battlefield in 24 hours in order to save their lives. Mostly, the deaths were caused because of the surgical infections and due to non-sterile use of tools in surgeries. It was the British surgeon Joseph Lister who introduced the concept of sterile surgery which was a life-saving advancement and which saved many lives by maintaining standards of sterile surgery (Deerochanawong, et al 1992).

1.2 Cultural Perspective of Amputation in Ancient Times

Studies revealed that amputation has its roots in culture as well as in religion. Anthropological studies of cave paintings demonstrated the evidences of limb amputations which were held in ancient times (nearly 36000 years ago). Most of such amputations were self-mutilated.in order to please god during religious ceremonies. In addition to this, Peruvian paintings have also been found showing amputees in South America (Smedley & Smedley, 2005).

Moreover, in some cultures, amputations were conducted as a judicial punishment for crimes. In Arabic culture, foot was amputated for being lazy, both arms for being rebellious and a hand for theft. The religious figures were also characterized by amputations. For instance, an ancient God, Tezxatlitoca was a right foot amputee. New Hah who was a Cetlic Irish God was portrayed with finger prosthesis because of his left arm amputation. In those cultures prostheses were often used in order to fill the functional, physical and psychological gap left due to limb loss. Considering the paintings, myths, legends and other studies from past, striking similarities can be seen between the amputation and prosthetics' used in ancient times with those which are used now. However, it is also a candid truth that people in the past were not inclined much towards amputations and they preferred dying over amputation. For instance, in ancient Egypt, people feared amputation more than they even feared death. They even believed that amputation is going to affect the amputee in the life after death (Van Houtum & Lavery, 1996).

One of the earliest amputation incidents in the history of Egypt can be found during the reign of Amenhotep II in 1500 BC. The remains of mummies also revealed the use of prosthesis that was used to function at the place of an amputated right toe. It was made up from leather and wood. According to their belief, such prosthesis would be helpful in afterlife of the amputee (Gallagher, 2004).

In short, from ancient times until today, acquired limb amputation is considered to be necessary as a life preserver after non-surgical treatments have expired or failed. After discussing the great advancement in limb

amputation techniques, we shall later have a look at how modern day limb amputations are performed and how surgeons manage them at the present time.

1.3 Amputations: At present.

Nowadays, amputation techniques have improved significantly. For instance, to conduct an amputation surgery, the patient is given general or local anesthesia. General anesthesia makes the patient unconscious for the entire course of surgery. On the other hand, local anesthesia is used only to numb certain area of patient's body while the patient remains conscious during surgery (Gallagher, et al 2001). During the limb amputation surgery, the surgeon cuts through different layers of body tissues that may include skin, muscles, nerves, blood vessels and bones. Brief descriptions of how these steps are performed are discussed below:

1.3.1 Skin

Medical research showed that first step in limb amputation surgery is to cut through the patient's skin. The cut is preplanned and therefore it only leaves a scar at the place of the cut (Geertzen, et al 2001). The location of the cut is extremely important so that later it does not rub against the joint where the prosthetic limb is connected with the body.

1.3.2 Muscle

According to the studies, muscle is the main tissue that is being cut by the surgeon during the course of an amputation surgery. They also have to give attention to the shaping and arranging of the remaining muscle tissues because it then provides significant padding around the bone after limb

amputation. This kind of padding is vital for maintaining a healthy base and also it is very essential for the appropriate fitting of prosthetic limb to the patient (Cvetkovich, 2003).

1.3.3 Nerves

After the surgery the doctors have to take special care to deal with the remaining stumps of the nerves since they carry sensory signals like feelings of pain. To minimize pain, surgeons cut the nerves from little above the amputation point and the nerve endings are stitched into the surrounding tissues. This procedure is necessary as to control unwanted regeneration of nerve endings that may grow to form a mass called neuroma which can be quite discomforting and source of pain for the patient (Davies & Datta, 2003). Therefore, surgeons try to minimize pain of the patients by isolating the nerve endings from the areas of motion and try to keep away the nerve endings from larger blood vessels which pulse with heartbeat (Hagberg, 2001).

1.3.4 Blood Vessels

Blood vessels of patients are tied firmly in order to control the excessive blood flow. However, surgeons also pay special attention that the blood supply to healthy tissues is not stopped by completely damaging the blood vessels (Geertzen, et al., 2001).

1.3.5 Bones

Once the surgeons cut the required bone, they spend some time smoothing any sharp edges which might be a source of pain later or which might interfere with the healing process by rubbing against the surrounding tissues. During the surgery, surgeons keeps in mind the issues concerning

bone healing and also how the remaining bone will behave with prosthetic limb (Davies & Datta, 2003).

1.4 Causes of Acquired Limb Amputation

Amputation may result from many reasons, ranging from medical causes to surgical necessities. It may occur at the place of an accident, in an animal attack or in a battlefield. It is specifically used for the patients who have met irreparable damage to their limb due to any reason (Mayfield & Sugarman, 2000). The common causes of amputation can be classified into Trauma, Tumor, Diabetics, and Peripheral Vascular Disease.

1.4.1 Trauma

Trauma refers to conditions in which a limb is severely injured in some accident or attack (Cvetkovich, 2003). It is associated with automobile accidents, train and subway accidents, falls, factory mishaps, fire, electric burns, warfare traumas, etc. In such cases, sometimes limb amputation may become a necessity for instance, in cases of blast injuries, people are wounded by explosive devices which require amputation. Avulsion injuries in which a body part is torn off i.e. a dog bites off a finger, also requires acquired amputation. Moreover, the guillotine injuries in which a limb or body part is completely torn off from the body in an accident like cutting off a finger while using power saw (Caruth, 2010). Furthermore, severe burns by chemicals sometimes also trigger an immediate need for limb amputation. It must be remembered that amputation is considered in such cases in which there is very little or almost no chance of saving that affected body part. Therefore, if

doctors think that amputation is essential for a quicker recovery or better and long lasting outcomes then they will eventually suggest amputation.

1.4.2 Tumor

Limb amputation is also used to treat cancer and to remove the limb part which contains tumor. Some healthy tissues are also amputated in order to make sure the tumor is completely removed from the body (Jain, 2005; Sørlie et al., 2001). However in present time, amputation is carried out only when there is no other option left for the doctors to ensure patient's safety. MRI scans tissue examination and helps the surgeon in deciding how much part of the limb needs to be removed in order to eradicate tumor from the body. In addition to this, surgery is planned in a way to leave behind cuffed bones which can later be fitted easily into an artificial limb or prosthesis after amputation (Maeda et al, 2000). However, after the surgery it is essential for a person to learn the use of artificial limb so that he can adapt to it as soon as possible.

1.4.3 Diabetes

Past researchers have suggested that series of factors can lead towards amputation and one of them is Diabetes (Bacci et al., 2002; Horgan & MacLachlan, 2004). According to past research, diabetes is a condition in which the pancreas of human body stops producing insulin and as a result the sugar level in the blood becomes too high (Heller & Pishko, 2001; Tepper et al., 2002). The high level of sugar in the blood can damage nerves or blood vessels particularly those present in the feet. As a consequence of nerve damage, the sensation in feet is reduced which results in injuries or ulcers

without realization. The damage done to blood vessels can also reduce the supply of blood to the feet. As a result, ulcers or wounds take longer time to heal and are most likely to become infected. Such infections are also inclined to spread rapidly and infect other body parts including the leg (Khader, et al 2006). Hence in such cases, amputation becomes necessary in order to prevent further spread of infection. It is also essential to seek medical assistance early in order to avoid amputation.

It is believed that people with diabetes are 15 times more prone to limb amputations than those without diabetes (Taylor, et al 2005). In addition to this, some of the statistics reveal that aging population, early detection of diabetes and peripheral vascular disease are giving more hype to limb amputations surgeries around the globe (Sandeep, et al 2004).

1.4.4 Peripheral Vascular Disease

Peripheral Vascular Disease (PVD) also referred as Peripheral Arteries Disease is also one of the widespread causes of acquired limb amputation. It is a common condition in which there is an accumulation of fatty deposits in the arteries that restrict supply of blood to the leg muscles. In some cases, critical limb ischemia (CLI) can occur in one or both legs (Ouriel, 2001). CLI comes under PVD and it can sometimes be treated by angioplasty or bypass for the restoration of the blood to the affected leg (Hirsch, et al. 2006). However, such treatments are more successful if performed early. However, if these techniques do not work then patient might have to go through limb amputation. Studies showed that PVD is considered to be the most common

cause of limb amputation in adults while PVD is not common in the pediatric age group (Iribarren, et al. 2000; Shepherd, et al.2002).

Some other common reasons that might lead to limb amputations include cancers which develop inside the skin or bone of the limb. It also includes osteosarcome (bone cancer) or malignant melanoma (skin cancer). Serious infections like bone infection of osteomyelitis or necrotizing fasciitis which is also known as flesh-eating bacteria, may also result in amputation of the affected leg. A rare condition of Buerger's disease in which the blood vessels that supply blood to hands, arms, legs and feet are swollen and blocked. As a result, gangrene and infection can occur. The treatment for this disease is also limb amputation (Kawamura, 2005)

1.5 Types of Acquired Limb Amputation

The major types of amputation may either lower limb amputation or upper limb amputation

1.5.1 Lower Limb Amputation

Past studies explain that lower limb amputations can further be classified into many types. Firstly, foot amputation involves amputation of toe or fingers of the patient and such amputations mainly affect walking and balance. Ankle disarticulation is the amputation of entire ankle. However, such amputees can still move without prosthesis if motivated well (Ehde et al., 2000; Gibson, 2001).





Below Knee amputations are also called transtibial amputations and such amputations are performed above ankle but below the knee. These amputees are made to wear prosthesis as it is difficult for them to put any weight on the remaining stump. Knee is not amputated here, only the part below is removed. Adding on Knee bearing amputation is a complete removal of the lower leg (Horgan & MacLachlan, 2004).

Above knee amputation is also known as transfemoral amputation and they are made at thigh level. The remaining stumps cannot bear the weight of the entire body however; a person is still able to sit upright. Hip disarticulation is type of amputation which removes complete bone of the leg. Surgeons might leave the upper femur for stability for a suitable place for prosthesis to be able to fit (Taylor et al 2005).




1.5.2 Upper Limb Amputations

According to studies conducted, upper limb amputations are further categorized into hand and partial-hand amputations that include fingertips and parts of the fingers (Jain & Robinson, 2008; Lotze, et al 2001). Thumb can also be amputated and in case of thumb amputation, the grasping ability reduces remarkably. However, when other fingers are amputated then the hand is still able to grasp things but with less precision.





Amputations in which more than one finger is amputated are called multiple digit amputations. Certain surgical methods are used to reconstruct muscles to enhance grasping capabilities of an amputee. Wrist disarticulations amputations involve the amputation of the hand at the wrist joint. Plastic sockets are available nowadays that can be fitted to serve as a wrist. Metacarpal amputations involve amputation of the entire hand up to wrist. As a result, an amputee is completely unable to grab objects around him. Elbow disarticulations amputations are also known as trans radial amputations. They involve removal of the complete forearm at the elbow. It leaves a bulb shaped stump that can bear weight (Kooijman, et al 2000).





1.6 Psychological aspect of amputation

Psychological state of an individual is an important aspect of human life and it consistently plays a major role in understanding the total wellbeing of a person. In case of amputation, it is commonly observed that the main focus is given to the physical aspect of this unfortunate incidence and the subsequent psychological burden it carries along with itself is usually ignored. Moreover, the amputees are not given much psychological attention unless they start showing some psychological symptoms and abnormalities in their behavior.

Furthermore amputation influences daily activities of life, participation in activities and overall quality of life. Studies (Grouzi, et al 2009) revealed that as a result of limb amputation, lifestyles of amputees are changed, source of living is partially or completely affected and it also changes the way people think about themselves. Therefore, it would not be wrong to say that amputation not only affects people physically but also economically, socially and psychologically.

As far as a psychological reaction to amputation is concerned it varies from situation to situation. Studies have revealed that the context of amputation plays an important role in the prevalence of associated psychological reactions (Bisschop, et al. 2004). Immediate reaction to amputation depends on number of factors such as whether it is an accidental or traumatic amputation or it is a planned one. Whether it had occurred due any chronic disease and long term illness or was the result of any unexpected stretch of infection (Parkes, 1975).

Recent research shows that it is quite common for an amputee to grieve or mourn over his amputated limb and the body image he used to have in the old days (Desmond, 2007; Horgan & MacLachlan, 2004). An individual might go through different stages in order to adjust and adapt. However, it might take some time, depending on the person's acceptance, to come to terms with his disability. A brief review of different research on the psychological aspect of amputation during the last decade is as follow.

Table-1.2: Historical Summary of Researches on Psychological aspects of Amputation

Authors	Name of the article	Results
Jasmine Washington (2013)	The Relations among Psychological and Demographic Factors in Individuals with Lower Limb Amputation	The younger the person at the time of amputation, the more likely to be depressed. Males reported higher rates of depression than females. Depression was positively correlated with social support from friends but not from family
Janet , Cater (2012)	Traumatic Amputation: Psychosocial Adjustment Of Six	Social support and positive attitude are important factors in positive adjustment to amputation. Active coping skills

	Army Women To Loss Of One Or More Limb	correlate with positive adjustment to amputation
Nellie Njambi 2010	The effects of amputation on Body image and well-being - A systematic literature review	Amputation has proven to have serious psychological, social and economic impact on the lives of people and results in loss of many physical functions and abilities that were once taken for granted
Sarah Eskandari, (2011)	Body image: an important factor for Adjustment to amputation	Individuals with higher pain and a shorter period of time since amputation were more depressed, anxious and had poorer quality of life
Srivastava K. et al. (2010)	A Study of Psychological Correlates after Amputation	In the early stages of amputation, the reactions can be in the form of disbelief, fear and panic, rage and anger, grief and despair. The late stage effects are in the form of depression and anxiety.
Chaya, G (2007)	Reactions to Amputation: Recognition and Treatment	Thinking about the impending limb loss results in classic stages of grief. Among these stages are denial, anger, bargaining, depression feelings of passivity and being overwhelmed and acceptance
Crosby, M (2005)	Body image, self-esteem, and quality of life in older individual with lower limb amputation	Whether a lower limb amputation occurs in early or late life, apparent differences exist in quality of life between older persons with amputation and age-adjusted healthy norms.
Hawamdeh, Z (2004)	Assessment of anxiety and depression after lower limb amputation	The longer the time since amputation, the lesser is the prevalence of psychological abnormalities which is evident for either anxiety or depression, which could be attributed to psychological adjustments that follow amputation

1.7 Psycho-Social consequences of Acquired Limb Amputation

It is quite natural for an amputee to react psychologically to this tragic incidence and feel vulnerable, empty and mutilated. Srivastava and colleagues (2010) stated that psychological pain associated with loss of body parts is not less than pain and grief experienced by an individual while losing his near and dear ones. It was further added that in both cases people exhibit similar reactions. However the immediate reaction are in the form of denial, amazement, anguish, anger, hopelessness fear, and dread while later on it takes the form of anxiety and depression.

All studies on the psychological reactions to amputation confirmed the increase likelihood of the person's inclination towards the exhibition of various psychological symptoms. After the painful surgery of amputation, almost each and every patient experience psychological maladjustment and exhibit variety of psychiatric warning signs. Some most frequent reactions are denial, anger, extreme sensitivity, crying spells, helplessness, loss of appetite, inability to sleep, self-pity, sense of loss and low self-esteem (Shukla and Coworkers 1982). Due to limb's loss, a person loses his confidence and catches sympathetic and sometimes contemptuous glances of people and society. They become more self-conscious, short tempered, anxious, and apprehensive and rejects all kinds of help and support of significant others such as family and friends (Desmond & MacLachlan, 2006). . It drastically shattered the mental state of an individual and increases the tendency towards the exposition of various psychological symptoms. Furthermore, due to societal unfavorable attitude and discriminatory such people are more

susceptible to mental and psychological strain and their behaviour is more likely to produce many maladjustments issues in these amputees

Moreover, along with countless physical, psychological and social problems faced by an amputee, limb loss of any family member also disturbed the normal functioning of the whole family and has everlasting effects on the whole family.

1.8 Impact of Amputation on the Family

Past Studies show that limb amputation or physical disability of any member of the family leaves the same scares of shock, depression and anxiety on the rest of the family too along with the amputee himself (Ferguson, et al 2004). However, usually the emotional setbacks of families are not given much importance as most of the attention is immediately shifted towards the amputee. Therefore, it would not be wrong to say that even though the families go through the same trauma and conflict, but they have to face it in isolation without even showing the grief in front of their amputated family member.

Physical disability of a family member also affects the entire family, as they function as a single unit. For instance, if an amputee was the only livelihood earner in the family then after his amputation, family will not be able to depend on him as they used to before this incidence. Due to such reasons, his/her financial status, social contacts and entertainment activities might also dwindle. In addition to this, the role of amputee in the family might change from being independent to being dependent (Breakey, 1997:

Rybarczyk & Behel, 2008). Therefore, families must also learn to adapt to the new changes and should give an amputee enough confidence and strength to deal with this heartrending incidence of life. Moreover, all such factors also determined their psychological responses to loss of limb.

1.9 Determinants of Psychological Response to Amputation

Past studies reported that the psychological response to limb amputation depends on a large number of socio demographic factors (Peirano & Franz, 2012; van der Schans, et al 2002). Some of the most important determinants of psychological response to amputation are as follow:

1.9.1 Age:

The difficulty of psychological adjustment with the reality of amputation varies with age (Ahmad, 2011). Findings of study conducted by Crosby & Miller (2005), also confirmed that young amputees have more problems while adjusting to their amputation as compared to aged people. The younger the amputee at the time of amputation, the more likely he may develop depressive symptoms.

1.9.2 Gender:

Studies showed that the reaction of males towards amputation is different than females. Njambi Mugo (2010), found in his study that males accept the reality of this lose earlier than females. They actively try to adjust to this new change successfully and return to their normal life responsibilities as quickly as possible. On the other hand, females may take time and they think to search different modes to pull through this trauma. Conversely

Washington (2013), observed that the rate of depression however is greater in males as compared to females.

1.9.3 Personality Style:

It is usually observed that people who are over conscious about their physical appearance are most likely to react to the loss of limb in a negative way. It is a biggest setback for them and they think that their personality will not look as attractive as it looked before amputation. On the other hand, some individuals might accept the change in its practical terms without creating much fuss about it (Srivastava, et al., 2010).

1.9.4 Economic and Vocational Variables:

The main bread earners of the families suffer most adverse psychological problems as limb loss influences both their earning and livelihood (Shultz, et al 2011; Tang Castle, & Choong, 2015). They feel emptiness and may think as if the purpose for their existence no longer exists. On the other hand, people who were mainly dependent on their families will adapt to the change somewhat quickly and they may start living with their usual activities with slight changes in their life style.

1.9.5 Nature of amputation

The nature and cause of amputation is equally important in respect to the exhibition of psychological response to amputation (Fisher & Hanspal, 1998). In cases of traumatic or accidental amputation, the person is not mentally prepared for this loss and instantly reacts with denial and rejection. Such people are usually at high risk of developing depression and other psychological symptoms as compare to those who acquire this condition as a

result of infection or disease (Livneh & colleagues, 1999). People who undergo planned amputation for the treatment of any disease or infection may take time to accept the necessity of this procedure and may not react strongly. They usually have a realistic acceptance of this unavoidable incidence and hence cooperate with the treatment team (Williamson & Walters, 1996).

1.9.6 Health status

Past research shows that the young adults who lose limbs due to traumatic accidents have more chances of survival and quicker recovery than old and weak adults (Barak, 2007; Sinha et al., 2011). The older people's bones are also weak and their bodies do not accept the change so easily. On the other hand, young adults are more easily able to adjust to their new lifestyle. Because of overall good body health, the recovery time is also fast and their inclination towards the use of artificial limbs is also more commendable which ultimately leads to effective psychosocial adjustment.

1.10 Amputation and Familial-Social Support

Successful adjustment to limb loss not only depends on the health status and personality traits of an amputee but also depends on the attitude of family members and availability of adequate social support. Findings of the previous research (Lai, et al 2000) confirm the importance of adequate family support by stating that the attitude of family members sometimes facilitate or hinders their adjustment to amputation. Engstorm and colleagues (2001) also stated that family is one of the biggest supports for the amputee and their reaction determines how the amputees cope with this tragic incidence. It was found that without social support such patients exhibit more severe

psychological symptoms as compare to those who have support available. Similarly Gallagher and MacLaclan (2001) also examined the psychological adjustment of a group of amputees and found that social support was an important factor in their process of adjustment to amputation

According to research, people without family like widows suffer more from the psychological effects of amputation (Bekrater-Bodmann, et al 2011; Haythornthwaite & Benrud-Larson, 2000). It is difficult for them to learn to adapt to physical change than people who have families who can provide them with psychological support as they will be able to rehabilitate more quickly. Moreover, they will always be ready to provide a helping hand when an amputee is not able to manage things because of physical limitations. However, the family will make sure that amputee's self-esteem is not hurt in the process of helping him

Moreover, it is quite necessary for the amputee to communicate with family members to feel better psychologically (Unwin, et al 2009). In this way, an individual can share one's feelings of loss, anger, fright, resentment, conflict and grievances with one's family and in response to this; they can give him moral support and encourage him towards better adaptation. Overall, family is a big support system for the amputee and the biggest assistance in the time of need. A study conducted by Longino and Mittelmaek (1995) also emphasized the importance of social support in adjustment of amputation. It was stated that social environment and social support may serves as a healing mechanism in the adjustment process of amputation. It is further said that support of family and friends may help to reduce the level of stress and

anxiety brought through this incidence and hence positively influence their adjustment process.

It is commonly noticed that family support is more likely to raise the self-esteem of the amputees. The support, love, care and attention of the family ultimately ease the acceptance of this loss without decreasing their level of self-esteem. In this respect, Symister & Ronald (2003) stated that social support is closely linked with positive self-esteem. It increases the confidence level of an amputee and decreases the level of anxiety and depression. Similarly inadequate support is more likely to increase depressive symptoms and ultimately leads to negative self esteem

1.11 Self-esteem and Amputation

Losing any part of body is indeed very similar to losing loved one. It is never easy to accept the reality that a person has actually lost one of his body parts. For many patients the imagination of being amputated is even worse than reality. It not only affects the self-confidence of an individual but adversely affects all the central components of quality of life (Taleporos & McCabe, 2002). The feeling of being handicapped really hurts self-respect of an amputee and he feels vulnerable while living in the society. Amputation leaves everlasting scars on the mind and body of amputees which can never be forgotten for the rest of life. Consequently it leads to feeling self-pity, helplessness, perceived worthlessness, problems with body image and decreased self-esteem (Robert, et al 2010).

Self-esteem is an individual's perception of one's skills, abilities and other personal qualities which usually leads them to various behavior patterns and cognitive process. In case of any disability including amputation it is more likely to predict an individual's perceived rate and extend of nerve wrecking thoughts and the degree of physical and psychological pain felt (Panides & Ziler, 1981). As far as the psychological adjustment to amputation is concerned, the personal attitude of the patient is very important. Rather than developing negative attitudes, an amputation should be considered as a useful step towards the improvement and stabilization of physical condition and health status. In this respect self-esteem may serves as an important coping resource. According to Winchell (1995), in case of people with good self-esteem, the incidence of amputation is successfully incorporated and may develop as another aspect of their being.

It is important to understand that while dealing with amputees, we should not behave in such a way which might hurt their self-esteem. The goal of rehabilitation of an amputee must be kept in mind while dealing with him psychologically. For instance, amputees must be presented with facts in a casual and encouraging tone so that instead of denial, they come to accept their loss and begin to adapt to the changes. Horgan, et al 2004 presented a theoretical approach to the psychological rehabilitation of amputees by giving four stages of adjustment. A brief description of these stages is as follow:

1.11.1 Shock

Shock is the patient's immediate response to any threat for self-preservation, as it leaves the individual emotionally and intellectually numb.

When the reality of the situation is too much to handle, it results in defenselessness and leads to disruption of organized thinking. The individual has no plan of action and is essentially without psychological resources (Vermunt et al., 2008).

