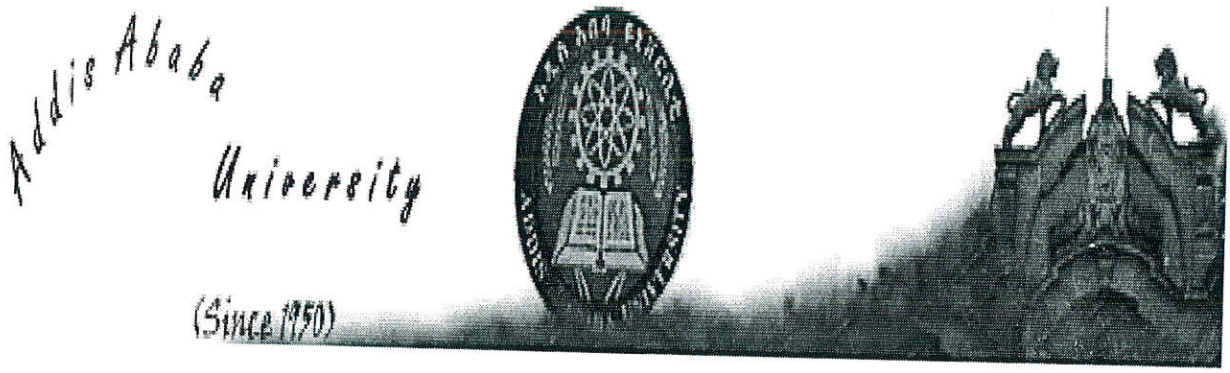


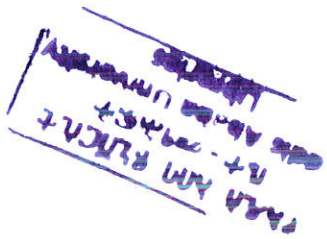
SATISFACTION OF LOWER PROSTHESIS LIMB USERS IN ADDIS ABABA, ETHIOPIA

BY HIWOT WOLDEYES

ADDIS ABABA UNIVERSITY

SCHOOL OF SOCIAL WORK

JULY, 2016
ADDIS ABABA



Satisfaction of lower prosthesis limb users in Addis Ababa, Ethiopia

By Hiwot Woldeyes

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This is to certify that the thesis prepared by Hiwot woldeyes , entitled: satisfaction of lower prosthesis limb user and submitted in partial fulfillment of the requirements for the degree of Masters of Social Work compiles with the regulations of the University and meets the accepted standards with respect to originality and quality.

Signed by the examining Committee:

Examiner Zena Berhanu ---- Signature ---------- Date 5 July 2016

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Advisor Mengistu Legesse ---- Signature ---------- Date 5 July 2016

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Acronyms

AAU – Addis Ababa University

CBR – Community Based Rehabilitation

CSA- Central Statistics Authority

GO – Government Organization

ICRC-International Committee of the Red Cross

ILO – International Labour Organization

LLA-Lower Limb Amputation

LPLU-Lower Prosthesis Limb User

MOLSA- Ministry of Labour and Social Affairs

NASSW – National Association of School of Social Work

POC- Prosthesis and Orthotic Center

PWDs – People with Disabilities

UN – CRC- United Nations Convention for the Right of the Child

UNESCO – United Nations Educational, Scientific and Cultural Organization.

WB-World Bank

WHO – World Health Organization

WVE – World Vision Ethiopia

Abstract

This study investigates satisfaction level of lower limb prosthesis users and determinant factor associated with their satisfaction in Addis Ababa. The investigation was conducted by endeavouring Quantitative Institution based cross sectional study with the support of qualitative case study. Indicators of device and service satisfaction; shape, dimension, easy to use, well fit, comfort, pain free, affordability and service and repair, elements examined in the rehabilitation centers as per clients perspectives.

Adult lower limb prosthetic users from two rehabilitation centers; POC and Menagesha rehabilitation center were included in the study using Convenient Sampling technique for quantitative study and eight respondents for qualitative study were purposefully recruited. Adapted QUEST 2.0, 173 structured questionnaires, were used to collect quantitative data and semi-structured interview guide and tape recorder used for qualitative data. The collected qualitative data were organized and analyzed through qualitative research approach and for quantitative data analysis SPSS version 20 was utilized.

The finding showed that 71.7 % of respondents were satisfied with the overall prosthesis device and related services. Prosthesis users were relatively highly satisfied with shape of the prosthesis device (87.9%), dimension of the prosthesis device (85.5%), training for using his/her prosthesis device by the service delivering institution (83.8%), prosthesis device meets his/ her need (77.5%) and prosthesis device well fit with his/her limb/limbs (75.1%). However, many prosthesis users were found to be dissatisfied with affordability of the prosthesis device

(60.1%).The main factors influencing user satisfaction were: marital status, monthly income, pain while using prosthesis device, height difference between the prosthetic devices or with the non amputated Leg, prosthesis type and years of using prosthetic device.