1.11.2 Defensive retreat

Study showed that this is an adjustment phase in which the patient denies any need for amputation (Atherton & Robertson, 2006). He tries to engage himself in normal activities in order to show that he is normal and he can live life without going through amputation surgery.

1.11.3 Acknowledgement:

In this phase, the patient begins to realize the necessity of amputation and slowly surrenders to the decision of doctors (Davidson, 2004; Mello, et al 2010). Patient goes through renewed psychological stress and in spite of feeling depressed about one's loss; he also begins to think intellectually. Overall, this makes it easier for him to adjust to one's her surroundings. Their relationships with families improve since they do not feel themselves dependent and frustrated.

1.11.4 Adaptation

According to past studies, it is the final stage in which an amputee is psychologically more prepared and tries to put in efforts to adapt him to use prosthesis or artificial limbs in order to increase mobility (Mello et al., 2010). A person is mentally prepared to face the society and also tries to adjust daily activities according to the new changes so that he is no more a burden on anyone and can spend rest of life more effectively than wasting it in mourning about this loss.

1.12 Psychosocial adjustment to Amputation

Adjustment to amputation is not an easy process and it not only depends on the personal traits and psychological properties of a person but also depends on the presence or absence of adequate love, care and support of the family and society. A study conducted by Lai, et al. (2000), revealed that an individual's ability to subsist their amputation will be influenced by numerous psychosocial factors. Some common factors includes the type and severity of disability, intensity of pain, amputee's own personality traits, socio-cultural demands, the attitudes of significant others and availability of adequate support system.

In case of the terrible event of amputation, an amputee not only requires varying degrees of physical support but also needs psychological support to maintain their emotional health. Nevertheless, not all of them are so blessed to have it and hence many of them are left with numerous psychological scars throughout their life. Moreover it also influences the everyday life affairs and social relationships of amputees thereby leading them to troubled social relationships.

As far as social relationships of amputees are concerned, research revealed that amputation disturbed the psychological balance and self-esteem of a person which ultimately shattered their social relationship as well. It was stated that self-esteem along with body image may serves as link between any kind of disability and disruptions in social relationships (Nicolson and Anderson, 2003). Similarly, in respect to body image research showed that it plays a great role in psychological adjustment of amputees. It was found that

after amputation, an amputee finds it difficult to readjust with the pre-amputation image that he had in his mind with the new formation his body has taken. He gets frustrated, depressed and does not like looking into the mirror (Desmond & MacLachlan, 2005; Dorstyn, et al., 2011).

Studies showed that it is important to take appropriate measures to reduce amputee's distress by intervening his grieve in order to ensure his quick recovery and rehabilitation physically as well as socially (Gallagher, & Maclachlan, 2001). Amputees need assurances and support from the community in order to overcome their post amputation fears and doubts. Although the treatment of visible disability of amputation is necessary but it also needs psychological treatment for the successful rehabilitation of the amputees (Jensen et al., 2011).

The rehabilitation of amputees varies from one amputee to another amputee. For instance, the victim whose mobility is very restricted due to major limb loss will take much time in adjusting socially and psychologically. On the other hand, an amputee with more ease of mobility can adjust and rehabilitate more quickly with the help of proper training, encouragement and use of artificial limb. Therefore, universal reactions cannot be completely comprehended unless each amputee is dealt individually. Patients who go through traumatic amputation are more inclined towards having posttraumatic stress disorder as compared to the other amputees. In addition, this might even lead them to psychological problem of social isolation. (Jensen, et al 2011). An amputee might not want to meet people because of the way they look at him with piety or scornful attitude is not bearable for him. As a consequence

individual with poor body-image, low self-concept and lowered self- esteem may lose interest in everyday life affairs and social activities and hence becomes unable to maintain or form new relationships (Nicolson & Anderson, 2003).

Research proved that psychological treatment for quicker rehabilitation of an amputee is a must. Unfortunately the psychology aspect is often ignored or glossed over in most of the cases while dealing with the rehabilitation of the amputees. It is commonly observed that for an amputee along with the quality of surgery or the nature of prosthetic device he may uses, the availability of efficient psychological support also has a great significance In addition to this, it is important to understand that an amputee is no different from other human beings. It is just that he is being confronted with a tragedy in his life (Desmond & MacLachlan, 2002). The problems arise when there are misperceptions about amputees and instead of helping them rehabilitate, the society acts against them which worsens the situation.

It is very necessary to understand that amputees are also people with heart. They have the same feelings and emotions. Therefore, no such steps should be taken which might hurt their self-esteem. As a consequence of amputation, an amputee builds a self- concept that how he envisions his disability and how he prepares himself internally to face the loss while living in judgmental society. Individual who are not able to cope up with life problems and had low self-esteem would not be able to deal with this terrible incidence. Similarly it also influences the success of rehabilitation strategies.

According to Gallagher & MacLachlan (2000) & Rudy, et al (2003), the rehabilitation process can occur in two ways; physiological restoration and psychological restoration. In order to ensure rehabilitation of amputees successfully in society, it is very essential to be aware of the basic human needs that are necessary to live a normal human life. It may include understanding of biological as well as environmental issues.

Once, an individual is aware of the basic human needs then it gets easier for him to understand that amputee's balance of life has been disrupted because of their amputation and therefore, some efforts should be put in to rehabilitate them. This can begin with fitting of an artificial limb or prosthesis in amputee's bone stumps. As a result, an amputee will soon start performing some of the activities like he used to with little effort. He will begin to feel normal gradually and will soon overcome the distress of being handicapped (Bishop, 2005).

1.12.1 Challenges

Many researchers believe that the amputees faced many challenges in their daily routine life both within themselves as well as in the society (Muller, et al 2002; Smith, et al 2004). Findings of the research conducted by Desmond (2006) stated that amputation engenders a huge number of physical and psychosocial challenges and because of limb loss several aspects of their lives changes dramatically. Some common examples are changes in self-concept, disturbances in physical functioning, prosthesis use and pain, alterations in body image and lifestyle. Furthermore, it also affects their social circle and most importantly their personality.

In respect of economic challenges faced by amputees, it has been observed that going to work after amputation is very difficult for most of them (Draganski, et al 2006; Gailey, et al 2008). Most of them find it difficult to cope with such drastic change initially and they find themselves restricted and limited in terms of activities that they can perform. The activities that were once taken for granted by them are now seen as most strength demanding tasks for them. They find their jobs more complex and tiresome. Most of the amputees are reluctant to go back to their jobs because of the same reasons and along with some other psychological factors.

Artificial limb fitting will give them physical mobility and lead to quicker rehabilitation. This may also be a source of reducing their psychological stress and gradually they will adapt to his new lifestyle. As their grief will reduce, they will start to become more socially more active and will also begin to adjust with their new body image.

Although, it is hard for amputees to accept limb loss, however, with proper care, at least they can come to adapt to the new changes with positive attitude. Hence the more positive the attitude is, the easier it is for amputees to rehabilitate in their surroundings. Proper support, training, time and motivation can help them and encourage them to accept this change in a positive way. Moreover they also help them to adjust to their new body structure and work like normal people and soon their skills can turn them into a valuable asset for the society.

1.13 Rationale of the study:

During the last few decades, the risk of acquired disabilities is significantly increased all over the word due to increasing socio-political instability, road accidents and natural disasters. Similarly many countries around the world are facing the issue of terrorism and violent acts and Pakistan is one of its main victims as well. It has been damaging the economy, political stability, social piece and the national security of this country.

In the same way, due to its big functional boundary with Afghan border, the Khyber Pakhtunkhwa province in general, and Peshawar in particular, is suffering a lot from terrorist activities. Violent acts, bomb blasts and suicide bombing are the normal everyday affairs for the citizens of this area. Lots of people are dying because of these activities and many are left with different types of disabilities. These sudden acquired disabilities leads to innumerable losses such as loss of physical functions, loss of body-image, loss of social relations and most ironically loss of body parts.

Loss of body parts is a dramatic life changing experience and although this procedure is used as a last resort to save the life of patient but still it has drastic and harmful consequences on the life of person which interfere with their normal life style. The physical wounds of amputation may heal after some time after amputation, but the endless psychosocial challenges take considerable time to mend over. Review of the current literature on amputation showed that previous studies mostly emphasized the physical and treatment aspect of amputations and inadequate attention is given to the corresponding psychosocial issues caused by such amputation surgeries. This

study is therefore, designed to fill this gap in literature by highlighting the importance of the psychosocial issues caused by amputation.

One of the greatest difficulties for an individual experiencing limb loss is not only to triumph over the physical pain of amputation surgery but also to overcome the psychological and social stigma associated with loss of limb. Due to societal unfavorable attitude and discrimination, such people are more susceptible to mental and psychological strain and their behavior is more likely to produce many maladjustments issues.

Most of the literature on psychological aspect of limb amputation is from the economically developed countries where there is lesser discrimination and stigma attached with disabilities as compared to Pakistan. Very limited research had been conducted on this sensitive issue in Pakistani context, and the issue has never been addressed in Pakhootun areas at all. The present study is an effort to fill this lacuna by investigating the magnitude of the psychosocial consequences of limb loss in Khyber Pakhtoonkhwa province of Pakistan

The issue understudy would have great implications as it centered on that segment of society who are usually neglected in every field of life. It is emphasized that although such people are part of our society but are always avoided and discriminated in every field of life.. The present study is basically an attempt to explore the determinants of psychosocial adjustment of amputees in order to prevent further psychological issues. It was asserted that support and encouragement of family, friends, and society as whole play a powerful role in the rehabilitation of these amputees. So recognizing the importance of

these variables the present study shall attempt to explore the impact of these variables on the psychological adjustment of amputees

The current study is also of immense importance as it is an effort to highlight the role of family and society in the rehabilitation of amputees as adjustment of any disability is significantly affected by the social context in which a person lives. The study promoted the fact that family and society plays an important role in developing positive self esteem of amputees and helping them to cope with their disability efficiently and successfully

The current study focused specifically acquired limb amputation in order to spot out the major psychosocial problems faced by this group of people. The target area for this study was different areas of Khyber Pakhtunkhwa including Peshawar city. According to Research and Development Department of Pakistan, some facts about People with disabilities in Khyber Pakhtunkhwa are as follow.

Table-1.3: Disabilities in Khyber Pakhtunkhwa

• Disability rate per year	2.1%
• Disabled population of rural areas	87%
• Disabled population of urban areas	13%
• Disabled male population	59%
• Disabled female population	41%
• Physically crippled population	31.3%
• District with Highest disability rate (Malakand)	9.9%

Source: People with disabilities (PWDs) statistics, 2012. Research and Development Department of Pakistan

Table-1.3 clearly revealed that the number of physically disabled or crippled people is much higher in the province of Khyber Pakhtunkhwa as compared to other types of disabilities. Hence keeping in view the increasing rate of physical disabilities including amputation the researcher attempted to address this sensitive aspect of human life. For the very purpose the researcher wants to bring the attention of families, general public and authorities towards these people and to make efforts to resolve their problems or at least minimize the intensity of its severity.

The study was meant to convey that it is essential to understand that physical wounds may take less time to heal but emotional wounds and adaptation can take much longer than that. Therefore, all amputees must be given attention in the society and every individual should work to facilitate them in order to feel them an integral part of the society. Only then, the amputee's will be able to restore their physical and mental health, participate actively in everyday life affairs, raise families and adapt themselves in order to lead a normal, happy and prolific life.

Based on the literature review on psychological aspect of amputation, the present research idealized a conceptual framework of a series of plausible relationships between different psychosocial variables which facilitate or hinder an amputee adjustment process. This framework also serves as basis for the formulation of research objectives and hypotheses. A diagrammatic representation of that framework is given in figure 1.2

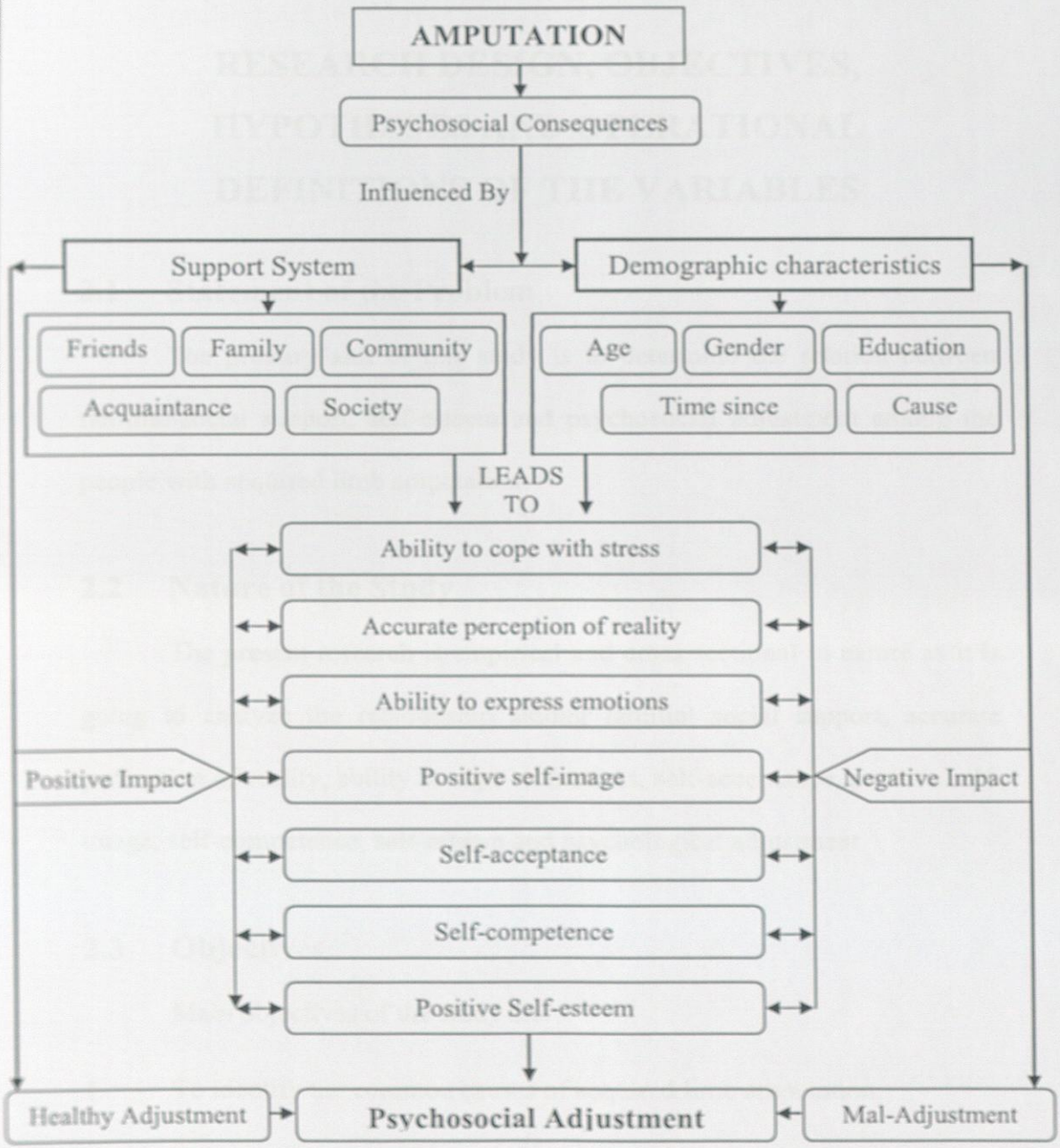


Figure-1.2: Conceptual Framework of Relationship among Study Variables

CHAPTER 2

RESEARCH DESIGN, OBJECTIVES, HYPOTHESES AND OPERATIONAL DEFINITIONS OF THE VARIABLES

2.1 Statement of the Problem

The primary aim of this study is to determine the relation between familial-social support, self-esteem and psychosocial adjustment among the people with acquired limb amputation

2.2 Nature of the Study

The present research is empirical and cross sectional in nature as it is going to analyze the relationship among familial social support, accurate perception of reality, ability to cope with stress, self-acceptance, positive self-image, self-competence, self-esteem and psychological adjustment

2.3 Objectives

Main objectives of the study are:

1. To identify the common causes of acquired limb amputation.
2. To investigate the psychological aspect of acquired limb amputation.
3. To analyze the role of familial-social support in the psychological adjustment of amputees.
4. To determine the importance of positive self -esteem in the process of adjustment to amputation.

5. To explore the relationship between psychological adjustment, self-esteem and familial-social support.

6. To examine the importance of various demographic factors in the development of positive self-esteem of amputees.

7. To find out how different demographic factors influence the psychological adjustment of amputees.

2.4 Hypotheses

1. Amputation is more likely to take place due to unplanned causes as compared to planned causes.

2. Acquired limb amputation is more likely to disturb the psychological balance of an individual.

3. Amputees having unplanned amputation have low self-esteem and face more psychological adjustment issues as compared to those who have planned amputation.

4. High scores on accurate perception of reality scale tend to increases the amputee scores on self-acceptance scale as well.

5. Amputees with high level of self-acceptance are psychologically better adjusted as compared to those with low scores on self-acceptance scale.

6. Positive self-image tends to increase an amputee's ability to attain Self-Competence.

7. High level of familial–social support tends to increases an amputee ability to cope with stress and anxiety produced by amputation.

8. High level of familial–social support tends to increase an amputee's level of self-esteem as well

9. Higher the scores of amputee's self-esteem, higher will be the level of psychological adjustment.

10. Self-esteem mediates the relationship between family support, and psychological adjustment.

11. Female amputees tend to score low on both self- esteem and psychological adjustment scale as compared to males amputees.

12. The amputee's scores of self-esteem and psychological adjustment increases with age, time since amputation and ability to do routine tasks.

13. The amputee's scores of self-esteem and psychological adjustment increases with increase in the level of education

14. Amputees residing in rural areas tend to score high on self-esteem and have less psychological issues as compared to amputees residing in urban areas.

2.5 Operational definitions

Following are the operational definitions of the terms used in the study and the variables measured by different scales.

1. **Acquired limb Amputation:** In medical terminology limb amputation is the removal of a limb by surgery, trauma, illness or infection in order to save the life of patient. In this present research, acquired limb amputation is operationally defined as surgical removal of whole or part of a limb such as arm, leg, finger, or toe as a life saving measure and exclude congenital limb amputation. The present study focuses only those amputees who acquired this condition at some stage of their life.

2. **Familial Social support**: The term familial-social support in this study has been operationally defined as the availability of adequate support and assistance from immediate family and extended family members as well as the larger social network including friends, neighbor and work place colleagues. This support can be in any form such as emotional support, love and care, financial assistance, sense of belongingness or in the form of personal advice and guidance in dealing with life situations.

3. **Self-esteem:** The term self-esteem is used to describe a person's overall sense of self worth or personal value. It is a judgment of oneself as well as one's attitude towards oneself. Usually, self-esteem is shaped by an individual's thoughts, relationships and experiences and serves as a powerful predictor of certain outcomes such as happiness, pride, satisfaction in marital life as well as academic achievement. In the current context self-esteem is

operationally defined as a person's overall opinion about his own worth and how he feels about his abilities and limitations

4. **Psychological adjustment:** The term psychological adjustment means a relative adaptation of a person to the changing demands of the external environment. Its level shows how well an individual effectively and efficiently be able to cope up with the situational demands of the environment as well as with the stress produced by these demands. In the present study the researcher wanted to know an individual's level of adjustment in response to the tragic incident of amputation

5. **Self-Acceptance:** The term self-acceptance refers to the positive appraisal of one's own self and is considered very important for the mental health of a person. It also involves a realistic approach of self-understanding, awareness of one's weaknesses and strengths, replacing the old behavior patterns with new ones and developing more helpful ways of thinking and behaving. In the present study self-acceptance is defined as an individual acceptance of oneself in spite of his deficiencies or disability. It is an individual satisfaction or happiness with oneself.

6. **Self-Competence:** self-competence is the sufficiency of a person with enough knowledge and skills that will help them to act in a variety of situations. It is that capacity of a person which aids him to understand the situation and act reasonably.

7. **Physical and Social Self-Acceptance**: Acceptance is person's response to any thing that occurs in any moment of life. It is basically a person's assent to the reality of situation recognizing the process or condition

without attempting to change or protest it. In the present study physical self-acceptance implies an individual's acceptance of the limitation of his physical body structure and health issues.

Social self-acceptance is being living and happy with whom you are now. Furthermore it is an agreement with yourself to appreciate, validate and accept and support who you are at this movement. Lack of acceptance involves an unwilling or rejection to experience these thought, feelings and emotions thereby leading to rejection of self. Being part of group still helps people feel safe and protected but people with poor physical health feels isolated, lonely and excluded. Poor physical and social acceptance is actually the end product of denial, hate anger or resentment literally build up inside those people as they are unable to accept the reality of their changed body structure and unable to release them in acceptable manner.

8. **Academic Self-Competence:** The term academic-competence is considered essential to all fields of school and college studies. These are the developed abilities which are usually the outcomes of intellectual discussion and learning. Such qualities eventually contribute to the success in the classroom and serves as a linkage across the wide range of disciplines of knowledge

9. **Ability to cope with stress and anxiety:** The term coping refers to a person's conscious efforts to solve personal and interpersonal issues in order to minimize, tolerate or master the corresponding stress. Similarly, in the current research the term "ability to cope with stress and anxiety" is operationally defined as the conscious efforts to deal with the stress and

anxiety produced by amputation. The effectiveness of the coping depends on individual's personality style, type of conflict or stress and the state of affairs.

10. **Positive self-image:** self- image means how a person's perceive about himself. It is a kind of mental image which a person develop about himself either from his personal experiences of from the judgment of others. The term positive self-image implies developing positive feelings about one-self and to see one-self as a positive and capable person. Such attitude leads to happiness, better performance and success in life.

11. **Ability to express full range of emotions:** This dimension of personality involves the expression of different emotional reactions in a way that is socially acceptable. A person cannot change or control his emotions rather he must learn how to know them, live peacefully with them, manage them and release them in a way approved by the societal norms. Moreover if these emotion are buried for a long time without being expressed may also leads to various physical illnesses

12. **Good interpersonal relationships:** Interpersonal relationships are the social connections which a person develops on daily basis with his family, friends, significant others and professional acquaintances. It may ranges in duration from brief to enduring. Good interpersonal relationship in this research implies developing strong relationship with people in order to fulfill each other's emotional and physical needs. People who learn to develop good interpersonal relationships with others in the social context certainly experience more success in life than those who don't. Such close connections

may provide a sense of security and safety that is more likely to reduce anxiety and stress thereby promoting good health.

2.6 Research design

The present research was carried out in different stages in order to answer the formulated research questions and test the study hypotheses. In the initials stages, the researcher finalize the target area for the study and the inclusion/exclusion criteria for the selection of sample was determined. The target area for the current research was major government hospitals and some prominent private hospitals of Peshawar city. Furthermore, the appropriate instruments to study the variables were also finalized.

After finalizing the sample size, inclusion /exclusion criteria, sampling techniques and the target area, the data was collected and analyzed in order to meet the research objectives and verify the study hypotheses. The procedure comprised of the following steps.

Step-1: Official request and permission from the administrative officials of the various hospitals

Step-2: Visits to concern departments of the hospitals:

Step-3: Scrutiny of the patients

Step-4: Approaching the amputees

Step-5: Administration of the Instruments

Step- 6: Statistical analyses

CHAPTER 3

METHODOLOGY

The study focused on the investigation of common psychological reactions to the unexpected incidence of acquired limb amputation. The major purpose of the current study was to explore the psychological sequel of traumatic events after amputation as well as the level of post amputation anxiety and distress. It also attempted to explore the role of various psychosocial variables in the psychological adjustment of amputees and further analyzed how the interrelationship of these variables influences the process of adjustment. Moreover, the study also aimed to explore the mediating role of different demographic factors in the way towards successful adjustment to amputation. The current study was carried out in different steps. The details of which are as follow:

3.1 Sample

The sample for this research study was the patients of amputation who acquired limb loss at some stage of their life. The study targeted adult males and females amputees between the age group of 19-60 years were included as this is the most active and productive age group and is highly influenced by any disability (Phillipo, Chalya, Joseph, Mabula, Ramesh, Isdori, Ngayomela, Alphonce, Chandika, & Japhet, 2012) The areas targeted for this purpose was different Government and Private Hospitals of Peshawar. The reason for selecting Peshawar for obtaining required information was that majority of amputation surgeries are conducted in Peshawar. Furthermore

Peshawar is the only medically advanced city in the province of Khyber pukhtoonkhwa where all kinds of advanced health facilities along with highly qualified doctors and health professionals are available. Therefore patients from all the remote areas of Khyber pukhtoonkhwa such as Chitral, Dir, Swat, malakand, bajawar, kohat etc comes to Peshawar for their major health issues and in case of emergency as well. Due to the paucity of sample 100 amputees were selected as a sample (N=100) for the purpose of the study. This number was reasonable as many past studies have used the same sample size with reliable results .