In general, the present study showed that the current status of the overall satisfaction of respondents towards lower limb prosthesis device in the POC and Menagesha Rehabilitation centers was satisfactory. Moreover, the study has a great implication for social work practice in the area of Policy formulation, Empowerment and Research in the areas of the prosthesis device users.

Key words: Addis Ababa, Amputation, Ethiopia, Lower Limb, Prosthesis, Rehabilitation, Satisfaction,

CHAPTER ONE

1.1 Background

According to the World Health Organization (WHO) definition, "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity". Disability is defined as impairments, activity limitations, and participation restrictions and usually associated with the negative aspects of the interaction between an individual with a health condition and that individual's personal and environmental factors (WHO,2001)

The World Bank (2008) has also defined disability as the result of the interaction between people with different levels of function and the environment. This definition underscores that people with physical, sensory, mental or intellectual disabilities are disadvantaged because they are denied access to health, education, employment, and equalization of opportunities and full participation in all spheres of life. This exclusion may be due to inadequate provision of physical rehabilitation services that complicate the prevalence of barriers to social, cultural, economic, political and physical environment.

It is estimated that there are over 650 million persons around the globe living with disabilities and about 80 percent of them live in developing countries where there are very few rehabilitation services(WHO,2001) . Further, according to (WHO, 2001) 10% of the population of any developing country is estimated to be people with disabilities.

The 2007 National Population and Housing Census revealed that the number of people living with disability (PWDs) constitutes to be 864,218 among those 464,202 are Male and 400, 016 Female. Out of the total PWDs, 31.18% have leg, hand and body movement difficulties, 28.77% seeing difficulties and total blindness, 19.74% hearing and speech difficulties, 4.8%

people with intellectual disabilities, 6.8% persons with mental problem or illness, and 8.78% with other disabilities (CSA, 2007) .Thus, the physically disabled constitute the highest population of PWDs in Ethiopia followed by the visually and the hearing impairment. Moreover, according to this survey, the highest incidence of disability is found in Addis Ababa where 17.7% of the families, included in the survey reported as they a disabled member in their family.

In my opinion and experience I got from my clinical practice, amputation of limbs due to a variety of reasons, including (disease, accidents and congenital defect) have saved many lives, but it also a source of staggering emotional and functional life style change and also significant disability. This makes me to select this specific topic.

The rehabilitation of persons with disabilities including lower limb amputated people involves the provision of medical, psychological, educational, social and vocational services. In Ethiopia, there are both governmental and nongovernmental services, which attempt to supply for the special needs of people with disabilities. However, among the millions of people facing various degrees of disabilities only few are beneficiaries of the rehabilitation services Tirusew as cited in Kahsay (2010).

Individuals experiencing various types of disabilities, including those who are physically handicapped due to lower limb loss deserve receiving proper rehabilitation services and prosthesis device which help them overcome disabling conditions and promote the development of their potentials (Tirusew, 2005).

However, different governmental and non-governmental organizations have been trying to improve the condition of these persons, among these Menagesha Rehabilitation Centre and POC are included in this study the reason for the selection of these center is currently they are actively engaged in provision of prosthesis device .Consequently, investigating the satisfaction level of

lower prosthesis limb users on the device and the service at those centers is important to design intervention plan for people with lower limb amputation.

1.2 Statements of the Problem

Lower prosthesis limb users are parts of the community. As such, their satisfaction on the prosthesis device demands careful provision of quality prosthesis device and related services. By doing so, it is possible to promote the wellbeing of the amputee people by taking the satisfaction of prosthesis limb users into consideration.

According to the 2007 population projection, its total population with physical disabilities is estimated to be 36,940 out of which 5% (1847) of PWDs requiring Prosthesis & Orthosis device and physiotherapy (CSA, 2007). However, there is no well registered statistics showing the number of PWDs in Addis Ababa who use prosthesis.

Client satisfaction is a multidimensional concept that roots in finding relationship between patient's pretreatment expectations and post-treatment experience from the delivered services (Geertzen, Gankema, Groothoff and Dijkstra, 2008, p.26). The level of satisfaction can be determined based on interaction between patient and service provider in respect to technical quality, accessibility, financial issues, physical environment, efficacy/outcome, and follow up of the delivered services (Ware, Snyder, Wright and Davies, 1983, p.6)

According to a study by Streiner & Norman (2008), rehabilitation of patients with lower limb amputations should consider not only physical functioning and prosthetic fitting but also factors such as quality of life and prosthesis satisfaction. High-quality instruments that cover these areas are needed to evaluate rehabilitation outcomes. As to my personal knowledge this is

also being observed in our community that the rehabilitation centers give more emphasis on physical functioning and prosthesis fitting not on prosthesis satisfaction and quality of life for long.