3.2 Mode of Data collection

Purposive sampling technique was used to collect the targeted sample and to meet the objectives of the study. Patients fulfilling the inclusion criteria of the study were included in the study while excludes all those who do not fulfill the required criteria.. The data was gathered from the surgical and orthopedic wards of different Government hospitals such as Lady Reading Hospital Peshawar, Khyber Teaching Hospital Peshawar, Hayatabad Medical Complex Peshawar. Similarly, some prominent private hospitals and institutes include Northwest General Hospital, Khyber Medical Center, Aman Hospital, Mercy hospital, Kowait Hospital, Rehman Medical Institute and PIPOS. Patients once identified were invited to take part in the study after explaining the nature and purpose of research.

The detail of the number of respondents from each hospital is as follow:

Table-3.1: Describing number of respondents from each hospital (N=100)

S.No.	Name of Hospital	No. of Respondents
1	Lady Reading Hospital Peshawar	21
2	Khyber Teaching Hospital Peshawar	14
3	Hayat Abad Medical Complex Peshawar	19
4	Northwest General Hospital	4
5	Kuwait Hospital	7
6	Mercy hospital	8
7	Aman Hospital	5
8	Khyber Medical Center	4
9	Rehman Medical Institute	5
10	Pakistan Institute For Prosthetic And Orthotic Sciences (PIPOS).	13

3.2.1 Inclusion Criteria

The criteria for the selection of study sample were as follow:

- The study consisted of patients of both genders who were between the age group of 19-60 years and who underwent limb amputation.
- The study included only amputees who had undergone major limb amputation such as lower or upper limb amputation, therefore minor \amputation such as finger, toe or ray amputees were not included in the sample as it might not accompany serious psychosocial issues.

- This current study was only limited to acquired limb amputees i.e. patients who acquired amputation at some stage of their life. Congenital limb amputees or amputees who attained this condition since birth were excluded from the study.

- Adjustments to amputation may also vary with time since amputation therefore the sample included only those amputees who acquired this condition with not less than six weeks before and not more than one year. In case of amputation the first 2-3 weeks is a period of shock and denial for a patients therefore we cannot predict their level of adjustment. The level of psychological stress may also decrease with time and a person may be able to adjust with their disability with time

3.2.2 Exclusion Criteria

- The first exclusion criterion for this study was patients with associated physical disabilities other than amputation. Such groups might have different problems and psychological issues that should be analyzed and resolved separately.

- Amputees with pre-existing psychiatric disorders before the incidence of amputation were also excluded from the study.

- The nature of psychosocial issues faced by amputees using artificial limbs is usually different from those who are without such devices. The present study excludes all those amputees who were using any kind of prosthetic devices or artificial limbs.

3.3 Instruments

Data was collected by using questionnaire as well as interview based survey technique. The sample composed of amputees of all the societal units and every amputee was visited in person to get the required information. The instruments comprised of three sections in which the first section was used for the introduction of the topic and confidentiality statement. Second section included the demographic questions including age, marital status, gender and education etc. of the respondents. Third section contained the items regarding familial social support, ability to cope with stress, accurate perception of reality, psychological adjustment, and self-acceptance, self-competence and self-esteem etc. In order to have a better idea a brief description of those instruments are given below.

3.3.1 Demographic Data Sheet

Demographic data sheet consisted of information regarding the age, gender, socio economic level, place of residence, educational background, family system, number of family members and description of the incident happened. This information was inquired to compare and analyze data in terms of differences in the study variables by these socio-demographic factors.

3.3.2 Familial Social Support Scale for Patients (FSSSP)

The Familial Social Support Scale for Patients (Nousheen & Kamal, 2001) is a 38 item scale used to measure the familial social support perceived by the patients in different areas. The details of different areas are as follow

- Treatment (4 items).
- Physical/health care (4 items).

- Nutrition/food (1item).
- Emotional support (18 items)
- Cooperation/domestic helps (2 items).
- Transportation (1 item).
- Financial support (2 items).
- Child care assistance (1 item).
- Sexuality/sex life (3 items)
- Attitude of the family (2 items).

Among these 38 items, 23 items are positively scored and 15 are negatively scored which require reverse scoring. Moreover the items of the scale were scored on 4-point rating scale i.e. Never=1, Sometimes=2, Most of the time=3, All the time=4. The total score on this scale is an aggregate of the values assigned to responses. Minimum score that could be attained on FSSSP is 38 while maximum score is 152. Higher scores indicate higher familial support while low scores show minimum support. FSSSP have been empirically determined and found to have discriminant validity whereas the alpha coefficient and split-half reliability coefficient was found to be .97 and .93 which is quite satisfactory.

3.3.3 Self-Esteem Scale

Rifai's (1999) Self-Esteem scale shall be supplemented with Familial Social Support Scale (FSSSP) which is a 29 items scale with four subscales such as:

- Self- Acceptance (11 items)

- Self- competence (6 items)
- Social and Physical Self-Acceptance (7 items)
- Academic Self-Competence (5 items).

It is an indigenous measure of self-esteem which offers assessment of self-esteem along with four dimensions the end of each statement, five response options are provided i.e., Extremely true= 4, Somewhat true=3, Neither true nor false =2, Somewhat False =1, and Extremely false=0. Reverse scoring is used for negatively phrased items.

Self-Esteem (Rifai, 1999), is an individually administered scale but can be used in group setting. The test completion time is 10-15 minutes as per manual. Possible maximum and minimum score range for Self-acceptance is 0-44, Self-competence (0- 24), Social and Physical Self-Acceptance (0-28) and Academic Self-Competence is 0-20. Full score of Self-Esteem scale ranges from 0 to 116. High scores reflect high level of Self-Esteem and low scores indicate low level of Self-Esteem. The first three subscales have shown high internal consistency as indicated by the coefficient alpha reliability of these scales, with an average of .75. However, Academic Self Competence is found to be quite satisfactory in terms of internal consistency as reflected by coefficient alpha .64 ($p<.000$). Similarly his scale was validated against Rosenberg self–esteem scale and was found to have an extensive validity among all other measures

3.3.4 Psychological Adjustment Scale

This assessment tool consists of 27 items with five subscales such as

th 14778

- Accurate perception of reality (4 items)
- Ability to cope with stress and anxiety (6 items)
- Positive self-image (7 items).
- Ability to express full range of emotions (6 items)
- Good interpersonal relationships (4 items)

Accurate perception of reality is represented by item 3, item 6, item 23 & item 27; ability to cope with stress and anxiety is represented by item 2, item 4, item 7, item 8, item 25 & item 26; Positive self-image is represented by item 5, item 10, item 13, item 15, item 16, item 17 & item 21; ability to express full range of emotions is gauged by item 1, item 11, item 14, item 18, item 22 & item 24 and good interpersonal relationships is represented by item 9, item 12, item 19 & item 20.

Responses are scored on 4-point rating scale with response options ranging from strongly agree (5) to strongly disagree (1). Scoring is reversed for negatively phrased items. Possible score ranged from 27-135 with cut off = 81. High scores reflect better psychological adjustment while low scores indicate poor psychological adjustment. The reliability coefficient of this scale is .82. (Sabir, 1999).

A breif summary of the demographic information obtained through demographic data sheet are given in the tables below:

Table-3.2: Gender, Age And Educational And Occupational Status of Respondents (N = 100)

S.No.	Variable	Grouping	*f*(%)
		Male	80 (80.0)
1	Gender	Female	20 (20.0)
		Total	100 (100.0)
2	Age	20-29 yrs	34 (34.0)
		30-40 yrs	36 (36 .0)
		40-60 yrs	30 (30.0)
		Total	100 (100.0)
3	Educational status	Illiterate	40 (40 .0)
		Middle	28 (28 .0)
		F.A	20 (20 .0)
		B.A and above	12(12 .0)
		Total	100 (100.0)
4	Occupational status	Shopkeeper	4 (4.0.)
		Business	6 (6.0)
		Farmer	17 (17.0)
		Service	10 (10.0)
		Driver	2(2.0)
		House Wife	4 (4.0)
		Misc odd jobs	57 (57.0)
		Total	100 (100.0)

Table-3.2 describes the gender, age, educational status and occupational status of the respondents. Result of the current study revealed that majority of the respondents i.e. 80% were males and only 20% were female. It was also found that 34% of respondents were between the age range of 20-29 years. 36 % were found between the age group of 30-40 years while only 30% of the respondents were found in late adulthood i.e. 50-60 years.

As far as the educational status of respondents is concerned, results depicted that majority of the respondents (40%) had no formal education or were illiterate. Moreover 28 % of the sample was able to complete studies up to middle school and 20 % of the total sample was intermediate degree holders. It was further found that a small percentage i.e. 12% of the respondents had bachelors or other higher degrees.

In case of occupational status of the respondents, results further revealed that majority (57%) of the amputees were doing some sort of odd unskilled laborious jobs. Apart from this, 17% of amputees belonged to farming and 10 % were doing regular service. Similarly 6% were businessmen, 4% were shopkeepers, 4% were housewives and 2% were divers.

Table-3.3: Income Status &Sources, Area Of Residence and Family System of Respondents. (N=100)

S.No.	Variable	Grouping	*f*(%)
1	Income status	No Income	14 (14.0)
		3000-17000	49 (49.0)
		18000-34000	20 (20.0)
		35000-51000	11(11 .0)
		52000- 68000	6 (6 .0)
		Total	100 (100.0)
2	Additional source of	Nil	31 (31.0)
	Income	Business	9 (9.0)
		Property	6 (6.0)
		Help and support	54 (54 .0)
		Total	100 (100.0)
3	Residence	Urban	35 (35 .0)
		Rural	65 (65 .0)
		Total	100(100.0)
4	Family System	Joint	61(61.0)
		Nuclear	39 (39.0)
		Total	100 (100.0)

Table-3.3 describes the income status, additional sources of income, place of residence and family system of respondents. With respect to income level of the respondents, results depicted that 14% of the amputees were jobless and had no source of income at all. The income level of 49% of the

amputees was exceptionally low i.e. 3000-17000. It was also found that 20% of the amputees were earning from 17000 to 34000 of income while 11% had reasonably good income status which ranged from 35000- 51000. The study also revealed that 6% of amputees belonged to income group which ranged from 52000-68000.

Results also provide information about the additional income sources which the respondents may have along with their regular jobs. It clearly indicated that 31% of the respondents didn't have any additional sources of income. 9% had some sort of business which served as an additional source of income while 6% had property as a source. It was also found that maximum 54% of respondents received help and support from their families and friends.

As far as the place of residence of the respondents is concerned, results illustrates that most of the respondents (65%) were living in the rural areas and about 35% were residing in the urban areas. Results also gave an idea about the family system of the respondents that 61% were living in joint family system while 39% were living in nuclear family system.

Table-3.4: Cause, time since amputation and Ability to do routine tasks (N=100)

S.no	Variable	Grouping		*f*(%)
1	Cause of Amputation	Planned causes	Diabetes	24 (24,0)
		Unplanned causes	Accident	56 (56.0)
			Bomb Blast	9 (9.0)
			Electric Shock	4 (4.0)
			Gun Shot	7 (7.0)
		Total		100 (100.0)
2	Time since amputation	Up to 2 Months		13 (13.0)
		3- 6 months		33 (33.0)
		7 months to 1 year		54 (54.0)
		Total		100 (100.0)
3	Ability to do routine tasks	No.		37 (37.0)
		Yes		63 (63.0)
		Total		100 (100.0)

Table-3.4 further describes the different causes of amputation. It was found that the major cause of amputation was accidents which were revealed in 56% of cases and second leading cause was diabetes which was found in 24% of cases. Apart from that 9% of amputations were caused by bomb blasts, 4% were caused by electric shock and 7% were caused by gunshots. Results also revealed that majority (76%) of the cases of amputation were unplanned such as accidents, bomb blast etc. While only 24% were planned cases such as diabetes in which doctors and patients planned with mutual consensus to go for amputation.

With respect to the time since amputation, it was found that 13% of cases took place within the previous 3 weeks to months and 33% of cases take place within last 3-6 months of time period. It was also found that maximum 54% of amputation took place within the previous 7 months to 1 year of time period. Results also reveal that 63% of the amputees were able to do their normal routine work and 37% of cases faced difficulties in doing their routine life activities

Procedure

The Main study was conducted following different steps. A brief description of each step is given below in order to understand the procedure of the research.

Step-1: Official Permission

In the first step the administrative officials of the various hospitals were approached. They were briefed about the nature and purpose of the study and the whole research aim was explained. They were assured that the data

collected would be used for research purpose only. After that an official request and permission letter dully signed by the research supervisor stating the nature and purpose of the study was sent to all the concerned departments of different government and private hospitals as well as institutes through their hospital administrations.

Step-2: Visits to Hospitals

After obtaining the official permission from the administrative officials, the surgical and orthopedics wards of all the hospitals were visited. The on duty doctors and other concerned staff were again briefed about the purpose of study and were requested to provide the data regarding amputation from their hospital directories.

Step-2: Visits to Hospitals

After obtaining the official permission from the administrative officials, the surgical and orthopedics wards of all the hospitals were visited. The on duty doctors and other concerned staff were again briefed about the purpose of study and were requested to provide the data regarding amputation from their hospital directories.

Step-3: Scrutiny

All the data regarding the cases of amputations were collected with the help of hospital directories. Patients were scrutinized according to required research inclusion criteria e.g. age of respondents, level of amputation, time since amputation, history of related psychiatric and associated physical disabilities. The final list of amputees to be included was given to the concerned departments in order to get the contact details of the patients.

Step-4: Approaching the Amputees

The participants were contacted with the help of medical records from the concerned wards. The nature and purpose of the study was explained to them and they were briefed about the benefits of the study The volunteered amputees were invited to participate in the study. After obtaining their verbal willingness, the time and venue for the administration of instruments were finalized with them. Few of the amputees preferred to meet at their home and workplaces while most of the participants decided to meet at their hospitals during their regular follow up visits. Patients from other cities were requested to have meeting with the researcher whenever they come for their regular checkups to the hospitals.

Step-5: Administration of the Instruments

A brief description was given to the amputees regarding the topic to make the context clear to them in order to get realistic responses. They were assured of the nature of the confidentiality so to make them able to respond to the questions with full freedom. The participants were not required to mention their names on the response sheet and thus it was anonymous. The researcher used the participants identification number as the only identifier. Participants were given the scales under the researcher's supervision. Self-administrative technique was used for the collection of data . Illiterate respondents filled the questionnaire with the help of researcher. Response rate was 100% and all the questionnaires were received back in the form that they can added into SPSS for statistical analysis

Step- 6: Statistical analyses

In this step statistical procedures such as Regression, Correlation, analyses of variance, T-statistics etc using SPSS version 20 were applied.

CHAPTER-4

RESULTS

The collected data were statistically analyzed using SPSS version 20. Summary statistics, frequency distribution, percentages and cross tabulations were conducted to obtain demographic information of the respondents. Similarly descriptive statistics such as mean, standard deviation, variance, range etc. were also calculated for all the continuous variables which include the scores of all the scales and subscales. Correlations were employed to examine the relations of different variables such as familial-social support, perception of reality, ability to cope with stress and anxiety, self-acceptance, self-esteem and psychological adjustment with each other as well as with the demographic variables.

Simple and multiple regression models were used to study the differences in the psychological outcomes and predictors of psychological adjustment of the amputees. Independent t-tests were used to compare different groups (i.e. gender, cause, time since amputation etc.) for the level of adjustments and self-esteem. Similarly analyses of variance (ANOVA) were used for comparisons of research variables between different groups of amputees. The details of descriptive and statistical analyses are discussed below.

Table-4.1: Cross Tabulation between Gender and Cause of Amputation (N=100)

Gender	Cause		χ^2	*p*	Odds ratio
	Unplanned n=76	Planned n=24			
Males (n=80)	73 (96.0%)	7 (4.0%)	51.0	.000	59.09
Females (n=20)	3 (15.0%)	17(85.0)%			

Table-4.1 shows cross-tabulation of gender and cause of amputation. It was found that males dominate females accounting for 80% of the total sample. With respect to cause of amputation, results depicted that 76% of amputations were caused by planned reasons while 24% were caused by unplanned reasons. The current cross-tabulation also showed that in case of males, majority i.e. 96% of amputations took place due to unplanned accidental reasons while only 4% were caused by planned reasons. On the other hand, majority (85%) of amputation in females was caused by planned reasons and only 15% were caused by unplanned reasons.

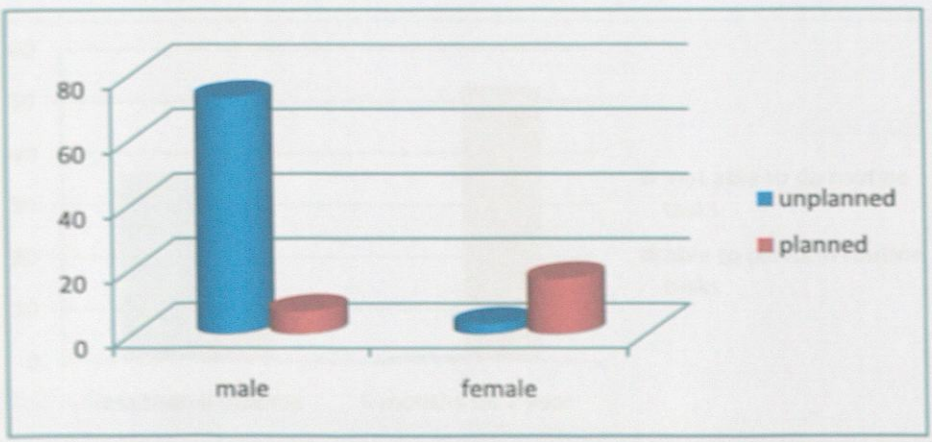


Figure-4.1: Bar chart describing gender differences on the basis of cause. (N=100)

Table-4.2: Cross Tabulation between ability to do routine tasks and time period since amputation (N = 100)

Time since amputation	Ability to perform routine work		X^2	p	Odds ratio
	No (n=37)	Yes (n=63)			
Less than 6 months (n=46)	36(78%)	10(22%)	62.21	<.001	190.8
7 months till 1 year (n-54)	1 (2%)	53(98%)			

Table-4.2 shows the cross-tabulation of time period since amputation and an amputee ability to perform daily routine tasks. Results revealed that in cases of amputation which took place within the previous 6 months of time, majority (78%) of amputees were not able to perform their daily routine tasks after the incidence of amputations. On the other hand, 22% of amputees were able to do their routine work. Similarly, among those amputation cases which took place within previous 7 months till 1 year, 98% were able to perform their routine life activities while only 2% face difficulty in performing their routine tasks and were not able to continue their routine activities.

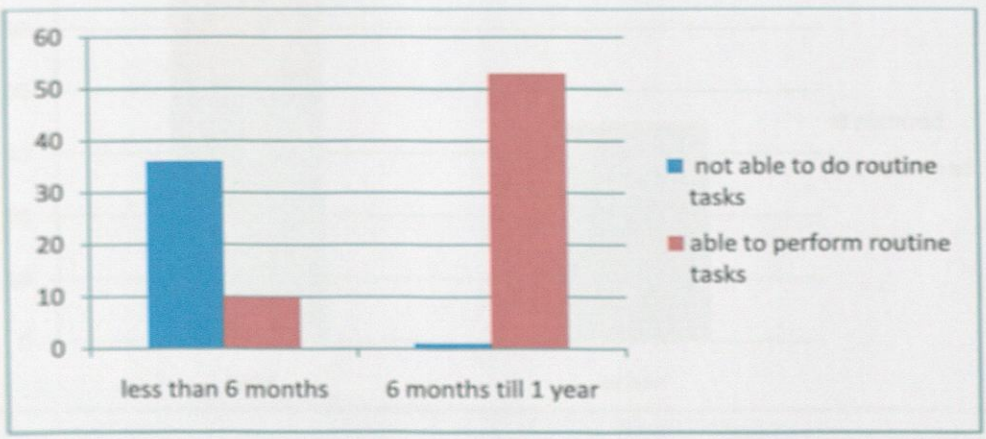


Figure-4.2: Bar chart describing ability to perform routine task on the basis of time period since amputation (N=100)

Table-4.3: Cross Tabulation between area of residence and cause of amputation (N=100)

Place of Residence	Cause		X^2	p	Odds ratio
	Unplanned (n=76)	Planned (n=24)			
Rural (n=65)	42(65%)	23(35%)	13.19	<.001	.054
Urban (n=35)	34 (97%)	1(3%)			

Table-4.3 shows cross-tabulation of the incidence of amputation with respect to place of residence. Results depicted that maximum cases (65%) of amputation took place in rural areas and among those cases a majority i.e. 65% cases took place due to unplanned accidental reasons. Similarly 35% of the cases of amputation took place in urban areas and among those 3% were caused by planned reasons while 97% of amputees were the victims of unplanned accidental mishaps.

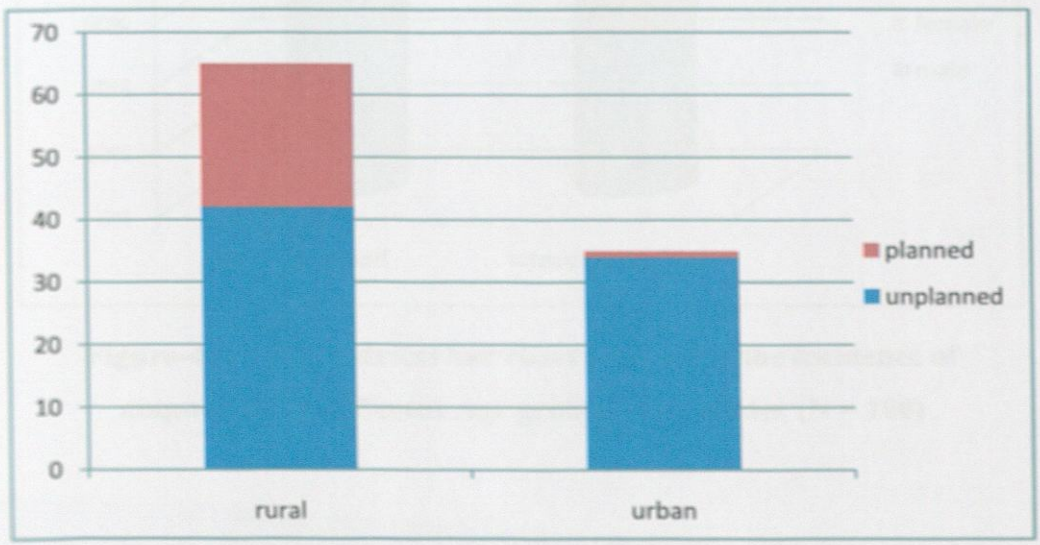


Figure-4.3: Bar char describing the causes of amputation on the basis of area of residence (N=100)

Table-4.4: Cross Tabulation between Age group and Gender of amputees (N=100)

Age Group	Gender		χ^2	p	Odds ratio
	Male n=80	Females n=20			
Early Adulthood (n=62)	61(98.0%)	1 (2.0%)	34.4	<.001	61.0
Late Adulthood (n=38)	19 (50 %)	19(50 %)			

Table-4.4 describes that majority (62%) of the respondents were in their early adulthood and almost all (98%) were males. On the other hand 38% of respondents were in late adulthood and among them 50% were males and 50% were females.