Lower Limb Amputation (LLA) can lead to a negative change in how an individual mentally perceives their own body, as they attempt to adjust to their new condition. Amputees can experience feelings of social discomfort and may avoid particular social scenarios and can exhibit symptoms of depression (Rybarczyk& Behel, 2008, pp.23-31) In fact, concern about body image has been directly linked to depression in amputees. The appearance of a prosthetic limb is important to amputees and can influence their opinion or acceptance of the prosthesis. Moreover, dissatisfied with the appearance of prosthesis device had negative impact how amputees view their body (Carroll and Fyfe, 2004, p.66). Therefore, improving prosthesis appearance and quality of prosthesis rehabilitation service may have a positive impact on an individual's body image and consequently improve their psychological well-being and satisfaction.

The critical problem of providing unaddressed rehabilitation service for prosthesis users and the device low appearance quality itself lead lower prosthesis limb users to depression and dissatisfaction by reducing their physical mobility and independence. Moreover, they have low physical functionality, fail to work and to participate in daily activities and also separated from the larger society (Gallagher & Maclachlan, 2004, p.35)

People with LLA can establish productive and improved quality of life with their respected families in daily routines and are able to realize their potentials if the community member and government create favourable situations at different levels (ADPD,2010). In addition, having good rehabilitation center and prosthesis device service helps them to fully participate in all

social activities (ADPD,2010). According to ADPD, absence of social care like rehabilitation centres, lack of (equal) access to artificial limbs, employment and other services makes it particularly an uphill battle for LLA to overcome livelihood challenges.

I have not found any study conducted in Ethiopia that shows the Satisfaction of lower prosthesis limb users (LPLU) . According to the information I got from reviewed literature so far little is known about prosthesis device , the service provide by rehabilitation centers and the level of satisfaction of users.

In order to identify the satisfaction of LPLU, understanding their experience and existing practices in relation the prosthesis device and the service they get from rehabilitation centers is very important. Therefore, this study has explored the experience and practice of lower limb prosthesis users in relation to their satisfaction on the device and the service they receive from the selected rehabilitation centers.

1.3 Research Questions

The thesis addressed the following research questions:

- What is the satisfaction level of lower prosthesis limb users in POC and Menagesha Rehabilitation Center?
- What are the determinants for satisfaction of prosthesis users?
- What Prosthesis user encountered as a result of using prosthesis limb device?

1.4 Objectives

1.4.1 General objective

The aim of this study was to investigate the satisfaction of Lower prosthesis limb users in physical rehabilitation centers of Addis Ababa.

1.4.2 Specific objectives

- ✓ To investigate the satisfaction level of Lower prosthesis limb users in physical rehabilitation centers of Addis Ababa.
- ✓ To identify the determinants factors for the satisfaction of prosthesis limb users.
- ✓ To assess benefits of LPLU encountered as a result of using prosthesis device.

1.5 Significance of the Study

Since the researcher did not found any research conducted in Addis Ababa rehabilitation centers that shows satisfaction of LPLU. This will provide

- ➢ A better understanding and awareness on the major factors affecting satisfaction of lower prosthesis limb users in the utilization of their prosthesis device.
- ➢ Helps for future developing intervention and strategies that impact positively on the satisfaction of prosthesis limb users by different concerned bodies.
- ➢ The result of this research study may also invite scholars to research more.

1.6 Limitation of the Study

Since the study was conducted only on two rehabilitation centres, fair generalizations were not free of limitations. Moreover, the study was cross sectional, it shows only temporal relationship between variables (inability to infer causality).

1.7 Operational Definition

Above-knee amputation: "Amputation of the lower-limb between the hip joint and the knee joint", trans-femoral amputation.

Below-knee amputation:"Amputation of the lower-limb between the knee joint and the ankle joint", trans-tibial amputation .

Lower-limb prosthesis:"Prosthesis used to replace the whole or part of the lower-limb", functional characteristics of the neuromuscular and skeletal systems" .

Prosthesis; prosthetic device: "Externally applied device used to replace wholly, or in part, an absent or deficient limb segment".

Prosthetist/orthotist: "A person who, having completed an approved course of education and training, is authorized by an appropriate national authority to design, measure and fit prostheses and orthoses" .

The next chapter enclose different reviewed literatures written by various scholars which are related to the topic of this specific study; satisfaction of lower prosthesis limb users.

CHAPTER TWO

2. Literature Review

This chapter will present various reviewed literatures: including Historical perspective of disability, Definition of disability, Prevalence and current situation of disability in Ethiopia, Cause of disability, physical disability and Amputation and rehabilitation, International charters and polices. These would have great impact to enrich the study.

2.1 Historical Background of the Concept of Disability

Throughout history, people with various disabilities have together been marginalized and is often associated with various misconceptions and attitudes in different societies. They have had a history of 'silence' and have been socially constructed as 'others'. In earlier times, disabled persons were not considered equal to the other 'non-disabled people. Indeed, in ancient times, a child born disabled was either thrown away or infanticide was practised by the mother because the disabled child as believed to have 'demons' or 'evil spirits'. The practice of infanticide was aimed to destroy the so- called 'demons' or 'evil spirit' in the disabled child (Gearheart &Weishehn as cited in Tekalign,2007).

Since the 17th century, however, the approach to understanding or helping disabled people began to change in the western world. Gradually, more progressive developments were observed and different models were adopted to address disability. This development resulted in the formation of three major models of disability. These include religious, medical and rights-based models of welfare for disability (Clapton & Fitzgerald, 1996).

According to the religious model, the root of understanding the bodily difference on disabled persons was grounded in the 'Biblical References'. (Clapton and Fitzgerald, 1996) argued that disability has been seen as a result of 'evil spirits', 'the devil', 'witchcraft' or 'God's displeasure'. During the pre-industrial period, those people with bodily limitations were required to stay at home and often ostracized by the able people. This threatened their survival and thereby some became homeless, dislocated and victims of poverty and shame.

The central argument of this model lies on the perception that "disability was punishment from divine power for the wrong doing of either the disabled or their parents. The 'able bodied' people appear to carry out the punishment by ignoring, rejecting or putting aside those with disabilities" (Mackelplang & Salsgiv as cited in Tekalign , 2007).

Nevertheless, the religious model is later challenged by the enlightenment era of 18th century, which was based on reason. This era produced a medical model of disability, which came up with scientific knowledge in Europe and America. The model replaced the 'priest custodial' system for disabled people with the medical professionals. According to this model, disabled people are expected to access some support from the 'medical intuitions'. It was argued by the medical professionals that it is essential to help the disabled people to enable them compensate their deficiencies (Daniel, 2000).

On the other hand, the rights –based model of disability gives more emphasis to the socio-political construct within society. It was contended that there was transfer of disabled people from 'dependency' in the medical model to 'independency' and self responsibility. Emphasis was given to participation of disabled people in the social, political and civil rights movement. Disabled people were entitled to participate in social service activities such as employment, education and recreations (Clapton &Fitzgerald, 1996).

In contrast to the traditional approach to disability, 'social model' of disability was also supported by the UK Department for International Development (DFID, 2000). This model is against the traditional way of categorizing persons with disabilities as 'special' or 'different' people from the non-disabled people. In the conventional approach to disability, people with disability need help from others to meet their social needs. But it was criticized for its medical approach, which promotes dependency and difference among disabled people (DFID, 2000).

The social model of disability emphasizes the promotion of social change to incorporate persons with disabilities in the larger social context. The model affirms that disability is not only the medical issue but the social restrictions emerging from discrimination. According to this model, therefore, active participation of disabled people is essential to address disability problems. For them, it is not the impairment but the social response that has much more influence on the lives of disabled people. According to this model, people with disability face three different types of discriminations in their life, namely 'institutional, environmental and attitudinal' (DFID, 2000).

The abovementioned literature implies that disability is a 'social construction' in the human history. It shows that disability has been negatively conotated in the long history of society. These facts are still prevailing in most part of the world particularly in Africa. The pre-existing perceptions seem to have influence on the disabled peoples' access to social services.

2.2 Defining Disability

There is no universal agreement on the definition of disability. However, the International Classification of Functioning Disability and Health (ICF) defines disability as "an umbrella term, covering impairments, activity limitations, and participation restrictions"; adding that "disability is a contextual variable, dynamic over time and in relation to circumstances; its prevalence corresponds to social and economic status". Disability is thus seen as "a complex phenomenon, reflecting an interaction between features of a person's body and features of the society in which he or she lives" (WHO,2011,p.17).

Increasing evidence suggests that disabled people in general have a poorer level of health, lower educational achievements and a higher rate of unemployment than their non-disabled counterparts (WHO, 2011). Disability can be, physical, mental, sensory, or involve a learning disability, it may be recent or long-term, progressive or stable and needs to be considered in terms of the physical implications and in relation to a woman's coping abilities and those of her family (Kirshbaum, 1995, pp.9-28).

The International Classification of Functioning, Disability and Health of the World Health Organization (WHO) melds the medical and social models in defining disability, thus producing a coherent view of health (WHO, 2001). This classification explicitly recognizes the contribution of external forces the physical, social, and attitudinal environments in causing or eliminating disability among people with functional impairments.

In addition, the classification includes participation in daily and community life as explicit components of health, thus shifting the focus from prevention or cure to maximizing functioning and well-being. By presenting disability as a continuum, the WHO treats disability as relevant

"to the lives of all people to different degrees and at different times in their lives." (WHO, 2003, pp.77-88)

Two key definitions proposed by the WHO and ILO reflects the shift in the concept of disability as captured in the explanation of the two models. "Disability is any restriction or lack (resulting from impairment) of ability to perform an activity in the manner or within the range considered as normal for human beings (WHO, 1976, p.7)".