Figure-4.4: Cylindrical bar chart describing the incidence of amputation in different Age groups and Gender (N = 100)

Table-4.5: Cross Tabulation between Age group and cause of amputation (N=100)

Age Group	Cause		χ^2	p	Odds ratio
	Unplanned n=76	Planned n=24			
Early Adulthood (n=62)	60(97.0%)	2 (3.0%)	38.6	<.001	42.0
Late Adulthood (n=38)	16 (42.0%)	22(58.0%)			

Table-4.5 reveals that majority (97%) of amputations in early adulthood took place due to unplanned causes while in late adulthood, amputations of (58%) took place due to planned causes.

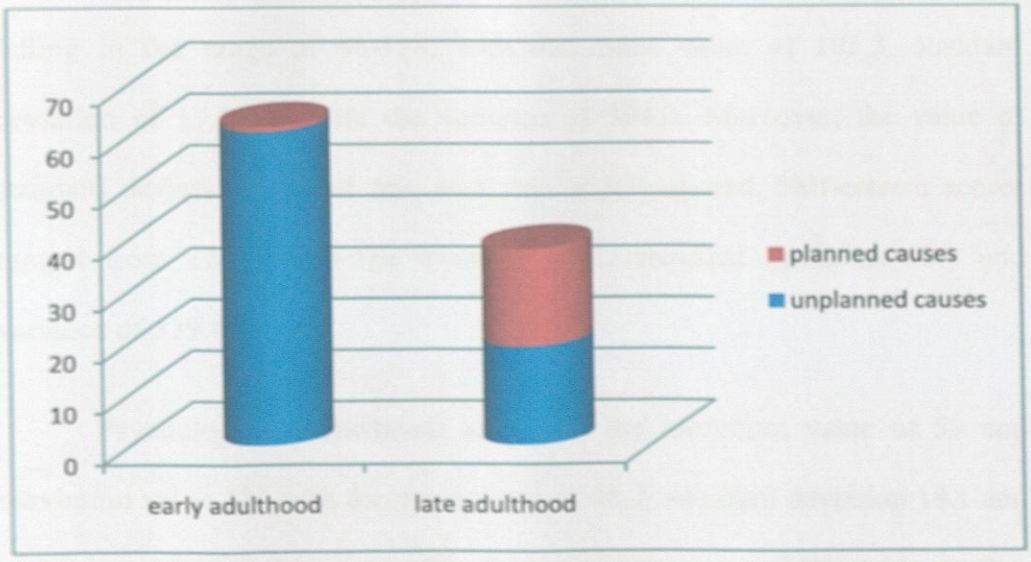


Figure-4.5: Cylindrical bar chart describing differences in the cause of amputation on the bases of Age group (N=100)

Table-4.6: Descriptive statistics and reliability estimates of all scales (N=100)

S.No.	Scales	Range	Min	Max	Mean	St.Dv	Var	Skw	No. of Items	α
1	Familial social support	72.0	66.0	138.0	105.3	19.8	394.0	-.17	38	.909
2	Self Esteem	80.0	16.0	96.0	67.1	18.4	339.4	-.34	29	.712
3	Psychological Adjustment	67.0	59.0	126.0	96.7	18.1	329.0	-.01	27	.816

Table 4.6 shows descriptive statistics of the various scales used in the study. For this purpose, the raw data is modified into interpretable facts that comprised of mean and standard deviations along with the range of the variables. The management of data showed that family support scale was falling in the range of 66-138, with the mean value of 105.3, standard deviation of 19.8 and with the variance of 394.0. Moreover, the value of standard deviation showed that data was widely spread. Self-esteem scores ranged from 16-96 with the mean of 67.1, standard deviation 18.4 and variance of 339.4.

Psychological Adjustment scale had the minimum value of 59 and maximum value 126 with the mean value of 96.7, standard deviation 18.1 and variance of 329.6. Moreover the skewness values in above table further explained the normal distribution of data.

The table also indicates the magnitude of reliability of all the three scales administered on the present sample of 100 participants. The values ranged from .71 to .90 for all scales i.e. Familial Social Support Scale, Self

Esteem Scale and Psychological Adjustment Scale. Therefore, it was concluded that all these scales were sound in terms of internal consistency and serves as reliable measures of the construct

Table-4.7: Descriptive Statistics and reliability estimates of Subscales of Self-Esteem Scale (N=100) & Psychological Adjustment scale (N = 100)

S.No.	Scales	Range	Min	Max	Mean	St.Dv	Var	Skw	No. of Items	α
1.	Self-Acceptance	29.0	23.0	52.0	39.9	7.1	50.5	-.12	4	.707
2.	Self-Competence	24.0	2.0	26.0	15.3	4.9	24.4	-.80	11	.576
3.	Academic self-competence	18.0	0.0	18.0	9.44	5.1	26.5	-.16	7	.612
4.	Physical and social self-Acceptance	23.0	3.0	26.0	19.4	3.6	13.4	-1.7	6	.752
5.	Perception of reality	11.0	9.0	20.0	15.4	2.9	8.66	-.27	4	.639
6.	Ability to cope with stress	16.0	12.0	28.0	20.3	4.2	17.87	.25	6	.934
7.	Positive self-Image	23.0	11.0	34.0	24.8	6.2	39.01	-.46	7	.789
8.	Ability to express emotions	15.0	15.0	30.0	22.2	3.6	13.52	.07	6	.908
9.	Interpersonal relationships	11.0	9.0	20.0	15.3	2.8	8.03	-.19	4	.823

Table 4.7 shows descriptive statistics of the subscales of self-esteem scale and psychological adjustment scales used in the study. Results showed that self-acceptance and self-competence had minimum value of 23 and 2 respectively and maximum value 52 and 26 with the mean values of 39.9 and 15.36, standard deviation 7.1 and 4.9 respectively. Academic self-competence has mean value of 9.44, with standard deviation of 5.1 whereas the minimum value was 0 and maximum value was 18.0. The skewness values also demonstrated the normal distribution of data.

Similarly accurate perception of reality and Ability to cope with stress and anxiety had mean value, 15.4 and 20.3, standard deviation 3.9 and 4.2, whereas variance of 8.6 and 17.87. The minimum values were 9 and 12 and maximum values were 20 and 28 respectively. Whereas Positive self-image, Ability to express full range of emotions and good interpersonal relationships had mean value 24.82, 22.25 and 15.37, standard deviation of 6.24, 3.67 and 2.83 and variance of 39.01, 13.52 and 8.03. Further its minimum values were 11, 15 and 9 and maximum values were 34, 30 and 20 respectively. Moreover the skewness values in above table further explained the normal distribution of data.

The Table also shows the reliability coefficients of the four (4) subscales of Self-Esteem scale and all the five (5) subscales of Psychological Adjustment scale used in the current study. Results shows that the alpha reliability values of these scales ranges from .57 to .93 thereby confirming that all these measure are significant and reliable

Table-4.8: Alpha Reliability of Male (N = 80) and female participants (N = 20).

S.No.	Scales	Male participants. N = 80		Female participants. N = 20	
		No. of Items	α	No. of Items	A
1	Familial Social Support Scale (FSSS)	38	.913	38	.902
2	Self Esteem Scale (SE)	29	.706	29	.743
3	Psychological Adjustment Scale (PAS)	27	.885	27	.885

Table 4.10 shows the reliability coefficient of all scales for the male and females participants of the current investigation (n = 80). Results verified that these values are highly significant at <.01 indicating significant correlation among each others

Table-4.14: Correlation Matrix of all the Scales and Subscales (n= 100)

Variable	FSSS	SE	PAS	SA	SC	SPSA	ASC	APR	ACSA	PSI	AEFRE	GIR
FSSS[1]	-											
SES	.726**	-										
PAS	.760**	.880**	-									
SA	.455**	.633**	.726**	-								
SC	.299**	.492**	.473**	.465**	-							
SPSA	.295**	.461**	.418**	.447**	.477**	-						
ASC	.240*	.397**	.344**	.219*	.452**	.313**	-					
APR	.249*	.436**	.482**	.674**	.249*	.330**	.102	-				
ACSA	.531**	.651**	.797**	.676**	.373**	.355**	.318**	.523**	-			
PSI	.418**	.582**	.658**	.772**	.598**	.393**	.261**	.665**	.563**			
AEFRE	.137	.349**	.403**	.532**	.360**	.317**	.146	.515**	.450**	.481**	-	
GIR	.309**	.426**	.493**	.581**	.214*	.370**	.018	.586**	.439**	.613**	.322**	-

*$p<.05$, **$p<.01$

Read FSSS as Familial Social Support Scale, SES as Self-Esteem Scale, PAS as psychological adjustment Scale, SA as Self-Acceptance, SC as Self-competence , SPSA as Social and physical self- acceptance s, ASC as Academic self-competence, APR as Accurate perception of reality, ACSA as ability to cope with stress and anxiety, PSI as Positive self image, AEFRE as ability to express full range of emotions and GIR as Good interpersonal relationships

Table 4.14 shows Inter-correlation among all the three scales and nine subscales of the current study. The matrix demonstrated that there were significant correlations between the different variables ranging from week to strong positive correlation. Results depicted that the relationship between study variables were strongly positive and statistically significant thereby confirming the hypotheses based upon these variables. Findings showed that familial social support was strongly correlated with both self-Esteem (r=.880, $p<.01$) and psychological adjustment (r= .760, $p<.01$). Moreover, familial

social support also had a good positive relation with ability to cope with stress and anxiety (r=.531, p<.01). Results further revealed that there was significant positive relation between self-acceptance and psychological adjustment (r=.726, p<.01), as well as between accurate perception of reality and self-acceptance i.e. r=.674, p<.01. Findings of the study also showed that positive self-image was also positively related with self-competence (r=.598, p<.01) and is statistically significant

4.1 Nature and cause of amputation surgery

With respect to the nature and cause of amputation procedure, two groups of amputees were identified. One group of amputees (Group-1) comprised of all unplanned amputation cases such as those people who had traumatic or accidental amputation i.e. accidents, bomb blasts, electric shocks and gun shots while other group (Group-2) consisted of those amputees who acquired this condition due to any planned cause e.g. diabetes and infections.

Table-4.10: Nature of amputation surgery (N=100)

Nature of Amputation	Cause	*f*(%)	Total (%)
Planned amputation	Diabetes	24 (24.0)	24 %
Unplanned amputation	Accident	56 (56.0)	
	Bomb Blast	9 (9.0)	76%
	Electric Shock	4 (4.0)	
	Gun Shot	7 (7.0)	
Total		100 (100%)	100.0%

Table 4.10 describes the cause of amputation on the basis of whether it was a planned procedure or it was an accidental or traumatic incidence resulting in amputation. Results showed that majority (76%) of the cases of amputation took place due to unplanned causes while 24% of the amputations were caused by unplanned reasons.

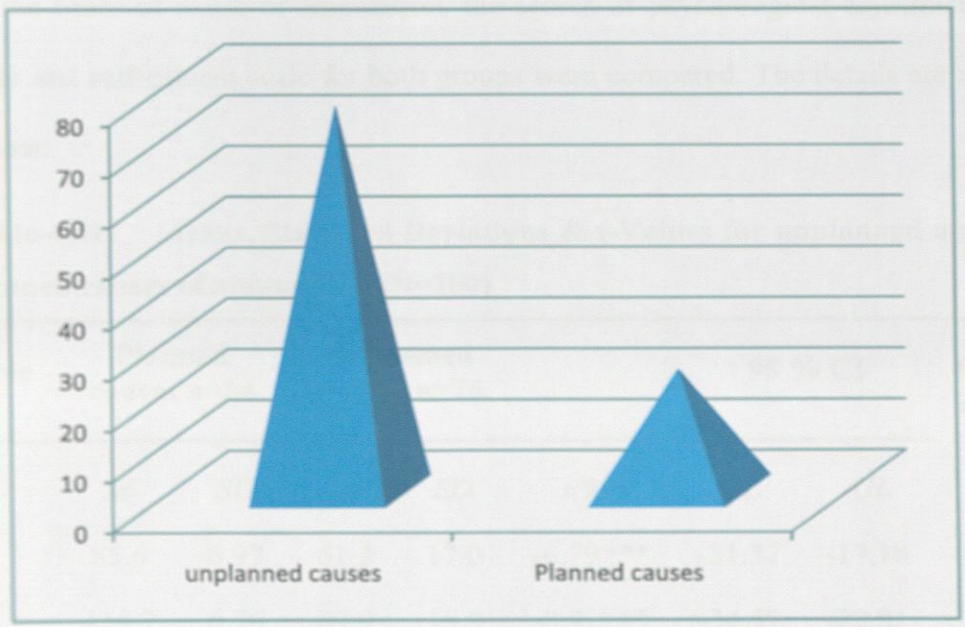


Figure-4.6: Cubic bar chart describing Unplanned and Planned causes of Amputation (N=100)

4.2 Differences in cause of amputation and level of Psychological adjustment and self-esteem

An amputee's level of psychological adjustment and self-esteem may also be influenced by the cause of amputation. In order to know the differences in an amputee level of psychological adjustment and self-esteem on the bases of cause of amputation, the scores of psychological adjustment scale and self-esteem scale for both groups were compared. The details are as follow.

Table-4.11: Means, Standard Deviations & t-Values for unplanned and planned causes of amputation (N=100)

Variable	Planned causes n=24		Unplanned causes n=76			95 % CI		Cohen's d
	M	*SD*	*M*	*SD*	*t(98)*	*LL*	*UL*	
SES	85.6	6.97	61.3	17.0	-6.79***	-31.37	-17.18	1.86
PAS	118.2	6.76	89.9	15.0	-8.92***	-34.59	-22.01	2.43

****p <.001*

Table 4.11 indicates significant differences in the level of self-esteem {*t (98)* = -6.79, *p* <.001} and psychological adjustment {*t (98)* = -8.92, *p* <.001} of amputees on the basis of cause of amputation. Finding explained that on self-esteem scale, amputees with planned amputation (M=85.62, SD= 6.97) scored higher as compare to amputees with unplanned amputation (M=61.34, SD=17.02). Similarly on psychological adjustment scale, amputees with planned amputation (M=118.29, SD= 6.76) also scored higher than amputees with unplanned amputation (M=89.98, SD=15.01).

Table-4.12: Analyses of variance of Psychological adjustment, self-esteem and educational status (N = 100)

Variable	Group 1 (n=40) Illiterate		Group 2 (n=28) Middle		Group 3 (n=32) F.A n above		*f(97)*	i-j
	M	SD	M	SD	M	SD		
SES	82.10	8.74	68.46	11.91	47.37	13.06	86.18***	*1>2>3*
PAS	112.57	9.36	93.64	15.51	79.78	10.09	72.33***	*1>2>3*

****p < .001*

Analyses of variance was carried out to find out if self-esteem and psychological adjustment increases or decreases with the level of education. The three groups under study were (1) amputees who were illiterate, (2) amputees who had middle level education (3) amputees who had a qualification of intermediate and above. Table-4.12 indicates significant differences in the scores of self-esteem scale {F (97) =86.1, p<.001} and psychological adjustment scale {F(97) = 72.3, p<.001} due to differences in the educational status of amputees. The results of one-way Anova revealed that there was a significant inverse relation between psychological adjustment, self-esteem and an amputee's level of education. Results of the study showed that an amputee level of self-esteem as well as psychological adjustment decreases with an increase in the level of education.

Results demonstrated that illiterate amputees scored higher than amputees who had matriculation and amputees who were matriculate scored better than amputees with F.A qualification and above on both scales. The mean scores of self-esteem scale were 82 for illiterate, 68 for middle and 47

for F.A and above. In the same way, the mean scores on psychological adjustment scales were 112 for illiterate, 93 for middle and 79 for F.A and above. The findings of Turkey's post-hoc test (Appendix F) also revealed significant differences among all groups.

Table-4.13: Analyses of variance of Psychological adjustment, self-esteem and Age groups (N = 100)

Variable	Group 1 (n=34) 20-29 yrs		Group 2 (n=36) 30-40 yrs		Group 3 (n=30) 49-60 yrs		*f(97)*	i-j
	M	*SD*	*M*	*SD*	*M*	*SD*		
SES	54.73	16.06	66.86	17.61	81.63	9.64	25.35***	*1<2<3*
PAS	84.94	13.39	94.22	17.35	113.26	10.10	32.85***	*1<2<3*

****p < .001*

Table 4.13 shows significant differences in level of self-esteem and psychological adjustment of different age groups of amputees. Results showed that amputees of different age groups scored differently from each other on both self-esteem scale {F (97) = 25.35. p<.0 001} and psychological adjustment {F (97) =32.8. p<.001.

In case of self-esteem level, results demonstrated significant differences among all three age groups. It was found that amputation more drastically effected young people (age 20-29 yrs) as compare to other age groups. The mean scores showed that amputees between age group of 20-29 years had lowered level of self-esteem (M=54.73. SD= 16.0) among all three age groups. It was also found that amputees between 30-40 years of age group had higher level of self-esteem (M=66.86. SD= 17.61) as compared to younger age group. Similarly results showed that older amputees i.e. 40-60 years of age had the highest level of self-esteem (M=81.73. SD= 9.64) among all other age groups. Similarly, in case of level of psychological adjustment, amputees between age group of 40-60 years and above also scored higher than amputees of other age groups. The mean scores on psychological adjustment

scale showed that amputees between age 40 to 60 years (M= 113.2. SD=10.10) were better psychologically adjusted as compare to young age groups. The findings of Turkey's post-hoc test (see Appendix F) also revealed significant differences among all groups.

Table-4.14: Means, Standard Deviations & t-Values on level of Psychological Adjustment and Self Esteem for less and more time since amputation (N = 100)

Variables	More than 6 months (n=54)		Less than 6 months (n=46)			95 % CI		Cohen's d
	M	*SD*	*M*	*SD*	*t(98)*	*LL*	*UL*	
SES	79.5	11.2	52.6	14.0	-10.6**	-31.97	-21.95	2.11
PAS	110.6	10.6	80.5	9.34	-14.8**	-34.17	-26.12	2.01

***p <.001*

Table 4.14 shows the differences in the amputee's level of self-esteem and psychological adjustment due to increasing time since amputation. Results indicated significant differences between groups of amputees with less than 6 months of time since amputation and more than 6 months of time since amputation on both self-esteem scale {t(98)= -10.6, p<.001} as well as on psychological adjustment scale {(t (98) = -14.8. p<.001}. Findings demonstrated that amputees with more than 6 month of time since amputation scored higher on self-esteem scale (M= 79.5, SD = 11.2) as compare to those amputees who had less than 6 months of time since amputation. (M= 52.6, SD=14.0).

Similarly an amputee's level of psychological adjustment also increases as time since amputation increases. It was found that amputees with more than 6 month of time since amputation were better psychologically adjusted (M= 110.6, SD= 10.6) as compare to those amputees who had less than 6 months of time since amputation. (M = 80.5, SD = 9.3).

Table-4.15: Means, Standard Deviations & t-Values on level of Psychological Adjustment and Self-esteem for ability to do routine work or not (N = 100)

Variables	Able to work (n=63)		Not able to work (n=37)			95 % CI		Cohen's d
	M	*SD*	*M*	*SD*	*t(98)*	*LL*	*UL*	
SE	78.03	12.01	48.67	11.25	- 2.0*	-34.18	-24.52	2.52
PAS	108.33	11.63	77.10	6.35	-15.0**	-35.34	-27.10	3/33

**p <.01, **p<.001*

Tables 4.15 shows marked difference in an amputee's ability or inability to do routine work and their level of self-esteem {t (98) = -12.0, p<.01} and psychological adjustment {t (98) = -15.0, p<.001}. Results of the study revealed that ability to work increases an amputee's level of self-esteem which in turn increases their level of psychological adjustment. Results further depicted that amputees who were able to do normal routine work scored higher on both self-esteem (M= 78.0, SD= 12.0) and psychological adjustment scales (M=108.3, SD=11.6). On the other hand those amputees who were not able to do their routine tasks scored less on both self-esteem scale (M= 48.6, SD= 11.2) and psychological adjustment scale (M=77.1, SD=6.35).

Table-4.16: Means, Standard Deviations & t-Values on level of Psychological Adjustment and Self Esteem for both genders (N = 100)

Variable	Females n=20		Males n=80			95 % CI		Cohen's d
	M	*SD*	*M*	*SD*	*t(98)*	*LL*	*UL*	
SES	86.2	4.99	62.4	17.43	-6.03***	-31.69	-16.00	1.8
PAS	121.2	3.54	90.6	14.85	-9.09***	-37.18	-23.86	2.85

****p <.001*

Table 4.16 reflects gender differences on both self-esteem scale and psychological adjustment scale. On psychological adjustment scale results depicted significant differences between males and females {t (98) = -9.09, p< .001} and it was found that on average females (M=121.2.SD=3.5) scored higher than males (M=90.6, SD=14.5). In the same way there appeared significant differences on self-esteem scale scores as well {t (98) = -6.03, p< .001} and here again females (M= 86.2.SD= 4.9) scored higher than males (M= 62.4, SD= 17.4).

Table-4.17: Means, Standard Deviations & t-Values on level of Psychological Adjustment and Self-esteem for rural and urban areas (N = 100)

variable	Rural n=66		Urban=34			95 % CI		Cohen's d
	M	*SD*	*M*	*SD*	*t(98)*	*LL*	*UL*	
SE	77.0	13.0	48.0	10.6	11.2***	23.86	34.13	2.44
PAS	106.8	13.0	77.1	7.08	12.3***	24.91	34.48	2.84

****p <.001*

Table 4.17 indicates that on the basis of place of residence there were considerable differences on both self-esteem scale {t (98) = 11.2, p<.001} and psychological adjustment scale {t(98)= 12.3, p<.001}. Findings demonstrated that amputee residing in rural areas had much higher level of self-esteem (M=77.0. SD= 13.0) as compare to amputees who were living in urban areas (M=48.0. SD=10.60). In the same way, amputees residing in rural areas were better psychologically adjusted (M=108.8. SD= 13.0) as compare to amputees residing in urban areas (M=77.1. SD= 7.0).

Table-4.18: Regression Analysis of perception of reality predicting self-Acceptance in amputees (N = 100)

Model	Unstanderdized β	Std Error	Standardized Beta	*t*	*P*
(Constant)	14.899	2.827		5.27	.000
APR	1.627	.180	.674	9.02	.000

R^2=.454; *Adjusted* R^2 =.488. $F(98) = 81.50$, $p < .001$

In order to specify the predictive relationship between accurate perception of reality and self-acceptance, a linear regression analysis was conducted using enter method. The results disclosed that 45.4% of the variance in the dependent variable was caused by the predictor variable i.e. accurate perception of reality (R^2=.454, f(98) =81.5, p<.001). The findings of the study indicated that accurate perception of reality was positively related with self-acceptance {B=.674, t=9.02, p=< .001}.

Table-4.19 Regression Analysis of level of self-acceptance predicting psychologically adjustment of amputees (N = 100)

Model	Unstandardized β	Std Error	Standardized Beta	*t*	*P*
(Constant)	22.756	7.198		3.161	.002
SA	1.852	.177	.724	10.34	.000

R^2=.537; *Adjusted* R^2 =.532. $F(98)$= 109.069, $p < .05$

Regression analysis was conducted using enter method to specify the relationship of self-acceptance with` psychological adjustment. The results suggested that there was a positive relation between self-acceptance and psychological adjustment {B=.724, t=10.34, $p<$ .001) and 53 % of the variance in the dependent variable was caused by the predictor variable {R^2=.537, f (98) 109.1, p <.001).