"Disability is a state in which functional limitations and/or impairments are causative factors of existing difficulties in performing one or more activities which, (in accordance with the subjects age, sex and normative social role) generally accepted as essential basic components of daily living such as self care, social relationship and economic activity" (ILO, 2006,p.2)

According to, UN Convention on the Rights of Persons with Disabilities (UNCRPD) in 2007, the term disability includes "Persons who have long-term physical, mental, intellectual or sensory impairments that in the face of various negative attitudes or physical obstacles may prevent those persons from participating fully in society" (UN, 2007)

Following the World Health Organization (WHO) and International Labour Organization (ILO) definitions on disability, "Disability" is defined as follows in Ethiopia, "A disabled person is any person unable to ensure by himself or herself a normal life, as a result of deficiency in his or her physical or mental capabilities"(Tirussew ,1991).

2.3 Prevalence and Current Situation of Disability in Ethiopia

A survey made by WHO on Health and Global Burden of Disease 2002-2004 in more than 50 countries reveled that, 15% (650 million) of persons around the globe are living with disabilities and about 80 percent of them live in developing countries where there are

very few rehabilitation services and do not have access for those services due to a lack of resources and other various factors and about 2-4% (110-190 million people), experience significant difficulties in functioning .

The state of persons with disabilities in Ethiopia is even more tragic and severe due to the presence of diversified pre and post-natal disabling factors (like infectious diseases, difficulties contingent to delivery, under-nutrition, malnutrition, harmful cultural practices, lack of proper child care and management, civil war and periodic drought and famine) and the absence of early primary and secondary preventive actions.

According to JICA (2002), major current problems concerning disability are:

- Lack of public understanding
- Lack of information on the number and status of disabilities
- Shortage of basic needs, such as vocational training placement, health facilities etc.
- Inaccessibility to assistive devices

In Ethiopia, it is difficult having reliable data and information about people living with disabilities. More over the available stastical reports showed contradicted figurative presentation on PwDs. The most recent statistics estimate on PwDs in Ethiopia could the World Report on Disability jointly issued by the World Bank and World Health Organisation, according to the report, there are an estimated 15 million children, adults and elderly persons with disabilities in Ethiopia, representing 17.6 per cent of the population (WHO, 2011).

But according to World Bank report person with disabilities in Ethiopia is estimated to be more than 7.3 million. But this figure has not been confirmed by the National Population and Housing Census conducted by the Central Statistics Authority (2007). Rather the census report

indicated that there were 864,218 PwDs of which 464,202 are Male and 400, 016 Female. Out of the total PWDs, 31.18% have leg, hand and body movement difficulties, 28.77% seeing difficulties and total blindness, 19.74% hearing and speech difficulties, 4.8% people with intellectual disabilities, 6.8% persons with mental problem or illness, and 8.78% with other disabilities (CSA, 2007). The differences in understanding on the concept of disability, the stigma associated, and low level of awareness on disability might have influenced the enumeration as a result of which the number of PwDs is suspected to be lesser than anticipated (MOLSA, 2011)

Ethiopia has long been having large number of people with disabilities. The total number of persons with disabilities in the country is assumed to be over 8 million on the bases of 10 % estimate of the total population. However, some local studies report lower percentage. For instance, the national base line survey of disability conducted by the Institute of Educational Research of Addis Ababa University in collaboration with Joensuu University of Finland on 5085 households reported about 2.8 % of disabled cases. On the other hand, the 1995 focused base line survey of persons with disabilities in Ethiopia, the first type in the country revealed that the prevalence of disability is about 2.95 as cited in Yeshimebet ,2014.

The 1994 Ethiopian census showed that in Addis Ababa the prevalence of people living with disabilities estimated to be 2.18% (45,936). Among the indicated prevalence 15,320 Physically disability, 12,888 Blindness, 6,402 hearing difficulty, 5,912 mental illness, 2,673 leprosy, 1,887 multiple disability and 854 other not specified disabilities provide the large picture of disability collectively.

2.4 Disability and Health

People with disabilities are much more likely than the nondisabled to report being in fair or poor health. According to 2001–05 National Health Interview Survey data, only 3.4 percent of adults without disabilities reported fair or poor health, compared with 30.6 percent of those with difficulty seeing or hearing, 37.9 percent of those reporting movement difficulties, 51.8 percent of people with emotional difficulties, and 63.8 percent of those with cognitive difficulties (Altman & Bernstein, 2008).

The WHO definition of health has adopted a holistic approach to health, rather than a disease-oriented one. A holistic health approach in healthcare means a focus on individuals' vital goals, and therefore also includes health education and rehabilitation (Nordenfelt,1993).

According to National Council on Disability (2007), among people reporting movement difficulties, 77.2 percent of those experiencing the most severe type of movement difficulty reported fair or poor health, compared with 14.8 percent of those experiencing the least severe movement difficulty. According to data from an earlier National Health Interview Survey (2007) ,34 percent of people with major difficulties walking reported being frequently depressed or anxious, compared with 3 percent of those without disabilities

2.5 Disabilities and Gender

It has been argued that women with disability have less opportunity to get married than their non-disabled counter parts in Sub-Saharan countries. In this region, marriage is traditionally associated with the roles a woman could play at her husband's home. Men consider disabled women as those without roles at home and thus do not make any permanent marriage with them. In this regard, Ngwana,2002,p.13 argues as follows:

> In agrarian societies, survival depends on physical capabilities. Women are married because they are a source of labour. Disabled women are, therefore, viewed as liabilities and have less opportunity for marriage. In addition, beauty in Africa is largely physical and the beauty of the soul rarely come into play when choosing a spouse. The low social status makes women with disabilities less likely than men with disabilities to find a spouse.

2.6 Disability and Poverty

Research indicates that poverty and disability are much linked to each other. They usually reinforce each other and worsen the life of disabled people. It was argued that disabled persons' living situation affects their chances of working, enjoying their family life and daily activities. According to the UK Department for International Development (DFID), only 2 % of disabled persons living in developing countries have probability to access basic services and rehabilitation (DFID, 2000).

According to a world report on disability and rehabilitation, the linkage between poverty and disability is further explained by WHO ,2005,p.1 as follows:

> Poverty is a root cause of many disabilities. About 80% of the world's 600 million people with disabilities live in low-income countries, often in poverty, isolation and despair. Poverty further limits access to basic health services, including rehabilitation and education. Most of the developmental initiatives often ignore the need of people with disabilities.

This indicates that poverty has a disabling effect on the life of people. As a result, the disabled people may not have ample access to basic human services due to their disability.

2.7 Causes of Disabilities

According to Ministry of Labour and Social Affair (MOLSA, 2011) the major causes of disabilities in developing countries are:

- Poverty: Due to poor nutrition, limitation to clean water, un affordability of hygienic living condition and difficulty to accesses health services, people get disability. Poverty causes disability and disability aggravates poverty.
- War: Not only combatants get disability but civilians are also victims during and after war including land-mine and ordnance.
- Accident: The developments of infrastructure, road traffic, construction and industrial accidents have been becoming the major causes of disability.
- Lack of Health Care: Lack of accesses for adequate primary health care and surgical treatments of injuries and accidents lead to disabilities.
- Lack of Information: Lack of adequate knowledge, awareness and information about disability; its causes, prevention and treatment.
- Environmental Factor: Disabilities are also caused by epidemics, natural disasters; toxic waste and other hazardous substances
- Ageing Process: As a result of increasing health care coverage and improving in life style, longevity is increasing. As a result, the age-associated physiological changes like reduction of muscle bulk, blood volume, and bone mass and other conditions.
- Congenital Conditions: There are many conditions that occur at birth which impair developmental physical movement. These include malformation, absence or dysfunction of one or more organs of the body. Prenatal chemical factors, mal development or injuries are some of them.

The causes for disability are numerous but major cause of disability in Ethiopia are Man-made disaster (conflict, road accident, work related accidents, etc), prenatal causes, during natal and postnatal periods, alcohol and drug addiction, communicable diseases, harmful traditional practices and they are aggravated by poverty related factors such as malnutrition, lack of environmental hygiene.

2.8 Physical Disabilities

The health status of people with physical disabilities often requires orthopaedic and prosthetic medical devices. These act to support muscle weakness, immobilize or stabilize the joint, facilitate movement of tendons, remodel scars, remove restrictions on movement, and strengthen certain muscle groups to avoid distortions, or support other tools of everyday life (Sastri, 2014, PP.9-18).

2.8.1 Physical Disability and Poverty

People with Physical disabilities are among the poorest and most vulnerable social groups in developing countries including Ethiopia. They face many barriers preventing them from fully participating in society and are the most likely to face an increased risk of social exclusion. They can hardly obtain the access to education, medical, and Para-medical services, income earning activities or participation in decision making like other citizens (Eide, 2011).

Poverty can further exacerbate physical disability by increasing people's vulnerability to malnutrition, diseases, poor living and working conditions. People living in poor socio-economic condition are at greater risk of falling in illness, have little or no access to social facilities and finally prone to disability. The causes of disability are compounded by lack of financial and human resources, lack of assistive devices and negative attitude towards disability that frequently result in marginalization of people with disabilities (Eide, 2013).

Not surprisingly the most affected groups among the disabled are those that are in developing countries in general and women and children in particular. Statistics by international research organizations show that 80 percent of disabled persons in the developing countries (out of which more than 70 percent are women) do not have working opportunities (ILO, 2006). The same statistics shows that nearly 98 percent of children with disabilities are not in school while the same percentages of people with disabilities in developing countries do not have access to rehabilitative and other basic health services (ILO, 2006).