Table-4.20: Regression Analysis of Positive self-image predicting Self-Competence in amputees (N = 100)

Model	Unstandardized β	Std Error	Standardized Beta	*t*	*P*
(Constant)	3.618	1.641		2.205	.030
PSI	.473	.064	.598	7.378	.000

R^2=.357, Adjusted R^2 =.351. $F(98) = 54.437$, $p < .001$

Linear regression analysis was applied to find out whether or not positive self-image had an effect on the amputees level of self-competence. The model suggested that positive self-image plays a significant role in boosting the amputees level of self-competence and there exists a positive relation between these two variables {B=.59, $f(98) = 54.4$, $p< .001$}. The findings of the study indicated that 35.7% of the variance in the dependent variable was caused by the predictor variable {R^2=.357, $f(98) = 54.43$, $p<.001$}

Table-4.21: Regression Analysis of familial–social support predicting amputee's ability to cope with stress and anxiety (N = 100)

Model	Unstandardized β	Std Error	Standardized Beta	*t*	*P*
(Constant)	8.388	1.953		4.29	.000
FSSS	.113	.018	.531	6.20	.000

R^2=.282; *Adjusted* R^2 =.275. $F(98) = 38.558$. $P < .001$

In order to ascertain the extent to which familial support can predict an amputee's ability to cope with stress and anxiety caused by amputation, a linear regression analyses was applied. It was found that familial support had a positive effect on an amputee's ability to cope with stress and anxiety. The regression model was a good fit for data {$R^2 = .282$, $f(98) = 38.5$, $p<.001$} and predicted 28.2% of variance in the dependent variable

Table-4.22: Regression Analysis of Familial Social support predicting self-esteem (N = 100)

Model	Unstandardized β	Std Error	Standardized Beta	*t*	*P*
(Constant)	-3.796	6.912		-.549	.584
FSSS	.674	.064	.726	10.44	.000

R^2=.527, *Adjusted* R^2 =.522. $F(98) = 109.1, p<.001$

Linear regression analysis was conducted in order to know if there is any relation between familial social support and self-esteem. The results suggested that there was a positive relation between self-esteem and familial social support {B=.726, t=10.44, $p<$ .001) and 52 % of the variance in the dependent variable was caused by the predictor variable {R^2=.527, f (98) 109.1, p <.001).

Table-4.23: Regression Analysis for self-esteem predicting psychological Adjustment (N = 100)

Model	Unstandardized β	Std Error	Standardized Beta	*t*	*P*
(Constant)	38.55	3.28		11.73***	.000
SE	.867	.047	.880	18.37***	.000

$R^2 = .775$, *Adjusted* $R^2 = .773$. $F(98) = 337.6$, $p < .001$

Linear regression analysis was carried out to specify the predictive relationship between self-esteem and psychological adjustment. The finding of regressions analyses indicates significant differences in the level of psychological adjustment due to increased or decreased level of self-stem. The model suggested psychological adjustment had a strong positive relation with self-esteem {B=.880, t=18.37, p<.001).The finding demonstrated that 77 % of the variance in the dependent variable was caused by predictor variable ($R^2 = .775$, $f(98) = 337.6$. $p < .001$

Table-4.24: Predictors of psychological Adjustment (N=100)

	Psychological Adjustment		
	Model 1	Model 2	95% CI
Variables	*B*	*B*	
constant	23.604	26.200	17.495, 34.906
FSSS	.695**	.234*	.116, .352
SES	-	.684**	.557, .811
R^2	.578	.806	
F	134.11***	201.57***	
Delta R^2		.228	
Delta *F*		114.166	

*$p < .05$, **$p < .01$, ***$p < .001$

Multiple regression analyses were carried out to verify self-esteem as a possible mediating variable of familial-social support and psychological adjustment. The results confirmed the hypothesis by verifying self-esteem as a significant mediating predictor of familial-social support and psychological adjustment {R^2=.806, F (2, 97) = 201.57, $p < .001$}. A significant 80% of the variance in the dependent variable was caused by the predictor variables

CHAPTER 5

DISCUSSION

At present, the rate of amputation is increasing day by day due to increasing socio-political instability around the globe. As far as Pakistan is concerned, the incidence of amputation is also increasing at an alarming rate and the reasons behind this increased rate are obvious. Unfortunately, the last few decades has seen the dramatic rise of instability, violence and insecurity in our country as Pakistan is a frontline state in the global war against terrorism. Moreover, due to geographical proximity to Afghanistan, Khyber Pakhtunkhwa and especially Peshawar city is paying a huge price in this war against terror. Increasing rate of bomb blasts, terrorist attacks and brutal violence lead to mass killings and serious injuries which results in an increase rate of different types of disabilities including amputation.

Limb amputation is the form of surgery in which upper or lower limb is removed from the body due to any disease, infection or traumatic accident. Losing a limb is one of the most shocking, tragic, and devastating incident that takes place in the life of any individual. Despite the fact that this surgery is usually done for improvement of health condition and in order to save the life of the person but still the victim faces terrible and hurtful psychosocial consequences. It not only affects the physical aspect of human life but also prohibit an individual to live a normal, healthy and constructive life ultimately leads to various psychosocial adjustment issues.

Adjustment to limb loss is not an easy process and it depends on a number of factors. Along with efficient psychological resources on the part of an amputee, it also depends on the adequate help and support of family, friends and society in order to adjust successfully to their limb loss. The present study aims to investigate this aspect of amputation in order to spot out the psychological burden of limb loss and to find ways to reduce this burden as much as possible.

The present investigation is an endeavor to identify the common psychological reactions to acquired limb amputation and to analyze the relationship between familial- social support and psychological adjustment to amputation. It further examined the role of accurate perception of reality, ability to cope with stress and anxiety, self-acceptance, positive self-image, self-competence and positive self-esteem in the process of adjustment to amputation.

The current research was an effort to relate psychological adjustment with self-esteem and family support and to extend these relations in other directions by including various demographic factors in the way towards successful adjustment to amputation. The major points that have been couched from the results of the current study are discussed in this section

The study sample was adult men and women, who experienced limb amputation at some point in their lives. The sample consisted of amputees between the age group of twenty to sixty years of age. The reason behind selecting this age group was that this is the most active and prolific age group and any kind of disability including amputation disturb their physical and

psychological equilibrium much ruthlessly than any other age groups (Phillipo, Chalya, Joseph, Mabula, Ramesh, Isdori, Ngayomela, Alphonce, Chandika, & Japhet, 2012). As far as the present research is concerned, the results of the survey showed an increased trend of amputation in males as compared to females.

In every part of the world, men are typically the bread winners of the family and are more actively involved in different occupational and vocational activities and hence are more prone to be the victims of amputation. On the other hand, females are usually restricted to homes which keep them safe from dangerous work environment. Females are seldom engaged in mechanical work and they do not drive too often like men and hence are less likely to face such problems. That's why ratio of men amputee's is comparatively larger than female amputee's and the same trend was shown in the present study where the ratio of males to females is 8:2.

This male domination in the current research is in agreement with judgments by other authors such as Sarvestani & Azam (2013) who stated that men have significantly high probability of amputation due to road traffic as well as work place accidents because they are more exposed to the environmental misfortune. Furthermore, due to their active life styles they are the easy victims of various infections or catching diseases which may result in limb amputations trapping people of any age group.

With reference to age of amputees at the time of amputation, the current study demonstrated significant variations. According to the findings, majority of amputees were found in young age group i.e. twenty to forty years

and only thirty percent were found in late adulthood i.e. forty to sixty years. The reasons of this increased rate of amputation at this stage of life are obvious. As young adulthood is the most energetic and active age group and are usually engaged in all sorts of mechanical, laborious and hazardous activities therefore they have high risk of accidents and traumas as compared to other age groups.

Other studies (Phillipo et al., 2012), also revealed that majority of amputee's in the developing countries were young as road traffic accidents, falls and malignancies were the most common indicators of amputation in the 2nd and 3rd decade of life. Similarly, in the study of Swedish population, Eliasson (2006) also concluded that in respect of age of amputees, there appeared significant difference between males and females and majority of male amputees were in their young adulthood at the time of amputation as compared to females.

As far as educational level of amputee's are concerned, the current figures showed that the majority of amputees were illiterate or uneducated. Such group of people is usually more involved in manual, unskilled or semi-skilled jobs. Due to nature of their job they are at high risk of work place accidents, have more chances of falls, road accidents, factory or machinery accidents etc. These conditions usually results in minor or major injuries leading towards limb amputation.

Secondly due to lack of awareness, illiterate folks are not able to receive in time medical treatment in case of accidents or disease. Hence delayed health consultation or inappropriate treatment by quacks may further

complicate their condition, ultimately resulting in amputation as a life saving measure. Similar concerns were also shown by Phillipo et al. (2012) in their study by stating that unfortunately in most of developing countries, patients were mostly presented to the hospital at a stage too late at which limb recovery was not possible. In such cases amputation may be the only hope in order to save the patient's life,

As mentioned before, most of the laborers end up meeting accidents that result in limb amputations which also results in the decline of their income graph as well. The incidence of amputation not only imposes physical limitation on a person but also imposes countless occupational and vocational limitations as well. In addition amputation also leads to many psychiatric issues which in turns influence job performance and ultimately leads to loss of jobs and decrease income level.

Srivastava et al. (1997) also agreed to same notion by stating that amputation leads to impaired work performance, job change and socioeconomic problems and as a consequence the income level of a large number of amputees turned down. Findings of the present study also confirmed that amputation do affect the income level of a person.

Usually most of the patients from lower class or lower middle class go to government hospitals as they can't afford the expenses of private hospitals. As majority of the data was collected from government hospitals, the current findings showed that majority of amputees belonged to lower class, had very low income status and were dependent on their families for help and support. It was also found that 6% of the amputees belonged to high income group

which showed that upper class has adequate and quick access to the medical facilities that's why they may have less chances of amputation.

Findings also revealed that maximum numbers of amputees were involved in some sort of odd jobs including laborious, unskilled and semi-skilled jobs that are potentially more risky and prone to accidents and trauma. Findings further illustrated that the rate of amputation was also high in rural areas and mostly influenced farmers. It is usually observed that farmers are more susceptible to limb amputations due to frequent accidents with machinery, farm tractor accidents, farm structure falls etc. Comparatively the chance of amputation for business people, house wives, and office workers are less and is also confirmed from the current statistics.

From the analysis of amputee's income status, it was found that amputation influences the job status of an individual and decreases their regular earnings due to which they were not able to fulfill their basic necessities of life. It was found that maximum numbers of amputees was dependent on their friends, relatives or family for their survival and were getting help from them. This feeling of dependency and inability also influences their self-esteem thereby leading to numerous psychological issues.

On the other hand, amputee's who have personal business or property may have the assurance that they are not dependent on others and would be able to take care of themselves, their families, business and property after some period. Such people are able to cope with their disability and are psychologically stable enough to face the bitterness of life. Furthermore

amputation doesn't affect their self-esteem that much as they don't need to take help from other for satisfaction of their basic needs of life.

Every individual needs help and support in case of any kind of disability or disease and the same is true for amputation as well. In this respect the type of family system in which an individual lives also matters a lot. According to the current results sixty one percent of amputees were living in joint family system while thirty nine percent were living in nuclear family system. It is important to note that the larger the family, the more will be the chances of support and care on the part of family. In joint family systems, there is large number of people who can provide support and help to their disabled family member. Along with efficient physical support they also provide adequate emotional support in order to help them to adjust to their disability in a positive way.

However, in case of nuclear families the limited number of family members is unable to take good care of their disabled member. The additional duty of taking care of such family members and added financial lumber may sometimes tired and fed up the family members as they also had their own personal duties and responsibilities of their busy life schedules. In such case, an amputee might also start feeling useless and burden on family resulting in the development of numerous psychosocial symptoms.

Moreover along with family system, an amputee area of residence is also very important in case of amputation. According to Phillipo et al. (2012), the causes of amputation may be varied depending upon the area of residence. Present finding revealed that majority of amputees belonged to rural areas and

as we all knows that rural areas usually lacks advanced medical facilities. In cases of any accident or trauma, patients are not able to get instant and adequate medical treatment and as a consequence the injury becomes severe and infectious enough to a stage in which amputation may be last option as a life saving measure.

On the contrary, urban areas are enriched in medical facilities for treating any sort of accidents which reduces the chances of conducting limb amputation. In addition, there are better chances of rehabilitation and access to artificial limbs centers which aids in overcoming the trauma of limb amputation. More over the different conditions and causes which may lead to amputation also varies depending on the place of residence.

In respect of the causes of amputation, it was found that there were numerous causes of amputation depending upon the health and social setting of the society. Results showed that most common causes of amputation nowadays are road traffic accidents which accounts for fifty six percent of all the cases. Diabetic amputation traps about twenty four percent of the people while electric shock, falls, blasts and gunshot are also some of the causes of amputation.

Similar finding was also revealed by a study conducted by Abou-zamzam, et al (2003) and Olasinde, et al (2002) which stated that the different conditions which lead to limb amputation have been reported to vary from one area to another. In developed countries the most common cause of amputation is peripheral vascular disease while accidents, trauma, infections, uncontrolled

diabetes and tumors are the leading causes of amputation in the under developed countries.

One other important factor which influences adjustment to amputation is time period since amputation. The present study targeted amputees with major limb amputation and only those cases were considered who acquired amputation not less than three weeks and more than one year before. The current figures also revealed that an amputee ability to perform his daily routine life tasks varies with time period since amputation (Table-4.7).

Recognizing the importance of the cause of amputation in the psychological adjustment to amputation, it was assumed that amputation is more likely to take place due to unplanned causes as compared to planned causes (hypothesis-1). If we analyze the causes of the limb amputation in this study, it can be categorized into planned and unplanned amputation. For instance, accidents, bomb blasts, electric shocks and gun shots all are unplanned causes and it usually take place unexpectedly and without any prior planning. Similarly diabetics and infections lead to planned limb amputation. In these cases the doctor and patient mutually discuss the severity of the condition and reach to a mutual consensus for limb amputation in order to avoid further consequences.

The findings of present study verified the assumption and found that nowadays amputations mostly took place due to unplanned or accidental causes as compared to planned causes (Table-4.15). These findings are also in line with the case study carried out by Soomro et al. (2013) in the province of Sindh, Pakistan. It was stated that trauma and road traffic accidents were the

leading causes of amputation while diabetic ulcers, infections and work place trauma were also some common causes of amputation.

The reasons behind increased rate of unplanned amputation in this region are obvious. Increased sociopolitical instability, terrorist attacks, violation of safety and traffic rules and insecure work environment drastically increases the rate of accidents and trauma's which in turns leads to increased rate of amputation. In addition improper medical treatment and lack of medical facilities further complicate the conditions and are more likely to contribute in the mount of unplanned or accidental amputation

Amputation or loss of any limb restricts physical functions of body and this limitation of bodily normal functions also disturbed the psychological state of an individual resulting in various psychosocial symptoms. Almost all the studies (Shukla and Coworkers 1982; John, 1989) on the psychological aspect of amputation clearly showed that this drastic life altering experience badly disturb the psychological state of a people involved. Some common reactions found were severe anxiety, frustration, anger, helplessness, suicidal tendency, low self-esteem and depression.

Keeping in view the importance of psychological aspect of amputation, the present stud hypothesizes that amputation is more likely to disturb the psychological balance of an individual (hypothesis-2). Results of the current study confirmed this hypothesis and revealed that nearly all the amputees showed signs of psychological maladjustment (Table-4.7).

The physical limitation of amputation and perception of helplessness and dependency eventually leads to the development of negative feelings

about one self. An amputee is no able o cope with severe frustration, stress and anxiety produced by limb loss. As a consequent an individual is more likely to exhibit various psychological symptoms such mood disorders, negative self-image, feeling of useless and unworthiness, temper tantrums. and social isolation.

In this respect, one other hypothesis formulated by the researcher was that amputees with unplanned amputation develop negative self-esteem and face more psychological adjustment issues as compared to those who acquire amputation due to planned causes (hypothesis-3). Results of the present study confirmed this hypothesis and found that amputees with traumatic or unplanned amputation score low on both self-esteem and psychological adjustment scale (Table-4.11) as compared to amputees with planned amputation.

The underlying reason behind this is that amputees having accidental or unplanned amputation are not mentally prepared to bear the sudden limb loss. Such patients are more likely to go into the state of shock and denial which might take long time before they come to accept the reality of new body image and its limitations. On the other hand, in case of planned amputation the patient is mentally prepared for this loss and does not react psychologically to the same extent as amputees with unplanned amputation. This also helps in quicker rehabilitation of the amputees, reducing their level of psychological distress and also helps in rebuilding their self-esteem.

Previous research examining the relationship between cause of amputation and corresponding psychosocial issues also confirmed this

assumption. It was revealed that amputees with traumatic or unplanned amputation usually had lower self-esteem and may be at higher risks of developing anxiety and major depressive symptoms as compared to disease related or planned amputation (Fisher & Hanspal, 1998; Livneh & Colleagues, 1999).

Apart from the cause, adjustment to amputation also depends on many other psychological responses as well. One important factor is an amputee acceptance of the reality of the fact that he has lost one of his body parts. In this respect, the researcher intended to check relation between an amputee perception of reality and his level of acceptance of new body image (Hypothesis-4). Analyses of results significantly demonstrated that the two variables were positively related with one another with value of Pearson correlation 0.665** (Table-4.9).

It was found that accurate perception of reality serves as a good predictor to bring change in an amputee level of self-acceptance (Table-4.18). In the same way, poor perception of reality tends to decreases an amputee's level of self-acceptance. It is quite common for an amputee to grieve or mourn over his amputated limb and the body image he used to have in the old days. These people are more likely to develop mournful or grieving attitude and might go through the stages of frustration, anger and depression. Such people usually deny the reality that they actually lost one of their body parts which can never be attained again and do not accept their changed body structure.

The finding of the research conducted by Tomeno et al. (1997), was also in agreement with the present study and stated that some amputees easily

accepted the reality of this unavoidable loss and readily accepted his limitations as a result of amputation. Such attitude is an indicative of their strong personality traits and they had no difficulty in accepting this loss and were able to tolerate the course of events following amputation.

It is usually observed that amputees with high level of self-acceptance are better psychologically adjusted (hypothesis 5) as compared to those who lack self-acceptance. Findings of present study undoubtedly verified this hypothesis by concluding that self-acceptance is an efficient predictor of successful psychological adjustment to amputation (Table-4.19). An individual's acceptance of this loss ultimately decreases their level of anxiety and depression and speed up the adjustment process. High level of self-acceptance is more likely to motivate them to focus on their existing abilities and strengths in order to live a normal and healthy life rather than mourning and grieving.

In this respect Lobe (2006), also revealed similar findings by stating that once an amputee accepts the reality of this undeniable loss, it becomes easier for him/her to cope with it psychologically. The present study suggested that acceptance of this tragic loss might be facilitated by efficient guidance and counseling as well consulting religious teachings. It might help to lessen the psychological burden of amputation and the amputee is more likely to visualized the positive aspect of life, evaluates his strengths and abilities and actively cope with this life altering situation.

Research revealed that positive self-image is also an important factor in the process of adjustment to amputation. In order to verify this aspect, the

researcher hypothesizes that Positive self-image tends to increase an amputee's ability to attain Self-Competence (Hypothesis 6). The results of hypothesis testing showed positive correlation (.599**) between these two variables and confirmed that positive self-image plays an important in improving the amputee's level of self-competence (Table-4.20).

Losing a limb is just like losing a loved one or being diagnosed with a life threatening disease. Therefore, it is not so easy to come out of its grieving phase and to develop positive self-image unless proper attention and support is provided. It is hard for amputees to accept limb loss, however, with love, proper care and attention at least they can come to adapt to the new changes with positive attitude. The more positive the attitude is, the easier it would be for amputees to focus on their existing qualities, accentuate their strengths and abilities and realize the fact that they are still competent enough to carry their everyday life affairs and manage their lives.

Conversely with negative self-image they consider themselves useless and incompetent and withdraw from all sorts of everyday life affairs. These findings are also supported by Roberta Cone (2012), by revealing in her study that amputee's negative self-image leads to self-consciousness about their residual abilities and competencies. Such behavior leads to many psychosocial issues including avoidance of social situations and social isolation.

Amputation or loss of limb is a psychologically painful and stressful experience. It may prohibit a person to deal with various small and large tasks of everyday life. Living with amputated limb requires developing unique approaches in order to confront these problems. It is evident that after

amputation, the victims face numerous personal and psychosocial challenges and at this stage the role of family and social support is very crucial in the amputee's psychosocial adjustment (Rybarczyk, 2008).

A study conducted by Williams, et al (2004) discovered that among the most influential and essential aspects of individual's support system are friendship and social networks. Recognizing the importance of support factor, the current study attempted to investigate how family and friends contribute in the successful adjustment to amputation. It was hypothesized that high level of familial–social support tends to increase an amputee's ability to cope with stress and anxiety produced by amputation (hypothesis 7).

As far as our Pakistani society is concerned, it is evident that it is a family oriented society. Strong kinship ties, sturdy religious orientation, flexible family roles and joint family system all serve to contribute to the welfare of its members. In case of amputation, the attitude of family and society undoubtedly play a key role in the adaptation process. The findings of the present study showed that nearly all the amputees had some sort of help and support from their families (Table-3.3).

An interesting finding of the current study was that amputees with high level of support also had better ability to cope with stress and anxiety produced by amputation (Table-4.21). Losing a limb could be very depressing for the amputee and leaves everlasting effects on life. Due to physical disability, a person loses his confidence and catches sympathetic and sometimes contemptuous glances of people and society. In this respect, support system helps an amputee to feel that he can trust and depend on his

family and friends for meeting his needs. Such feeling is more likely to reduce his level of stress and anxiety or at least may develop a capability to be able to handle and overcome his stress and anxiety. The current finding was also supported by a study conducted by Newsom & Schultz (1996) which stated that the perception of no or minimal support was strongly correlated with high level of anxiety and depression as well as poor quality of life in the amputated patients.

The finding of the current study undoubtedly verified that family support is an important determinant of amputee's psychosocial adjustment (Table-4.24). As a result of amputation, the role of amputee in the family might change from being an independent member to a dependent member. It not only seriously influences personal life affaires but also social relationships. At this stage an amputee requires adequate psychosocial resources to stabilize his social relationships and interactions. On the other hand, in case if such resources are lacking, the result would be psychosocial maladjustment.

Previous literature such as Roberta Cone (2012) revealed that amputation is more likely to change body-image, distorted self-identity and faulty self-image. It may also lead to prolonged psychological issues which include high level of anxiety and depression, dissatisfaction with life, negative feelings about personal appearance and self-worth as well as lower level of self-esteem.

Similarly, according to Horgan and MacLachan (2004) people with limb loss have greater vulnerability to develop various psychological symptoms. Therefore after an amputation, an individual must learn ways to

adapt to his distorted and changed physical and social functioning. Furthermore they must need to incorporate those changes into a new sense of self, revised self-identity and positive self-esteem.

As far as self-esteem of an amputee is concerned, studies showed that the role of family and social support is very crucial. Adequate family and social support tends to increase the amputee's ability to adjust successfully to his disability and may serve as a mediating factor in reducing his stress and increasing his levels of self-esteem (hypothesis 8).

Families should help an amputee to adapt to the new changes rather than considering them an extra burden. Family support boosts them psychologically and they are able to accept their new body image with more courage which ultimately leads to development of positive self-esteem. Previous literature on same issue also showed evidence that family and social support serves as a primary step towards the processing and acceptance of this terrible loss. According to Orr.E et al (1995) social support sometimes can play a role of best collaborator or a horrible enemy for a person with limb loss. The social pressure of physical flawlessness makes it difficult for an amputee to accept, live and ultimately adjust with his disability.

Engstorm and colleagues (2001), stated that the only the feeling of being alone and lacking any help and support from family and friends increases the level of stress and feeling of unworthiness in amputees. This perception also leads to increased depression level and lowered self-esteem.

Results of the current study also confirmed that family and social support is directly and positively linked with the amputee's self-esteem

(Table-4.9). For amputees to have a stable life they need to have family support, a strong capability to cope stress, positive self-image and high levels of self-acceptance. All these factors ultimately lead to increased self-esteem which results in successful psychological adjustment to amputation. Proper support and motivation can encourage the amputees to work like normal people and their skills can be turned into a valuable asset for the society. In short, amputees need assurances and support from the community in order to overcome their post amputation fears and doubts.

The findings of the present study further demonstrated that self-esteem can be an important coping resource and it has a direct relation with better psychological adjustment (hypotheses 9). The higher the level of self-esteem, higher will be rate of psychological adjustment. (Table-4.23). Amputee with positive self-esteem realizes the fact that he is being confronted with a tragedy in his life and it should be treated in the same way as treating other life's issues. The feelings that they still have enough strength, talents and abilities to live a happy and productive life, make their adjustment process much easier and quicker.

Findings of the study were also supported by Symister, (2003). It was found that social support influences levels of optimism and self-esteem, which in turns decreases the level of depression and also increases the level of psychological adjustment. On the other hand problematic support is associated with increased level of psychosocial adjustment issues.

Hence it is clear that self-esteem mediates the relationship between family support and psychological adjustment (hypothesis-10). Results of the

present study also verified that there is a positive relation between adequate family and social support, level of self-esteem and an amputee's ability to adjust successfully to his disability as a result of amputation (Table-4.24).

Adjustment to limb loss or amputation is not an easy process and along with an amputee's psychological strength and resources it also depends on a number of socio-demographic factors as well. Research conducted by Cansever and colleagues (2003), also agreed to the same notion by stating that adjustment to any kind of loss including amputation may depends on many factors such as age, sex, time since amputation, cause of amputation, educational level of an amputee, place of residence etc. The current study also investigated the moderating role of various demographic factors and found some interesting findings in respect to these factors.

Gender is one socio demographic factor that could be associated with the outcome following amputation. Previous literature (Hawamdeh et al., 1983) reported that females exhibit more psychological reactions and have lowered level of self-esteem as compared to males. On the other hand some others (Washington, 2013) found that in case of amputation males comparatively suffered more than females. It was stated that males usually had negative self-esteem following amputation and are psychologically more disturbed than females. It is also important to consider that reaction to any disability including amputation, may also be influenced by social pressure, societal expectations and general attitudes of a particular society in which an amputee resides.

Keeping in mind the social setup of our society, the current study hypothesizes that females are more psychologically disturbed by amputation as compared to males (hypothesis-11). Results of the present study unexpectedly disallow this assumption and revealed that score of males are comparatively low on both the scales of self-esteem and psychological adjustment than females (Table-4.16). This implies that in our society, males are more psychologically shattered and disturbed by amputation as compared to females.

The present research concluded that the underlying reasons behind these gender differences are many. Usually men are the major bread earners of the families and in case of any accident or amputation they are not only concerned about their own selves but about their dependents and families as well. Amputation limits their work efficiency and productivity resulting in a feeling of uselessness and unworthiness. They considered their disability as an end to their role of basic provider of the family.

Furthermore because of their dominant and independent nature, men seldom share their feelings with others and seek help from others due to which their adjustment becomes extremely difficult. Hence they are more likely to develop negative self-esteem leading to numerous psychological adjustment issues. On the other hand, females by nature are the dependent ones and hence the dependency resulting from amputation doesn't influence them much harshly as males. Secondly females are usually more open to share their feelings and seeking help from others in order to cope with this tragic

incidence. Therefore with the passage of time, females were able to rebuild their self-esteem and adjust physically as well as psychologically.

One other important factor in the adjustment to amputation is age at the onset of amputation. Studies showed that the relation between age and adjustment to amputation is obvious. Young adulthood is usually considered as the most active and productive age group of life. Individual at this age group is also more conscious about their physical appearance and body perfection and considers it as a standard of self- evaluation. Young people are also more sensitive about the social stigma associated with any kind of disability. As a result in cases of amputation they experience more anxiety and depression resulting in distress and maladjustment as compared to other age groups.

Older amputees are not emotionally concerned about their body appearance as well as about the social attitudes around them. They prudently accept the reality of this occurrence and consider it as positive towards the recovery and improvement of their health. These assumptions were also verified by the result of the current analyses and showed that the younger the amputee at the time of amputation, the more likely they develop negative self-esteem and the greater psychological adjustment problems they experienced. However these problems decrease with increase in age at the time of amputation (Table-4.13).

A research conducted by Dunn (1996), also agreed to the notion that young amputees were significantly at high risk of exhibiting psychosocial symptoms. Amputation restricted their everyday life activities and more

specifically they not only had appearance related anxiety but are also concerned about social stigmatization of amputation. Older amputees have less activity related issues as aging has already reduced their activities and they didn't have any physical appearance issues as well. As a result they experience comparatively less anxiety and fewer psychological issues.

Time since amputation is also an important factor in respect to adjustment to amputation. The results of the current research demonstrated that the group of amputees who acquired this condition in the last six months had comparatively low scores on self-esteem and psychological scale than those who attained this condition last one year (Table-4.14). The current results demonstrated that amputees take some time to adjust psychologically and build their self-esteem once the amputation is done.

Amputation is heartrending incidence and certain degree of anxiety and grief is particularly common reaction to this misfortune. The amputee needs some time to accept and cope with this incidence. With the passage of time an amputee is more likely to overcome the psychological pain associated with this incidence. The help and support of family and friends may serve as mediating force to triumph over and adjust to their disability in a productive and growth promoting manner. Similar findings were also revealed by Horgan and Maclachlan (2004), by stating that the prevalence of various psychological symptoms such as anxiety and depression slowly and gradually decreases as the time since amputation increases.

One other noteworthy factor in the adjustment to amputation is the ability to perform normal routine duties and responsibilities after amputation.

The amputees are anxious and depressed because loss of limb limits their normal functioning and everyday life activities. Studies showed that those amputees who were able to continue their routine life activities with little or no difficulty exhibit less psychological symptoms.

Results of the present study also revealed that amputees who were able to do normal routine tasks scored higher on both self-esteem and psychological adjustment (Table-4.15). Results of the study verified that the feelings of inability and limitations of normal physical functioning gave rise to exposition of various psychological symptoms in these amputees and similar conclusions were also given by Akram (2010). After discussing all the above factors, it is concluded that amputee's scores on self-esteem and psychological adjustment increases with age, time since amputation and ability to do routine tasks (hypothesis 12)

A study conducted by Saradjian et al. (2008), emphasized the role of amputee's demographics in the process of adjustment to amputation. It was stated that this process is more likely to influence by age, gender and level of education. As far as the relation of educational qualification and adjustment to amputation is concerned, the present study assumed that the amputee's scores of self-esteem and psychological adjustment increases with increase in the level of education (hypothesis 13). But interestingly the findings of the study appeared in an opposite direction. It was found that amputee's scores of self-esteem and psychological adjustment decreases with increase in the level of education (Table-4.12).

It was found that illiterate and amputees with low level of education had more positive self-esteem and better adjustment level as compared to amputees with high level of education. It is concluded that as compared to illiterate people, educated people are much psychologically disturbed because as a result of amputation they not only lose their body part but also lose their dreams and ambitions, their achievements and their accomplishments. Secondly, , the highly educated amputees are more aware about the consequences of this loss and could not be persuaded and helped very easily to adjust to this loss and take it as a positive step towards improvement of health status.

An amputee area of residence also plays an important role in their adjustment to limb loss. In order to verify this aspect the current study hypothesizes that amputees residing in rural areas tend to score high on self-esteem and have less psychological issues as compared to amputees residing in urban areas (hypothesis 14). Present findings demonstrated that amputee residing in rural areas had much higher level of self-esteem and psychological adjustment as compare to amputees who were living in urban areas (Table-4.17).

People living in rural area lead simple life with strong family ties. They work in close cooperation with each other and are interdependent on one another. In case of amputation, family and friends are readily there to help and support them. On the other hand, urban life is usually very fast, complex and demands full participation and work dedication. Due to the social pressure and societal demands amputees consider themselves useless and unfit for this

world and lose their self-esteem. Moreover the busy and competitive life schedules also reduce the amount of support and help being offered by family and society. Hence urban amputees are easy victims of numerous psychosocial disorders.

The results deduced from the hypothesis testing support the general objective of the study as all the results are showing positive relation between the dependent and the independent variables. The study clearly states that there is a strong relation between adequate family and social support and successful adjustment to limb loss. Moreover various socio-demographic factors also served as moderators in successful adjustment to amputation.

The present study affirmed that an efficient support tends to increase an amputee's ability to adjust successfully to his disability as a result of amputation. Moreover, society and families should be the source of strength and must learn ways to help the amputee to adapt to this life altering incidence instead of discouraging them or disowning them. Rather than feeling pity, proficient help should be provided in order to encourage and motivate them and give them confidence to return back to their normal ways of life and continue their everyday affairs. Every individual should work to facilitate these amputees and make them feel that they are an equally important part of the society.

The present study has thus filled a gap in the literature by focusing on a new dimension i.e. psychosocial dimension, which was hardly ever attended before in this society. The results of this study will also serve as guidelines for

the rehabilitators and counselors while dealing with amputees and developing hope in these people that they can successfully adjust to their limb loss.

CHAPTER-6

SUMMARY, CONCLUSION, LIMITATIONS AND RECOMMENDATIONS

6.1 Summary

Amputation or loss of body part is a surgical procedure used to remove infectious, dead or nonfunctioning limb from the body as it threatens the patient's life. Some common causes of amputation are accidents, trauma, infections, diabetes, tumors, vascular diseases etc. the common causes of amputation are road traffic accidents, work place accidents, industrial accidents, combat related injuries, terrorist attacks and failure of adequate and in time medical treatment. Irrespective of its cause, limb loss is associated various life challenges which badly disturbed the life of an individual in many ways.

Amputation has proven to have distinctive psychological and psychosocial consequences which need to be carefully taken into consideration. While dealing with amputation, the major attention is usually given to the physical aspect of amputation by ignoring the corresponding psychosocial consequences. Some frequently noted reactions to amputation are sense of loss, feeling of helplessness, self-pity, hopelessness, anxiety, depression, negative self-esteem, body image issues and social isolation. Furthermore adjustment to the incidence of amputation is not an easy process and it varies according to psychosocial and demographic characteristics of the

persons involved. Some common factors influencing adjustments to limb amputees includes age, sex, cause of amputation, level of amputation, time since amputation, self-esteem, personality traits, socio-cultural problems, availability of adequate social support and the attitudes of family members. Studies revealed that family and society also plays a powerful role in the psychosocial adjustment of amputees. Family support may serves as cushion against the stresses experienced by an amputee, by sharing their physical and psychological burden of limb loss.

Recognizing the importance of this aspect of amputation, the current study attempted to evaluate the role of various demographic factors in the psychological adjustment of amputation. Results of the study demonstrates that due to societal pressures, social demands and expectations of fulfilling families responsibilities, males tends to exhibit much rigorous signs of psychological maladjustment as compare to females. Similarly the younger amputee, the greater the risk of psychological disorders as young age is most active and productive age group and is more harshly influenced by amputation.

As far as the cause of amputation is concerned, it was found that accidents and trauma are the most common causes of amputation nowadays. Moreover, amputations caused by sudden accidental reasons were associated with shock, denial and greater adjustment problems as compared to planned amputation such as diabetes. In the same way adjustment to amputation increases with increasing time since amputation as well as with an increased ability to carry on normal routine life activities. One of the unexpected

findings of the present investigation was that level of education was negatively correlated with self-esteem and psychological adjustment.

The present study further explored the relationship between familial social support, self esteem and psychological adjustment to amputation. Findings of the current study provide empirical evidence that there exists a strong relationship between the study variables. It was found that adequate familial and social support tends to increase an amputees ability to perceive accurately the reality of this tragic incidence and also help them to cope with the stress and anxiety produced by limb loss. They accept their changed body structure and after some time this self-acceptance leads towards the acceptance of the fact that they still have enough skills and abilities to deal with life situations, which increases their self-competence as well.

Results also revealed that all these factors also help an amputee to recover from the sense of loss and uselessness resulting in the development of positive self-esteem. After analyses of the self-esteem of amputees, it was found that amputees with high self-esteem are also better psychologically adjusted as compare to amputees with low or negative self-esteem. Hence the results confirm the hypothesis that familial social supports tends to increase an amputee level of self-esteem which in turns helps them to adjust successfully to amputation.

6.2 Conclusion

After detailed analysis of the psychological sequel of amputees, the current study concluded that amputation not only results in loss of body parts but also results in loss of body image, loss of body structure and appearance, loss of everyday life activities and decreased quality of life. Although a brief period of grief and mourning for this loss is normal for every person as the sudden shock of limb loss disturbs the psychological harmony of an individual. Moreover, lengthy mourning periods may cultivate various psychiatric and psychosocial issues which lead to wide range of adjustment problem. Results of the present study proved that nearly all the amputees showed signs of psychological maladjustment at varying degrees and adjustment to amputation depends on a number of psychosocial and demographic variables.

The researcher affirmed that the physical wounds of amputation may take some time to heal but the psychological soreness of limb loss takes much greater time to recover. The incidence of amputation affects the normal living style and prohibits an individual to re-assimilate into society. As a result of amputation, amputee losses much more than just a "limb" and more specifically, he loses his right to be considered and accepted as a normal human being. Due to the societal negative evaluation and rejection, the amputee becomes a victim of social injustice, discrimination and a public figure of dread and fright.

The current study emphasizes the fact that amputees are also part of society and should be considered as normal human beings. Moreover, the

problems of amputees should not be solved by the amputee alone; rather it is a challenge for all of us and society as a whole. It is the responsibility of family and community to bring them back to normal life by providing adequate support, love, care and efficient rehabilitation programs. The current investigation reaches to the conclusion the way the amputees are treated in the present time predicts how the amputees cope with this tragic incidence of life and how well they are adjusted to amputation by becoming an equally productive and contributing member of society.

6.3 Limitations

The present study made several contributions to the research on acquired limp amputation. It may serve as a preliminary step to ameliorate the overall functioning and quality of life of amputees and helps them to regain their physical and mental health. In order to take a broader view of the findings of the current research and to enhance its applicability, it is imperative to acknowledge its limitations as well. Like any other research, the present study also has some limitations which are discussed below.

- The current research employ cross sectional method for data collection which involves the analysis of data collected from a population at one specific point in time. This method may not accurately reveal the relationship between different variables as well as variation in the adjustment process with time.
- The present study includes acquired limb amputees only and amputees with associated illness were excluded, so this limits the applicability of

the study to only acquired limb disabilities. Amputees with other associated disabilities may have other psychological issues and problems which need to be discussed and study as well.

- Like other social science researches, the present study measures all the variables through self-report measures as it was more appropriate to analyze amputee's feelings, thoughts and reactions. One of the limitations on of this method was that the researcher had to rely on the responses of the amputees which may had the probability of hiding truth and provision of socially acceptable responses only.
- Due to the scarcity of sample, the sample was limited to hundred participants only so it might not explain the full perspective on the subject. The results of the study should be interpreted with the considerations that only a subset of the population has been studied. Participants of this research were recruited from the different hospitals of Peshawar city only so we cannot assume that they were fully representative of all the individuals who had acquired limb amputation.

6.4 Recommendations

The purpose of this study was to recognize the psychological reactions to acquired limb amputation and to evaluate the importance of familial and social support in the life of these unfortunate folks. Despite its limitations, the present research broadens the current knowledge on psychosocial aspect of amputation and raises many new research questions as well as provides basis for future research. Current research suggests avenues for future studies

regarding psychosocial consequences of limb loss. The following recommendations should be considered before designing any future studies on this aspect of amputation.

1. The sample size was limited in this study i.e. hundred participants, so future studies can be conducted with a larger sample size in order to generalize the results to a larger population. As the rate of amputation is increasing day by day therefore, the present research should be extended to Provincial and National level which is possible only in detailed studies and comprehensive surveys. Moreover reliable statistics from various health centers of Pakistan should be collected in order to plan the provision of efficient rehabilitation facilities.

2. Similar studies can be conducted on large scale with larger sample covering more and more areas of Pakistan in order to know the rate and magnitude of different problems arising due to psychosocial maladjustment of amputees.

3. The current study targeted few psychosocial variables i.e. Familial support, psychological adjustment and self-esteem. Future researchers can investigate other significant psychosocial variables and explore numerous other relationships which may contribute or hinder to psychosocial adjustment to amputation. Future studies can also add the effect of different mediators as well, in order to study its upshot on the prescribed variables.

4. The present study only includes amputees without artificial limbs and excludes all those who were using any kind of prosthetic devices or

artificial limbs. Future studies should also target amputees with artificial devices in order to explore the nature of the psychosocial problems faced by this group of amputees as well.

5. As the present study was a cross sectional, so there is a scope of longitudinal study on the subject as well. The above mentioned constraints of this study can be eliminated by having a lengthier duration to conduct the research so that it can be conducted in a broader perspective and to overcome many of the limitations of the current study.

6. Prospective studies can take in depth analyses of all the possible mediators and moderator of the relationship among study variables. Some other important variables such as personality traits, mental health, birth order, social context etc. can also be included. Moreover, the combine effect of different demographic variables and culture should also be considered for the purpose of more in depth viewpoint. There is also a scope for future study in which these relationships are tested with more modifications and some more refined statistical tools.

6.4.1 Practical Implications

The current study is an attempt to explore the psychological sequel of limb loss and identify common psychosocial problems faced by amputees. Previous literature describes that the limb amputations existed even in ancient times but nowadays the consistency of amputation surgeries has improved in terms of advanced surgical tools and health facilities. Findings of the current study accentuate that along with the physical treatment of amputees, the

subsequent psychosocial problems should also be taken into consideration in order to maintain their mental health and psychosocial adjustment. The present research serves to enhance the understanding of psychosocial challenges faced by people with limb loss and emphasizes the importance of proficient social support in the successful rehabilitation of amputees. The current findings have several practical implications and raised many new research queries which provide bases for future researches in this area.

1. First of all the current research opens new avenues for future researches by drawing attention towards the psychosocial aspect of amputation which is rarely realized ever before. The present study will help to create awareness among general population regarding the significance of psychological treatment of amputees.

2. On the research lines, the present research also makes its contributions by extending the past literature regarding amputation into new direction i.e. psychosocial dimension. It identified the relationship of various psychosocial variables in the way towards healthy adjustment to limb loss. Furthermore, the present study strengthen the need to identify various factors which may hinder the process of psychosocial adjustment as well as factors which contribute to successful adjustment to amputation.

3. The current investigation also emphasizes that medical practitioner, families and society should be careful of the fact that amputation not only results in physical trauma but results in severe psychological trauma as well. It also accentuates that almost every person undergoing

amputation may be at the risk of developing psychological symptoms which need to be attended vigilantly and cautiously. It is very important for families to put in efforts for the recuperations of such amputees and provide best support system to their amputated family member.

4. This study will further help the doctors and rehabilitators in mentoring the families that how support and encouragement is important for the amputee.

5. It further helps to spot out the crucial role of family and friends in the psychosocial adjustment of amputees. It may also help them to understand the amputated person in a better way and provide guidelines which serve to enhance their talents and skills in a best possible way..

6. The present study may be helpful for families, health practitioners, rehabilitation workers, counselors and researchers in the planning of intervention strategies for this group of people. Furthermore, it identified significant factors which would be of great help in increasing the psychological wellbeing of amputees. The current study identified many important variables that have an impact on the life of the amputee which previous studies have not identified so far.

7. The domino effect of the present study is that it provides new information regarding the different coping strategies which might be helpful in dealing with limb amputation. It also highlights the

importance of different demographic variables in the process of adjustment to amputation

8. Furthermore collecting data specific to amputation while particularly focusing on its psychosocial aspect generated new information about this group of people that is hardly ever examined in the amputation literature. As far as our country Pakistan is concerned, this is the most neglected area ever addressed.

9. The present finding can help to know the extent to which these people feel that their family and friends are aware of their problems and difficulties. It may help them to know which kind of help and support they need from the people around them and how to ask for that in a best way.

10. The results of the current research suggests that an enrich and stimulating environment is more likely to enhance the cognitive performance and adaptability of this group of people

11. The psychological intervention of amputation greatly improves the process of rehabilitation. The results of this study will also help the rehabilitators and counselors to use the study information for the inspiration of amputees and developing the hope that they can successfully adjust to their limb loss.

12. Finding of the current research will be of great help to the social workers and agencies working for the rights of disabled people including amputees

13. Present study emphasizes that amputees must be given attention in the society and every individual should work to facilitate them in order to feel an integral part of the society.

6.4.2 Educational and Action Plans

1. The researchers organized a two days seminar on "Counseling and Rehabilitation of Disabled People" with the collaboration of University of Peshawar at the College of Home Economics, University of Peshawar. The seminar aimed to divert the attention of the local community towards the psychosocial issues resulting from amputation. Renowned counselors, psychologists, psychiatrists, medical professionals and orthopedic surgeons were invited as speakers who shared their experiences and provided guidelines in order to deal with the different physical and psychological problems of amputation.

2. The researcher intended to create awareness amongst the people, media, government and non-government organizations, as well as academic sector regarding psychological aspect of amputation. by organizing different workshops, seminars and awareness campaigns. The collaboration and support of the University of Peshawar and concerned NGOs will be essentially required for holding such programs

3. The researcher also intended to generate awareness among amputees regarding their physical and mental health issues and how it can be minimized as much as possible. It is greatly wished to make the amputees well aware about their legal and social rights and also to

educate them as how they can improve their quality of life by adopting effective coping strategies with the help of their families and local community.

4. The researcher also planned to generate interests of the local public and families in the wellbeing of these special people through television, radio, newspaper and magazines.

5. It is also intended to educate the people as well as government about the countless psychosocial problems which are commonly faced by victims of amputation. It is also demanded that the government officials and policy makers should facilitate these people by creating enriched and stimulating environment that could enhance their cognitive abilities and increase their adaptability in the social settings. It is aimed to ensure the provision of equal rights, job opportunities, and special considerations for these disabled people. In this respect, some important issues which need needs to be addressed are as follow:

- Easy excess to artificial limb centers
- Provision of wheel chairs and limbs crutches to those amputees who are unable to afford.
- Special pathways should be made in public places, markets, parks, and educational institutes.
- Special toilet and washroom facilities in all educational institutes and public areas

REFERENCES

Abou-Zamzam, A.M., Teruya, T.H., Killeen, J.D. (2003). Major lower extremity amputation in an academic vascular center. *Annals of Vascular Surgery*, 17(3): 86-90.

Ahmad, Aziz. (2011). Prosthetic problems of transtibial amputee. *Journal of Postgraduate Medical Institute (Peshawar-Pakistan)*, 23(2):73-79

Akram, Irfana.(2010. Self Concept and Social Adjustment among Physically Handicapped Persons. *European Journal of Social Sciences*, 15(1).

Aleccia, J. (2010). Limb loss a grim, growing global crisis. Retrieved on May 7, 2010 from http://haitiamputees.msnbc.msn.com.

Atherton, R., & Robertson, N. (2006). Psychological adjustment to lower limb amputation amongst prosthesis users. *Disability & Rehabilitation*, 28(19): 1201-1209.

Bacci, G., Ferrari, S., Lari, S., Mercuri, M., Donati, D., Longhi, A., Pignotti, E. (2002). Osteosarcoma of the limb amputation : limb salvage in patients treated by neoadjuvant chemotherapy. *Journal of Bone & Joint Surgery*, British Volume, 84(1): 88-92.

Barak, Azy. (2007). Phantom emotions Psychological determinants. Oxford Handbook of Internet Psychology, 303.

Bekrater-Bodmann, R., Foell, J., Diers, M., Kamping, S., Rance, M., Yilmaz, P., Flor, H. (2011). Illusory hand ownership in upper limb amputees suffering from phantom pain. *European Journal of Pain Supplements*, 5(1) : 242.

Bishop, Malachy. (2005). Quality of life and psychosocial adaptation to chronic illness and acquired disability: A conceptual and theoretical synthesis. *The journal of Rehabilitation,* 71(2).

Bisschop, M.I., Kriegsman, D.M., Beekman, A.T., Deeg, D.J. (2004).Chronic diseases and depression: The modifying role of psychosocial resources. *Social Science & Medicine*, 59:721–733

Braunwald, E., Fauci, A.S., & Kasper, D.L. (2001).eds. *Harrison's Principles of Internal Medicine,* 15th ed. New York: McGraw-Hill.

Breakey, J. W. (1997). Body Image: The Lower-Limb Amputee. *Journal of Prosthetics & Orthotics*, 9 (2): 58-66

Burger, H., & Marincek, C.R.T. (2007). Return to work after lower limb amputation. *Disability and Rehabilitation*, 29(17): 1323-1329.