2.8.2 Physical Disability and Amputation

Limb loss affects a variety of people in Nigeria and around the world and includes people of every race, ethnicity and background without regard to geographic location, occupation or economic level. According to the country report in 2009, 1.6 per 100,000 as the estimated prevalence of extremity amputation in Nigeria. Rural people view amputation even more seriously. For them, surgery of any kind is accompanied by fantasies, helplessness, and mutilation, loss of control, body image distortion, castration, rejection and death.

The main cause of acquired limb loss is poor circulation in a limb due to arterial disease, with more than half of all amputations occurring among people with diabetes mellitus. Amputation of a limb may also occur after a traumatic event or for the treatment of a bone cancer. Congenital limb difference is the complete or partial absence of a limb at birth (WHO, 2011, P.16)

Limb amputation can lead to a negative change in how an individual mentally perceives their own body, known as body image, as they attempt to adjust to their new condition (Cairns ,

Corney & Murray, 2011, P.10).Amputees can experience feelings of social discomfort, may avoid particular social scenarios and can exhibit symptoms of depression. In fact, concern about body image has been directly linked to depression in amputees. The appearance or aesthetics of a prosthetic limb is important to amputees and can influence their opinion or acceptance of the prosthesis. Unsatisfactory prosthetic aesthetics are likely to negatively impact how amputees view their body (Murray & Fox, 2002, PP. 925–931).

The lower limbs are more often injured than the upper limbs and diabetic gangrene is commoner on the foot than elsewhere on the body .In Nigeria, below knee amputation (BK) is the leading level of amputation. This is followed by above knee amputations (AK) giving an AK/BK ratio 1:2 in Nigeria.

2.8.3 Physical Disability and Physical Rehabilitation

Physical disability by itself needs special health care service for the persons with physical disabilities to attain maximum functionality in day to day activities of routine life (Mont, 2007) these include the prevention of secondary conditions, physical rehabilitation, and prosthetic and orthotic services.

Rehabilitation as human service thinking is deliberate to attend to the physical, mental, emotional, spiritual, social and vocational aspects of life. Its goal is to facilitate productivity and independent living as well as community integration of a wide variety and substantial population of persons who otherwise may be functionally and societal limited in fully realizing their potential as cited in Kahsay (2010).

The world report on disability defined rehabilitation as "a set of measures that assist individuals who experience, or are likely to experience, disability to achieve and maintain

optimal functioning of individuals in interaction with their environments" Technological intervention such as prosthetic and orthotic services categorized in the bold health care service category of rehabilitation for persons with physical disability, especially persons with limb amputation (WHO, 2011,P.7).

The focus of physical rehabilitation mainly relies on attening the highest level of quality of life for person with physical disability through removing or reducing physical activities barriers. Effective rehabilitation service promotes persons with physical disability to become more independent and functional for day to day activities (Magnusson, 2014).

Physical rehabilitation must also include maintaining, adjusting, repairing and renewing the devices. It is not an end in itself, but an essential part of the process of ensuring the full integration of disabled persons in society (Magnusson, 2014). Restoring mobility is the first step towards enjoying such basic rights as access to food, shelter and education, getting a job and earning an income and, more generally, having the same opportunities as other members of society (Matsen, 2000).

2.9 Amputation and Prosthesis Limbs

Prosthesis is an artificial extension that replaces a missing body part such as an upper or lower body extremity (arms or legs). It is part of the field of biomechatronics, the science of fusing mechanical devices with human muscle, skeleton, and nervous systems to assist or enhance motor control lost by trauma, disease, or defect. The type of artificial limb used is determined largely by the extent of an amputation or loss and location of the missing extremity (Grant & Terry,2010).

According to Grant & Terry, there are four main types of artificial limbs. These include Transradial,Transhumeral, Transtibial and Transfemoral prostheses . A transradial prosthesis is an artificial limb that replaces an arm missing below the elbow.

A transhumeral prosthesis is an artificial limb that replaces an arm missing above the elbow and transhumeral amputees experience some of the same problems as transfemoral amputees, due to the similar complexities associated with the movement of the elbow. This makes mimicking the correct motion with an artificial limb very difficult.

A transtibial prosthesis is an artificial limb that replaces a leg missing below the knee. Transtibial amputees are usually able to regain normal movement more readily than someone with a transfemoral amputation, due in large part to retaining the knee, which allows for easier movement. A transfemoral prosthesis is an artificial limb that replaces a leg missing above the knee. Transfemoral amputees can have a very difficult time regaining normal movement. In general, a transfemoral amputee must use approximately 80% more energy to walk than a person with two whole legs.

According to WHO report in 2011, the risk of limb loss increases with age, with persons aged 65 years or older having the greatest risk of amputation. As with diabetes and heart disease, smoking, lack of exercise and improper nutrition may also increase the risk of limb loss. Certain racial and ethnic groups are at increased risk of amputation (e.g. African-Americans, Native Americans and Hispanic Americans).