Cansever, A., Uzun, O., & Yildiz, C. (2003). Depression in men with traumatic, lower part amputation: A comparison to men with surgical lower part amputation, *Mil Med*, 168:106–9.

Caruth, Cathy. (2010). Unclaimed experience: Trauma, narrative and history: JHU Press.

Chaya, G., Bhuvaneswar, Lucy, A.E., Theodore, A.S. (2007). Reactions to Amputation: Recognition and Treatment. *The Journal of Clinical Psychiatry,* 9(4): 303–308.

Crosby, l., & Miller, C. (2005). Body image, self-esteem, and quality of life in older individual with lower limb amputation. *Journal of geriatric physical therapy*, 28(3):107 - 113

Cvetkovich, Ann. (2003). An archive of feelings: Trauma, sexuality, and lesbian public cultures (Vol. 308): Duke University Press Durham, NC.

Davidson, Judith. (2004). A comparison of upper limb amputees and patients with upper limb injuries using the Disability of the Arm, Shoulder and Hand (DASH). *Disability & Rehabilitation,* 26(14-15): 917-923.

Davies, B., & Datta, D. (2003). Mobility outcome following unilateral lower limb amputation. *Prosthetics and orthotics international*, 27(3): 186-190.

De Godoy, Braile, D. M., Buzatto, Longo, O.J., & Fontes, O. A. (2004).Quality of life after amputation. *Journal of Psychology, Health & Medicine,* 7(4): 134-139

Deerochanawong, C., Home, P.D., & Alberti, KGMM. (1992). A survey of lower limb amputation in diabetic patients. *Diabetic medicine*, 9(10): 942-946.

Desmond, D. M. (2007). Coping, affective distress, and psychosocial adjustment among people with traumatic upper limb amputations. *Journal of psychosomatic research*, 62(1): 15-21.

Desmond, D. M., & MacLachlan, M. (2005). Factor structure of the Trinity Amputation and Prosthesis Experience Scales (TAPES) with individuals with acquired upper limb amputations. *American journal of physical medicine & rehabilitation,* 84(7):506-513.

Desmond, D. M., & MacLachlan, M. (2006). Coping strategies as predictors of psychosocial adaptation in a sample of elderly veterans with acquired lower limb amputations. *Social science & medicine,* 62(1): 208-216.

Desmond, D., & MacLachlan, M. (2002). Psychosocial issues in the field of prosthetics and orthotics. *Journal of Prosthetics and Orthotics*, 14(1):19-22.

Dettmers, C., Adler, T., Rzanny, R., Van Schayck, R., Gaser, C., Weiss, T., Weiller, C. (2001). Increased excitability in the primary motor cortex and supplementary motor area in patients with phantom limb pain after upper limb amputation. *Neuroscience letters*, 307(2): 109-112.

Dillingham, T. R., Pezzin, L. E., & MacKenzie, E. J. (2002). Limb amputation and limb deficiency: epidemiology and recent trends in the United States. *Southern medical journal*, 95(8):875-883.

Dorstyn, D.S., Mathias, J.L., & Denson, L.A. (2011). Psychosocial outcomes of telephone-based counseling for adults with an acquired physical disability: A meta-analysis. *Rehabilitation Psychology,* 56(1): 1-6

Draganski, B., Moser, T., Lummel, N., Gänssbauer, S., Bogdahn, U., Haas, F., & May, A. (2006). Decrease of thalamic gray matter following limb amputation. *Neuroimage*, 31(3) : 951-957.

Dunn, D. (1996).Well-Being Following Amputation: Salutary Effects of Positive Meaning, Optimism, and Control. *The Division of Rehabilitation Psychology of the American Psychological Association*. 4: 285-302

Ehde, D. M., Czerniecki, J. M., Smith, Douglas, G., Campbell, K. M., Edwards, W. T., Jensen, Mark, P., & Robinson, L. R. (2000). Chronic phantom sensations, phantom pain, residual limb pain, and other regional pain after lower limb amputation. *Archives of physical medicine and rehabilitation,* 81(8): 1039-1044.

Eliasson, M., Bostrom, G. (2006). Major public health problems- diabetes. *Scand J Public Health*, 67:59–68,

Engstrom, B., & Van dan van, C.(2001). Therapy for Amputees. Churchill Livingstone: pp. 27–41.

Ephraim, P. L., Dillingham, T. R., Sector, M., Pezzin, L.E., & MacKenzie, E.J. (2003). Epidemiology of limb loss and congenital limb deficiency: a review of the literature. *Archives of physical medicine and rehabilitation,* 84(5): 747-761.

Ferguson, A. D., Sperber, R., Beth., & Gomez, M.J. (2004). Psychological factors after traumatic amputation in landmine survivors: the bridge between physical healing and full recovery. *Disability & Rehabilitation*, 26(14-15): 931-938.

Fisher, K., & Hanspal, R.S. (1998). Phantom pain, anxiety, depression and their relation in consecutive patients with amputated limbs: Case reports. *Br Med J*, 316:903–4.

Franchignoni, F., Orlandini, Duccio, Ferriero, Giorgio, & Moscato, T. A. (2004). Reliability, validity, and responsiveness of the locomotor capabilities index in adults with lower-limb amputation undergoing prosthetic training. *Archives of physical medicine and rehabilitation,* 85(5):743-748.

Gitter, A., Bosker, G.(2005). Upper and Lower Extremity Prosthetics. 4th ed. Vol 2. Philadelphia: Lippincott-Raven

Gailey, Robert, Allen, Kerry, Castles, Julie, Kucharik, Jennifer, & Roeder, M. (2008). Review of secondary physical conditions associated with lower-limb amputation and long-term prosthesis use. *Journal of rehabilitation research and development*, 45(1): 15-19.

Gallagher, D. A., MacLachlan,M. P. (2001). Phantom limb pain and residual limb pain following lower limb amputation: a descriptive analysis. *Disability & Rehabilitation,* 23(12) : 522-530.

Gallagher, P. (2004). Introduction to the special issue on psychosocial perspectives on amputation and prosthetics. *Disability & Rehabilitation,* 26(14-15): 827-830.

Gallagher, P., & MacLachlan,M. P. (2000). Positive meaning in amputation and thoughts about the amputated limb. *Prosthetics and Orthotics International*, 24(3): 196-204.

Gallagher, P., & MacLachlan,M. P. (2001). Adjustment to an artificial limb: a qualitative perspective. *Journal of health psychology*, 6(1): 85-100.

Gallagher, P., & MacLachlan,M.P. (2004). The Trinity Amputation and Prosthesis Experience Scales and quality of life in people with lower-limb amputation. *Archives of physical medicine and rehabilitation*, 85(5) :730-736.

Geertzen, JHB., Martina, JD., & Rietman, HS. (2001). Lower limb amputation part 2: Rehabilitation- A ten year literature review. *Prosthetics and orthotics international*, 25(1): 14-20.

Gibson, Jo. (2001). Lower limb amputation. *Nursing standard*, 15(28): 47-52.

Goodenow, C., Reisine, S.T., Grady, K.E. (1990).Quality of social support and associated social and psychological functioning in women with rheumatoid arthritis. *Health Psychology,* 9: 266–284

Goodenow, C., Reisine, S.T., Grady, K.E. (1990).Quality of social support and associated social and psychological functioning in women with rheumatoid arthritis. *Health Psychology,* 9:266–284

Goujon, H., Bonnet, X., Sautreuil, P., Maurisset, M., Darmon, L., Fode, P., & Lavaste, F. (2006). A functional evaluation of prosthetic foot kinematics during lower-limb amputee gait. *Prosthetics and orthotics international*, 30(2):213-223.

Grouzi, Elisavet, Kyriakou, Elias, Panagou, Ioannis, & Spiliotopoulou, I. (2009). Fondaparinux for the treatment of acute heparin-induced thrombocytopenia: a single-center experience. *Clinical and Applied Thrombosis/Hemostasis*. *23*(24): 313-323

Hagberg, K., & Brånemark, R. (2001). Consequences of non-vascular trans-femoral amputation: a survey of quality of life, prosthetic use and problems. *Prosthetics and Orthotics International*, 25(3), 186-194.

Hawamdeh, Z., Othman, Y., Ibrahim, A. (2008). Assessment of anxiety and depression after lower limb amputation in Jordanian patients. *Neuropsychiatric Disease and Treatment*.4:627- 633

Haythornthwaite, Jennifer, A., Benrud-Larson., & Lisa, M. (2000).Psychological aspects of neuropathic pain. *The Clinical journal of pain*, 16(2): S101-S105

Heller, Adam, & Pishko, Michael, V. (2001). Electrochemical sensor; for in situ monitoring of glucose in diabetics: Google Patents.

Hirsch, Alan. T., Haskal, Z. J., Hertzer, Norman, R., Bakal, Curtis, W., Creager, Mark, A., Halperin, Jonathan, L., Puschett, J.B. (2006). ACC/AHA 2005 practice guidelines for the Management of Patients with Peripheral Arterial Disease (lower extremity, renal, mesenteric, and abdominal aortic): a collaborative report from the American Association for Vascular Surgery/Society for Vascular Surgery, Society for Cardiovascular Angiography and Interventions, Society for Vascular Medicine and Biology & Society of Interventional Radiology, *Circulation,* 113(11):463-654.

Horgan, O., & MacLachlan, M. (2004). Psychosocial adjustment to lower-limb amputation: A review. *Disability & Rehabilitation*, 26(14-15): 837-850

Horgan, O., & Maclchlan, M. (2004). Psychological adjustment to lower-limb amputation:A review. *Disability & Rehabilitation*, 26: 837–50

Iribarren, Carlos, Sidney, Stephen, Sternfeld, Barbara, & Browner, W.S. (2000). Calcification of the aortic arch: risk factors and association with coronary heart disease, stroke, and peripheral vascular disease. *Jama,* 283(21) : 2810-2815.

Jain, R. K. (2005). Normalization of tumor vasculature: an emerging concept in antiangiogenic therapy. *Science,* 307(5706), 58-62.

Janet, K. (2012). Traumatic amputation: Psychosocial adjustment of six Army /women to loss of one or more limbs. *Journal of rehabilitation Research and Development*, 49:1443-1456

Jensen, M. P., Moore, M, R., Bockow, Tamara, B., Ehde, Dawn, M., & Engel, J. M. (2011). Psychosocial factors and adjustment to chronic pain in persons with physical disabilities: a systematic review. *Archives of physical medicine and rehabilitation, 92*(1): 146-160.

John, C. R. (1989). Psychological Adaptation to Amputation. Atlas of Limb . *Prosthetics. O &P*, Virtual Library

Kashani, J.H., Frank, R.G., Kashani, S.R., Wonderlich, S.A., Reid, J.C. (1983). Depression among Amputates. *Journal of Clinical Psychiatry.* 44:256-258

Kawamura, Akio, Horie, Takashi, Tsuda, Ichirou, Ikeda, Atushi, Egawa, Hirotoshi, Imamura, Emi, & Kukita, K. (2005). Prevention of limb amputation in patients with limbs ulcers by autologous peripheral blood mononuclear cell implantation. *Therapeutic Apheresis and Dialysis*, 9(1): 59-63.

Khader, Y. S., Dauod, A. S., El-Qaderi, Saleh, S., Alkafajei, Ahmed, & Batayha, W.Q. (2006). Periodontal status of diabetics compared with nondiabetics: a meta-analysis. *Journal of Diabetes and its Complications*, 20(1): 59-68.

Kirkup, J. R. (2007). A history of limb amputation: Springer Science & Business Media.

Kooijman, C. M., Dijkstra, Pieter, U., Geertzen, Jan, HB., Elzinga, Albert, van der Schans, & Cees, P. (2000). Phantom pain and phantom sensations in upper limb amputees: an epidemiological study. *The Clinical journal of pain*, 87(1): 33-41.

Lai, A.M., Stanish, W.D., & Stanish, H.I. (2000). The young athlete with physical challenges. *Clin Sports Med*, 9:793–819.

Livneh, H., Antonak, R F. & Gerhardt J. (1999). Psychosocial adaptation to amputation: The role of socio-demographic variables disability-related factors and coping strategies. ***International Journal of Rehabilitation Research***, 22:21–31

Lobe, T.E., (2006). Perioperative hypnosis reduces hospitalization in patients undergoing the nuss procedure for pectusexcavatum. *J Laparoendosc AdvSurg Tech A*, 16:639–642.

Longino,C.F.,& Mittelmark,M.B.(1996).Sociodemographic aspect. Comprehensive review of geriatric psychology (2nd ed.) Washington ,DC:American Psychiatric Press

Maeda, Hiroshi, Wu, Jun, Sawa, Tomohiro, Matsumura, Yasuhiro, & Hori, Katsuyoshi. (2000). Tumor vascular permeability and the EPR effect in macromolecular therapeutics: a review. *Journal of controlled release*, 65(1): 271-284.

Masood, j., ali, irfan., mustafa, ghulam. (2008). Current indications for major lower limb amputations at civil hospital, karachi. *Pakistan journal of surgery*, 24(4).

Mayfield, Jennifer, A., Reiber, Gayle, E., Maynard, Charles, Czerniecki, Joseph, M., Caps, M., & Sangeorzan, B.J. (2001). Survival following lower-limb amputation in a veteran population. *Journal of rehabilitation research and development*, 38(3): 341-346.

Mayfield, Jennifer, A., Sugarman, & Jonathan, R. (2000). The use of the Semmes-Weinstein monofilament and other threshold tests for preventing foot ulceration and amputation in persons with diabetes. *The Journal of family practice*, 49(11): S17-29.

Mello, Arnaldo, A., Domingos, Neide, A.M., & Miyazaki, M. (2010). Improvement in quality of life and self-esteem after breast reduction surgery. *Aesthetic plastic surgery*, 34(1) :59-64.

Miller, William, C., Deathe, Barry, & Speechley, M. (2003). Psychometric properties of the Activities-specific Balance Confidence Scale among individuals with a lower-limb amputation. *Archives of physical medicine and rehabilitation*, 84(5): 656-661.

Mitrani, V. B., Lewis , J. E., Feaster, D. J., Czaja, S. J., Eisdorfer, C., Schulz, R., & Szapocznik, J.(2006). The role of family functioning in the stress process of dementia caregivers: A structural family framework. *The Gerontologist*, 46(1): 97–105.

Moulik, Mtonga , Probal, K., Robert, & Gill, G. V. (2003). Amputation and mortality in new-onset diabetic foot ulcers stratified by etiology. *Diabetes care*, 26(2): 491-494.

Muller, Ilona, S., de Grauw, Wim, J.C., van Gerwen, Willem, H.E.M., Bartelink, Marie L., van den, H., Henk, J.M., & Rutten, G. EHM. (2002). Foot ulceration and lower limb amputation in type 2 diabetic patients in Dutch primary health care. *Diabetes Care*, 25(3): 570-574.

Murray, Craig, D., & Fox, J. (2002). Body image and prosthesis satisfaction in the lower limb amputee. *Disability & Rehabilitation*, 24(17): 925-931).

Nellie, Njambi. Mugo. (2010). The effects of amputation on Body image and well-being - a systematic literature review. Dockside, Cockle Bay Wharf, Sydney.

Newsom, J. T., & Schulz, R. (1996).Social support as a mediator in the relation between functional status and quality of life in older adults. *Psychology and Aging*, 11: 34-44 Nousheeen, B. & Kamal, A. (2001). Familial social support scale for patients. National institute of psychology, Quaid-i- Azam University

Nicolson, P., Anderson, P., (2003).Quality of life, distress and self-esteem: A focus groups study of people with chronic bronchitis. *British Journal of Health Psychology*, 8:251–57 Olasinde, A.A., Oginni, L.M., Bankole, J.O. (2002). Indications for amputations in Ile-Ife, Nigeria. *Niger J Med,* 11:118-21

Olaolorun, D.A.(2001). Amputations in general practice. *Niger Postgrad Med J.,* 8(3):133–5.

Orr, E., Thein, R.D., Aronson, E.(1995). Orthopedic disability: conformity, and social support. *Journal of Psychology*: 129(2): 203-21

Ouriel, Kenneth. (2001). Peripheral arterial disease. *The lancet*, 358(9289): 1257-1264.

Panides, W.C., Ziller, R.C. (1981).The self-perceptions of children with asthma and asthma/enuresis. *Journal of Psychosomatic Research*, 25:51–56

Pardasaney, Poonam, K., Sullivan, Patricia, E. Portney, Leslie, G., & Mankin, H.J. (2006). Advantage of limb salvage over amputation for proximal lower extremity tumors. Clinical orthopaedics and related research, 444: 201-208.

Parkes, C.M.(1984). Determinants of disablement after loss of a limb, in Krueger DW. Emotional Rehabilitation of Physical Trauma and Disability , pp 105-111.

Parkes, CM. (1975).Psychosocial transitions: comparison between reactions to loss of a limb and loss of a spouse. *Br J Psychiatry*, 127:204–210

Pecoraro, Roger, E., Reiber, Gayle, E., & Burgess, E. M. (1990). Pathways to diabetic limb amputation: basis for prevention. *Diabetes care*, 13(5): 513-521.

Peirano, Amanda, H., & Franz, R. W. (2012). Spirituality and quality of life in limb amputees. *The International journal of angiology: official publication of the International College of Angiology, Inc*, 21(1): 47.

Persons with disabilities (pwds) statistics in Pakistan (2012). Helping hand for relief and development Islamabad, Pakistan. Research and Development Department of Pakistan

Phillipo, L., Chalya, Joseph. B., Mabula, Ramesh, M. D., Isdori, H., Ngayomela, Alphonce., Chandika, N., M. & Japhet, M. G. (2012).Major limb amputations: A tertiary hospital experience in northwestern, Tanzania. *Journal of Orthopedics Surgery and Research*, 7: 107-18

Rifai , F. & Tariq , N. P. (1999). Self-esteem scale. National institute of psychology, Quaid-i-Azam University

Robert, Rhonda, S., Ottaviani, Giulia, Huh, Winston, W., Palla, Shana, & Jaffe, N. (2010). Psychosocial and functional outcomes in long-term survivors of osteosarcoma: A comparison of limb-salvage surgery and amputation. *Pediatric blood & cancer*, 54(7): 990-999.

Roberta, cone. (2012).The psychological, social and physical consequences of amputation. Site for creative thoughts, change your thoughts, improve the world. Posted on February, 25.2012 by 1solutionfocusedcoaching

Rudy, Thomas, E., Lieber, S. J., Boston, J.R., Gourley, Lisa, M., & Baysal, E. (2003). Psychosocial predictors of physical performance in disabled individuals with chronic pain. *The Clinical journal of pain*, 19(1): 18-30.

Rybarczyk, B., & Behel, J. (2008). In Gallagher, Desmond, &MachLahlan, .M.(Eds.) Psychoprosthetics.. *Psycho-Oncology*, 9: 183-192

Rybarczyk, B., Nyenhuis, D.L., Nicholas, J., (1995). Body image perceived social stigma and the prediction of psychosocial adjustment to leg amputation. *Rehabilitation Psychology*, 49:95–110

Rybarczyk, B.D., Nyenhuis, D.L., Nicholas, J.J. (1992). Social discomfort and depression in a sample of adults with leg amputations. *Archives of physical medicine and rehabilitation*, 73:1169–73

Sabir, F. (1999).Psychological adjustment scale. Unpublished M.phil dissertation. National institute of psychology, Quaid-i- Azam University

Sandeep, Thekkepat, C., Yau, J.L.W., MacLullich, Alasdair, M.J., Noble, June, Deary, Ian, J., Walker, Brian, R., & Seckl, J. R. (2004). 11β-hydroxysteroid dehydrogenase inhibition improves cognitive function in healthy elderly men and type 2 diabetics. Proceedings of the National Academy of Sciences of the United States of America, 101(17): 6734-6739.

Saradjian, A., Thompson, R. A., & Datta, D. (2008). The experience of men using an upper limb prosthesis following amputation: Positive coping and minimizing feeling different. *Journal of Disability and Rehabilitation*. 30(11): 871-883.

Sarah, E., Louise, S., Alex, B.(2011).Body image: an important factor for adjustment to amputation. Dockside, Cockle Bay Wharf, Sydney

Sarvestani, A., & Azam, A. T. (2013). Amputation: A Ten-Year Survey. *Trauma ,Mon*, 18(3): 126-9

Shepherd, James, Blauw, Gerard, J., Murphy, M.B., Bollen, Edward, LEM., Buckley, Brendan, M., Cobbe, S.M., Jukema, J. W. (2002). Pravastatin in elderly individuals at risk of vascular disease (PROSPER): a randomised controlled trial. *The Lancet*, 360(9346): 1623-1630.

Shukla, G.D., Sahu, S.C., &Tripathi, R.P. (1982). A psychiatric study of amputees. *Br J Psychiatrys*.141:50–3

Shultz, James, M., Marcelin, Louis, H., Madanes, S.B., Espinel, Zelde, & Neria, Y. (2011). The "Trauma Signature:" understanding the psychological consequences of the 2010 Haiti earthquake. *Prehospital and disaster medicine*, 26(05):353-366.

Sinha, Richa, van den, H., Wim, JA., & Arokiasamy, P. (2011). Factors affecting quality of life in lower limb amputees. *Prosthetics and orthotics international*, 35(1): 90-96.

Smedley, Audrey, & Smedley, B. D. (2005). Race as biology is fiction, racism as a social problem is real: Anthropological and historical perspectives on the social construction of race. *American Psychologist*, 60(1): 16.

Smith, Douglas, G., Michael, J. W., Bowker, J, H., & Surgeons, American Academy of Orthopaedic. (2004). Atlas of amputations and limb deficiencies: surgical, prosthetic, and rehabilitation principles (Vol. 3): American Academy of Orthopaedic Surgeons Rosemont, IL.

Soomro, N., Bibi, R., Ahmed, S.I., Kamran, B., Minhas, M.A., Siddiqui, K.Y. (2013).Epidemiology of amputation; low resource community, Sindh Province, Pakistan. *Professional Med J*, 20(2): 261-265

Sørensen, Henrik, T., Czeizel, Andrew, E., Rockenbauer, M., Steffensen, F. H. & Olsen, Jørn. (2001). The risk of limb deficiencies and other congenital abnormalities in children exposed in utero to calcium channel blockers. *Acta obstetricia et gynecologica Scandinavica*, 80(5), 397-401.

Sørlie, Therese, Perou, Charles, M., Tibshirani, Robert, Aas, Turid, Geisler, Stephanie, Johnsen, Hilde, J., Stefanie, S. (2001). Gene expression

patterns of breast carcinomas distinguish tumor subclasses with clinical implications. Proceedings of the National Academy of Sciences, 98(19), 10869-10874.

Srivastava, K., & Saldanha, D. (2010).A Study of Psychological Correlates after amputation. ***Medical Journal Armed Forces India***. 66(4): 367-373.

Srivastava, K., Saldanha, D., Chaudhury, S., Ryali, VSSR., Goyal, S., Bhattacharyya, D., & Basannar, D. (2010). A study of psychological correlates after amputation. *Medical Journal Armed Forces India,* 66(4): 367-373.

Symister, P., & Ronald, F. (2003).The influence of social support and problematic support on optimism and depression in chronic illness: A prospective study evaluating self-esteem as a mediator. *Health Psychology*, 22(2):123-129

Tadmor, O.P., Kreisbe, G.A., Achiront, R., Porat, S., & Yagel, S. (1997). Limb amputation in amniotic band syndrome: serial ultrasonographic and Doppler observations. Ultrasound in *Obstetrics & Gynecology*, 10(5): 312-315.

Taleporos, George, & McCabe, M. P. (2002). The impact of sexual esteem, body esteem, and sexual satisfaction on psychological well-being in people with physical disability. *Sexuality and Disability*, 20(3): 177-183.

Tang, M. H., Castle, D. J., & Choong, P. (2015). Identifying the Prevalence, Trajectory, and Determinants of Psychological Distress in Extremity Sarcoma. *Sarcoma*, 30(3): 79-83

Taylor, Spence, M., Kalbaugh, C. A., Blackhurst, D. W., Hamontree, S. E., Cull, D. L., Messich, H.S., & Carsten, C. G. (2005). Preoperative clinical factors predict postoperative functional outcomes after major lower limb amputation: an analysis of 553 consecutive patients. *Journal of vascular surgery*, 42(2) :227-234.

Tepper, O. M., Galiano, R. D., Capla, J. M., Kalka, C., Gagne, P. J., Jacobowitz, G. R., Gurtner, G. C. (2002). Human endothelial progenitor cells from type II diabetics exhibit impaired proliferation, adhesion, and incorporation into vascular structures. *Circulation,* 106(22) : 2781-2786.

Tomeno, P., Anract, M., Ouaknine.(1998). Management, prevention and treatment of phantom pain after amputations for tumors. *International Orthopedics (SICOT)* 22:205–20.

Unwin, Jennifer, Kacperek, Lynn, & Clarke, C. (2009). A prospective study of positive adjustment to lower limb amputation. *Clinical rehabilitation.* 32(4) :196-204.

van der, S., Cees, P., Geertzen, J.H.B., Schoppen, Tanneke, & Dijkstra, P. U. (2002). Phantom pain and health-related quality of life in lower limb amputees. *Journal of pain and symptom management,* 24(4): 429-436.

Van Houtum, William, H., & Lavery, L.A. (1996). Outcomes associated with diabetes-related amputations in the Netherlands and in the state of California, USA. *Journal of internal medicine,* 240(4) :227-231.

Vermunt, L. C., Buysse, C. M., Joosten, K. F., Oranje, A.P., Hazelzet, J. A., Verhulst, F. C., & Utens, E. M. (2008). Self-esteem in children and adolescents after septic shock caused by Neisseria meningitidis: scars do matter. *Journal of Adolescent Health*, 42(4) :386-393.

Washington, Jasmine. (2013)."The Relations among Psychological and Demographic Factors in Individuals with Lower Limb Amputation". Senior Theses, Trinity College, Hartford, CT. Trinity College Digital Repository, http://digitalrepository.trincoll.edu/theses/337

Williams, M. R., Ehde, M. D., Smith, G. D., Czernieck, M. J., Hoffman, J. A., & Robinson, R. L.(2004)..A two-year longitudinal study of social support following amputation. *Journal of disability and rehabilitation*, 26 (14/15): 862-874

Williamson, G.M., Walters, A.S. (1996).Perceived impact of limb amputation on sexual activity. A study of adult amputees. *Journal of Sexuality and Disability*, 33:221–30.

Winchell, Ellen. (1995). Coping With Limb Loss. New York: Avery Publishing

World Report on Disability (2011).World health organization and World Bank.WHO Library Cataloguing-in-Publication Data.

APPENDICES

Appendix-A: General Instructions

I am a Ph.D. student at College of Home Economics, University of Peshawar. I am doing research to investigate the role of familial-social support in the psychosocial adjustment of amputees. For this purpose I need to ask few questions from you. You will be provided a leaflet comprised of two parts. In Part, I there are some questions about your personal life and demographic background while part two comprised of questions about how you think and feel after the incidence of amputation about yourself and your family and friends. Your help in this study will be highly appreciated. However, if you do not have to take part in this study if you do not wish to, or you can withdraw any time. Further, if you do not wish to answer any particular question, you can skip over it. You are requested to express your opinion explicitly in a way you actually feel like. Your responses will remain confidential and anonymous and no one from your family or friends can see it and it will used only for purpose of this research. I will be thankful for your cooperation in the completion of this study

Regards
Shaista Ali

Appendix-B: Demographic Data Sheet

1. Name (optional) _____

2. Age: _____

3. Gender a) Male b) Female

4. Educational Status :

   a) Illiterate, b) Up to Matric, c) Intermediate,

   d) Bachelors and above

5. Occupation : _____

6. Income : _____

7. Additional source of Income :

   a) No additional source b) Property c) Business

   d) Any other source

8. Area of residence a) Urban b) Rural

9. Family system a) Joint b) Nuclear

10. Cause of amputation:

    a) Accident b) Infection c) Diabetes d) Any other

11. Time since amputation:

    a) Up to 2 months b) 2- 6 months c) 7 months to 1 year

    d) More than 1 year

12. Ability to do routine daily tasks : a) Yes b) No

Appendix-C: Familial Social Support Scale for Patients

Familial Social Support Scale (FSSS)

ہدایات:

تحقیق کی رو سے گھر والوں کا مثبت رویہ مریض کے لئے کسی بھی مرض سے لڑنے میں مددگار ثابت ہوتا ہے۔ یہ تحقیق بھی اسی سلسلے کی ایک کڑی ہے جس کا بنیادی مقصد یہ معلوم کرنا ہے کہ مریضوں کے گھر والے اُن کی دیکھ بھال کس طرح کرتے ہیں اور اس بیماری کی وجہ سے اُن کی سوچ اور احساسات کیا ہوتے ہیں۔

آپ کو اس سے متعلق ایک ہوا نامہ دیا جا رہا ہے جو کہ مختلف بیانات پر مشتمل ہے۔ براہ مہربانی ہر بیان کو غور سے پڑھیے اور جس حد تک یہ کے گھر والوں پر لاگو ہوتا ہے اس کی نشاندہی اس کے سامنے دیے گئے خانے میں کیجئے۔ مثلاً:

اگر آپ کے گھر والے ہر وقت آپ کی خصوصی دیکھ بھال کرتے ہیں تو "ہر وقت" کے خانے میں ( ) کا نشان لگائیے۔ اگر اکثر اوقات کرتے ہیں تو "اکثر اوقات" کے خانے میں ( ) کا نشان لگائیے۔ اور وہ "کبھی کبھی" یا "کبھی نہیں" کرتے ہیں تو ان میں سے کسی ایک خانے میں ( ) کا نشان لگائیے۔

آپ سے درخواست ہے کہ ہر بیان کو باری باری پڑھیے اور کسی بیان کو خالی نہ چھوڑیے۔

آپ سے لی گئی معلومات صرف تحقیق مقصد کے لیے استعمال کی جائیں گی۔ نیز آپ کا ذاتی تشخص کسی مرحلہ پر ظاہر نہیں کیا جائے گا۔ آپ کے اس تعاون پر ہم آپ کے شکر گزار ہیں۔

قومی ادارہ نفسیات

قائداعظم یونیورسٹی

اسلام آباد

نمبر شمار	بیانات	ہر وقت	اکثر اوقات	کبھی کبھی	کبھی نہیں
۱۔	میرے گھر والے میرے علاج معالجے کا خاص خیال رکھتے ہیں۔				
۲۔	میرے گھر والے مجھے وقت پر دوا دیتے ہیں۔				
۳۔	میرے گھر والے میری صحت کا خیال رکھتے ہیں۔				
۴۔	میرے گھر والے ڈاکٹر سے میرے بارے میں مشورہ کرتے ہیں۔				
۵۔	میرے گھر والے ڈاکٹر سے معائنے کے دوران میرے ساتھ ہوتے ہیں۔				
۶۔	میری بیماری کے دوران میرے گھر والے میری گھریلو ذمہ داریاں بخوبی انجام دیتے ہیں۔				
۷۔	مجھے محسوس ہوتا ہے کہ میں اپنے گھر والوں پر بوجھ ہوں۔				
۸۔	میری بیماری کے اخراجات کی وجہ سے میرے گھر والے بیزار ہیں۔				
۹۔	مجھے محسوس ہوتا ہے کہ اب میرے شوہر میرے قریب آنے سے پرہیز کرتے ہیں۔				
۱۰۔	میرے شوہر حسن پرست ہیں اس لیے اب مجھ پر توجہ نہیں دیتے۔				
۱۱۔	مجھے محسوس ہوتا ہے کہ میں اپنے شوہر کے لیے آج بھی وہی ہوں جو پہلے تھی۔				

۱۲۔	لوگوں کے کہنے پر میرے گھر والے میرے برتھ ڈے وغیرہ منایا کرتے ہیں۔					
۱۳۔	لوگوں کی دل دکھانے والی باتوں پر میرے گھر والے میری حوصلہ افزائی کرتے ہیں۔					
۱۴۔	میرے گھر والے میری خوراک کا خاص خیال رکھتے ہیں۔					
۱۵۔	میرے گھر والے مجھے ڈاکٹر کی تجویز کردہ ورزش کرواتے ہیں۔					
۱۶۔	میرے گھر والے مجھے سیر و تفریح کے لیے لے کر جاتے ہیں۔					
۱۷۔	میرے گھر والے مجھے جسمانی مشقت نہیں کرنے دیتے ہیں۔					
۱۸۔	میرے گھر والے مجھے لوگوں سے میل جول رکھنے پر آمادہ کرتے ہیں۔					
۱۹۔	میرے گھر والے آرام کا خیال رکھتے ہیں۔					
۲۰۔	میرے گھر والے بچوں کو کھانا دینے میں میری مدد کرتے ہیں۔					
۲۱۔	میرے بچے میرے ساتھ تعاون کرتے ہیں۔					
۲۲۔	میرے بچے میرا سونہ صحت مند ماؤں سے کرتے ہیں۔					
۲۳۔	آج کل کوئی کسی کا دکھ بانٹنے کو تیار نہیں ہے۔					
۲۴۔	میرے گھر والے میری بات توجہ سے سنتے ہیں۔					
۲۵۔	میں اپنے مسائل کے بارے میں اپنے گھر والوں سے بات کرنے میں ہچکچاہٹ محسوس کرتی ہوں۔					
۲۶۔	مجھے اپنے گھر والوں کا رویہ بدلا ہوا محسوس ہوتا ہے					
۲۷۔	میرے گھر والے مجھے وقت نہیں دے پاتے ہیں۔					
۲۸۔	میرے گھر والوں کی نظر میں میری بیماری کے اخراجات برداشت کرنا ہی محبت ہے۔					
۲۹۔	میری لمبی بیماری کی وجہ سے میرے گھر والے مجھ سے بیزار ہیں۔					
۳۰۔	میرے گھر والے میری اذیت کو بخوبی سمجھتے ہیں۔					
۳۱۔	میرے گھر والے منفی خیالات سے نمٹنے پر میری حوصلہ افزائی کرتے ہیں۔					
۳۲۔	میرے گھر والے مجھ سے محبت اور اپنائیت سے پیش آتے ہیں۔					
۳۳۔	میرے گھر والے میرے مسائل کی شدت کو سمجھ نہیں پاتے ہیں۔					
۳۴۔	مجھے اپنے گھر والوں کا موڈ ٹھیک رکھنے کے لیے بناوٹ کا سہارا لینا پڑتا ہے کہ میں بہتر محسوس کرتی ہوں					
۳۵۔	میرے گھر والے مجھ سے ہمدردی سے پیش آتے ہیں۔					
۳۶۔	میرے گھر والے مجھے خوش رکھنے کی خصوصی کوشش کرتے ہیں					
۳۷۔	میرے گھر والے اب چھوٹی چھوٹی باتوں پر مجھ سے خفا رہنے لگے ہیں۔					
۳۸۔	میرے گھر والے مجھے حوصلہ دیتے ہیں۔					

Appendix-D: Self-Esteem Scale

Sely Esleem Scale

ہدایات:

یہ شخصیت کے متعلق ایک تحقیق کے سلسلے میں یہ سوالنامہ آپ کو دیا جارہا ہے۔ یہ سوالنامہ ایسے بیانات پر مشتمل ہے جو فرد کے اپنے بارے میں مختلف احساسات وخیالات کا اظہار کررہے ہیں۔ ہر بیان کے سامنے پانچ جوابات تحریر ہیں۔ آپ سے درخواست ہے کہ ہر بیان کو غور سے پڑھیں اور ہر بیان آپ کے اپنے بارے میں جس حد تک درست ہے اس کے مطابق سامنے دیئے ہوئے جواب میں کسی ایک پر ( ) کا نشان لگادیں۔ مہربانی فرما کر کوئی بیان خالی نہ چھوڑیں اور تمام بیانات سے متعلق اپنے جواب کا اظہار ضرور کریں۔ آپ کا تعاون تحقیق میں

مددگار ہوگا۔ شکریہ۔

نمبر شمار	بیانات	بالکل صحیح	کسی حد تک صحیح	معلوم نہیں	بالکل غلط
۱	مجھے یہ احساس ہوتا ہے کہ میری ذات کی کوئی حیثیت نہیں۔				
۲	میں ہر طرح کے حالات کا مقابلہ کرنے کے لئے تیار رہتی/رہتا ہوں				
۳	میرا خیال ہے کہ دوسرے لوگ میری شکل وصورت کو پسند کرتے ہیں۔				
۴	میرا خیال ہے کہ میں پڑھائی اور امتحان میں عمدہ کارکردگی کا مظاہرہ کرتی/کرتا ہوں۔				
۵	میں محسوس کرتی/کرتا ہوں مجھ زیادہ صلاحیتیں نہیں ہیں۔				
۶	میں ناکامی پر کبھی ہمت نہیں ہارتی/ہارتا۔				
۷	میرا خیال ہے کہ میں خوش شکل ہوں۔				
۸	میرا خیال ہے کہ میں دوسروں کے مقابلے میں کم خوبیاں رکھتی/رکھتا ہوں۔				
۹	میں اپنے بارے میں پراعتماد ہوں۔				
۱۰	میں محسوس کرتی/کرتا ہوں کہ مجھ میں کوئی قابل فخر خوبی نہیں۔				
۱۱	مجھے یہ احساس رہتا ہے کہ میں شاید کچھ بھی صحیح طریقے سے نہیں کرسکتی/سکتا۔				
۱۲	میں محسوس کرتی/کرتا ہوں کہ دوسرے لوگ میری کمپنی سے لطف اندوز ہوتے ہیں۔				
۱۳	میں اکثر دوسرے لوگوں کے مذاق کا نشانہ بن جاتی/جاتا ہوں۔				
۱۴	مجھے کوئی کام کرکے کبھی بھی پچھتاوا محسوس نہیں ہوں۔				
۱۵	میں اپنی تعلیمی کارکردگی پر فخر محسوس کرتی/کرتا ہوں۔				
۱۶	میں اپنے آپ کو ناپسند کرتی/کرتا ہوں۔				
۱۷	میری وضع قطع ایسی ہے کہ میں اکثر دوسروں سے ملنے سے ہچکچاتی/ہچکچاتا ہوں۔				
۱۸	مجھے اعتماد ہے کہ لوگ مجھے قدر کی نگاہ سے دیکھتے ہیں اور عزت کرتے ہیں۔				
۱۹	مجھے احساس ہوتا ہے کہ میں سمارٹ نہیں ہوں۔				
۲۰	میرا خیال ہے کہ میں ایک اچھی طالب علم ہوں۔				
۲۱	میں اپنے آپ سے مایوس ہوں۔				

۲۲	میرا خیال ہے کہ میں زیادہ دشواری کے بغیر فیصلہ کر سکتی/ سکتا ہوں۔				
۲۳	میرا خیال ہے کہ لوگ میرے بارے میں اچھا تاثر قائم کرتے ہیں۔				
۲۴	میں اپنے آپ کو لائق غالب علم سمجھتی/ سمجھتا ہوں۔				
۲۵	مجھ میں احساس کمتری ہے۔				
۲۶	میرا خیال ہے کہ میں بہت سے لوگوں کی توجہ اور محبت کا مرکز ہوں۔				
۲۷	میں اپنے آپ سے مطمئن ہوں۔				
۲۸	میرا بچپن خوشی میں دل نہیں لگتا۔				
۲۹	میں خامیوں کے باوجود ایک اچھا انسان ہوں۔				

☆☆☆

Appendix-E: Psychological Adjustment Scale

Psychological Adjastment Scale

سوالنامہ 1

ہدایات:

اس سوالنامہ میں کچھ بیانات لکھے ہوئے ہیں۔ ہر بیان کو غور سے پڑھیں اور جواب دیں کہ آپ کے متعلق یہ بیان صحیح ہے یا غلط یا ان دونوں میں سے ایک بھی صورت نہیں۔ یعنی نہ صحیح ہے نہ غلط۔ اگر آپ کے متعلق یہ بیان صحیح ہے تو مزید سوچیں کہ کتنا اور کس قدر صحیح ہے؟ یا بالکل صحیح ہے؟ اسی طرح اگر آپ ایک بیان سے اتفاق نہ کرتے ہوں تو بتائیں کہ وہ بیان آپ کے متعلق کس قدر غلط ہے؟ یا بالکل غلط ہے۔ ہر بیان باقی بیانات سے الگ ہے اسلئے ہر بیان کا جواب دیں۔ ہر بیان کے سامنے دی گئی خانی جگہوں میں سے (جو کہ پانچ درجوں کی عکاسی کرتی ہیں) جو آپ کیلئے سب سے مناسب ہے۔ اسی پر درست کا نشان لگائیں۔

آپ کی سہولت کیلئے نیچے ایک مثال دی گئی ہے تا کہ آپ جان لیں کہ بیانات کس طرح کے ہوتے اور انکے جوابات ظاہر کرنے کا کیا طریقہ ہے۔

نمبر شمار	مثال	بالکل غلط	کسی قدر غلط	نہ صحیح نہ غلط	کسی قدر صحیح	بالکل صحیح
۱	میں اکثر اپنے مقاصد حاصل کرنے میں کامیاب رہا/رہی ہوں۔					
۲	میرا ہنسنا اور رونا مکمل طور پر میرے اختیار میں ہے۔					
۳	اگر میرے مقصد کے حصول میں رکاوٹیں آئیں تو میں بڑی ہمت سے ان کا سامنا کرتا/کرتی ہوں۔					
۴	زندگی میں اپنے مقاصد طے کرنے سے پہلے میں سوچتا/سوچتی ہوں۔ کہ ان مقاصد کو حاصل کی صلاحیت بھی مجھ میں موجود ہے یا نہیں۔					
۵	مجھ میں بہت الجھن یا مشکل کا سامنا کرنے کا حوصلہ نہیں۔					
۶	باقیا مجھ میں خود اعتمادی کی کمی ہے۔					
۷	اگر مجھے اندازہ ہو جائے کہ میں جو کام کرنے والا/والی ہوں اسکے اثرات اچھے نہ ہونگے تو میں خود کو وہ کام کرنے سے روکنے پر قادر پاتا/پاتی ہوں۔					
۸	مجھ سے بہت سے کام ایسے ہو جاتے ہیں جن پر مجھے بعد میں پچھتانا پڑتا ہے۔					
۹	میں صرف دوسروں کے عیبوں پر ہی نظر نہیں رکھتا/رکھتی بلکہ ان میں موجود خوبیوں کو سراہتا/سراہتی ہوں اور ان کا احترام کرتا/کرتی ہوں					
۱۰	میں اپنی صلاحیتوں سے مکمل طور پر واقف ہوں۔					
۱۱	میں کبھی اپنے احساسات اور جذبات کا اظہار مکمل کر نہیں کر سکا/سکی۔					
۱۲	اگر میں کسی مشکل میں گرفتار ہوں تو دوسروں کی مدد لینے میں ہچکچاہٹ محسوس نہیں کرتا/کرتی۔					
۱۳	مجھے عموماً امید ہوتی ہے کہ میں جو بھی کام کروں گا/گی۔ اس میں کامیاب رہوں گا/گی۔					
۱۴	مجھ پر آسانی سے جنون چڑھ جاتا ہے اور جلدی اتر جاتا ہے۔					

۱۵	مجھ میں اتنی لچک موجود ہے کہ میں اپنی شخصیت میں مثبت اور صحت مند تبدیلیاں لا سکوں۔					
۱۶	میں خود کو ایک خاصی مضبوط شخصیت کا مالک سمجھتا/سمجھتی ہوں۔					
۱۷	میں ایک خوش طبع شخص ہوں/خاتون ہوں۔					
۱۸	میں جذباتی طور پر ایک صحت مند انسان واقع ہوا ہوں/ہوئی ہوں۔					
۱۹	اس دنیا میں کسی پر بھی اعتبار نہیں کرنا چاہیے۔					
۲۰	میرے کئی دوست/سہیلیاں ہیں۔					
۲۱	میری زندگی معنی مقصد اور سمت رکھتی ہے۔					
۲۲	اکثر اوقات میں سوچے سمجھے بغیر اپنا ردعمل ظاہر کر دیتا/دیتی ہوں۔					
۲۳	جب میں اپنے اردگرد رونما ہونے والے واقعات اور حالات سے کوئی نتیجہ اخذ کروں تو اکثر اوقات مجھے پتہ چلتا ہے کہ بیشتر لوگوں نے مجھ سے بہت مختلف نتائج اخذ کر رکھے ہیں۔					
۲۴	دوسروں کے جذبات کو ٹھیس نہ پہنچانے کی کوشش میں میں اکثر اپنے جذبات کا اظہار نہیں کر پاتا/پاتی۔					
۲۵	جب میں مشکلات سے دوچار ہوتا/ہوتی ہوں تو جلد ہمت ہار جاتا/جاتی ہوں۔					
۲۶	مشکلات سے نظریں چرانے کی بجائے میں آگے بڑھ کر ان کا مقابلہ کرتا/جاتی ہوں۔					
۲۷	میں اپنی مصروفیات کے متعلق پہلے سے منصوبہ بندی کر لیتا/لیتی ہوں۔					

☆☆☆

Appendix-F: POSTHOC ANALYSES

Posthoc Analyses of Age groups and self-esteem

(I) age group	(J) age group	Mean Differ (I-J)	Std. Error	Sig.	95% Confidence Interval	
					UL	LL
20 -29 yrs	30-40 yrs	-20.6*	3.24	.000	-27.12	-14.24
	40-60 yrs	-28.6*	5.00	.000	-38.53	-18.67
30-40 yrs	20 -29 yrs	20.6*	3.24	.000	14.24	27.12
	40-60 yrs	-7.91	5.32	.140	-18.47	2.63
40-60 yrs	20 -29 yrs	28.6*	5.00	.000	18.67	38.53
	30-40 yrs	7.91	5.32	.140	-2.63	18.47

Dependent Variable: SE

p<.01

Posthoc Analyses of Age groups and psychological adjustment

(I) age group	(J) age group	Mean Differ (I-J)	Std. Error	Sig.	95% Confidence Interval	
					UL	LL
20 -29 yrs	30-40 yrs	-21.6*	2.80	.000	-27.20	-16.079
	40-60 yrs	-36.4*	4.32	.000	-45.05	-27.9022
30-40 yrs	20 -29 yrs	21.6*	2.80	.000	16.07	27.2024
	40-60 yrs	-14.8*	4.59	.002	-23.95	-5.7175
40-60 yrs	20 -29 yrs	36.4*	4.32	.000	27.90	45.0503
	30-40 yrs	14.8*	4.59	.002	5.71	23.9535

Dependent Variable: PAS

p<.01

Posthoc Analyses of Level of education and self-esteem

Educational status (I)	Educational status (J)	Mean Differ (I-J)	Std. Error	Sig.	95% Confidence Interval	
					UL	LL
illiterate	Upto matric	18.93*	2.86	.000	13.25	24.61
	Bachelors	32.79*	2.74	.000	27.32	38.25
Up to matric	illiterate	-18.93*	2.86	.000	-24.61	-13.25
	Bachelors	13.86*	3.00	.000	7.89	19.82
Bachelors	illiterate	-32.79*	2.75	.000	-38.25	-27.32
	Upto matric	-13.86*	3.00	.000	-19.82	-7.89

Dependent Variable: PAS

p<.001

Posthoc Analyses of Level of education and psychological adjustment

Educational status (I)	Educational status (J)	Mean Differ (I-J)	Std. Error	Sig.	95% Confidence Interval	
					UL	LL
Illiterate	Upto matric	13.63*	2.75	.000	8.17	19.09
	Bachelors	34.72*	2.64	.000	29.46	39.98
Up to matric	illiterate	-13.63*	2.752	.000	-19.09	-8.17
	Bachelors	21.08*	2.89	.000	15.35	26.82
Bachelors	illiterate	-34.72*	2.64	.000	-39.98	-29.46
	Upto matric	-21.08*	2.89	.000	-26.82	-15.35

Dependent Variable: SE
p<.001