2.10 Utilization of prosthesis limb

According to National Council on Disability (2007) in the U.S, Use of prosthesis or artificial limb among amputees can assist with ambulation and participation in activities of daily living. It is estimated that approximately 199,000 persons in the U.S. were using an artificial limb in 1994, with the majority using an artificial leg or foot (173,000)

Violence during the civil war in Sierra Leone between 1991 and 2002 resulted in an increased number of amputees in need of prostheses. In addition, low vaccination coverage led to polio outbreaks before and during this war, resulting in persons in need of assistive devices (Kamara , Williams, Turay & Sengeh ,2006). At the end of the war, the group in need of prostheses and orthoses was estimated at 10,000 people, with approximately 5000 new upper-limb amputees and 1,000 new lower-limb amputees due to war-related injuries. In Sierra Leone persons with disability have poor access to healthcare and appropriate rehabilitation services (Zingale & McColl , 2006)

According to the baseline assessment conducted in Ethiopia there about twelve orthotic and prosthetic centers available in Ethiopia, among the twelve centers two of them found in Addis Ababa, Namely; Menagesha Prosthetics-Orthotics Centre and Prosthetics-Orthotics Centre (POC). ICRC is a major donor in providing technical and financial assistance to most workshops by reimbursing social cost of PwDs (transportation, food, and accommodation) and cost of orthopaedic appliances (ADDP, 2010) From 2004-2009 a total of 4128 prosthetics service were provided by Addis Ababa Prosthetics Orthotics Centre (2928) and Cheshire Services Ethiopia (1200) in Addis Ababa (ADDP, 2010).

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2.11 International Charters and Polices on PWDs

The World report on disability produced by WHO and the World Bank clearly placed disability within a human rights perspective and argued that disability should not be seen from purely medical or social perspectives (WHO, 2011). The CRPD supports the ICF developed by the WHO, and considers disability and functioning as a dynamic interaction between health conditions (individual) and contextual factors (environment) (UN, 2007).

According to the ICF, environmental factors like Prosthetic devices can improve a person's function. The service provision that includes providing prosthetic devices has underlined aim in improving medical perspective like, increased function and mobility and improving ICF perspective, increased activity and participation in society (WHO, 2001).

The UN has been making several glorious human rights treaties. One of them is the UN Convention on the Rights of Persons with Disabilities (UNCRPD) that was adopted in March, 2007. It is the most recent and an integral part of the core human rights treaties.

Although existing human rights conventions offer considerable potential to promote and protect the rights of persons with disabilities, it became clear that this potential was not fully implemented. Persons with disabilities were denied of their rights and were kept on the margins of society in many parts of the world. This continued discrimination against persons with disabilities highlighted the need to adopt a legally binding instrument which set out the legal obligations on States to promote and protect the rights.

The convention is unique in the sense that it is the first human rights convention of the 21st century and the first legally binding instrument with comprehensive protection of the rights of persons with disabilities. While the convention does not establish new human rights, it does set

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out much greater clarity on the obligations of States to promote, protect and ensure the rights of persons with disabilities. Thus, the convention not only clarifies that States should protect discrimination against persons with disabilities, but also sets out the many steps that States must take to create an enabling environment so that persons with disabilities can enjoy real equality of life in society. In this way, the convention goes too much greater depth than other human rights treaties in setting out the steps that States should take to prohibit discrimination and ensure inclusiveness of PwDs.

As part of all the development agendas of the Government of the Federal Democratic Republic of Ethiopia has ratified the Convention and the development of this strategy is one of the initiatives to fulfill the needs of PwDs.

Different Continental and Regional Agreements have been made. One of such agreements is the "Continental Plan of Action for the African Decade of Persons with Disabilities (1999-2009)" proclaimed in July, 1999 in Algiers, Algeria. The Plan of Action was further extended for 10 years by AU Ministers in charge of Social development in Windhoek in 2008.

The major objectives of this Action Plan are:

- Formulate or reformulate policies and national programs that encourage the full participation of persons with disabilities in social and economic development.
- Support community- based service delivery in collaboration with international development agencies and organizations.
- Develop programs that alleviate poverty amongst PWDs and their families,
- Prevent disability by promoting peace and paying attention to other causes of disability.

2.12 Legal Issues on Disabilities in Ethiopia

In Ethiopia some people associate disability with spiritual evil and do not let disabled persons to go out in public. This leads to families hiding a disabled family member which leads to inaccurate information and statistics on disabilities JICA (2002). To improve problems of disability the Ethiopian Federal Democratic government has organized rehabilitation Department under MOLSA. To realize rehabilitation, capacity building and awareness creation is its main activities.

Like other countries Ethiopia's government has adopted and implemented laws, policies and standards pertaining to people with disabilities. Constitution of Democratic Republic of Ethiopia approved in 1995 Article 41 of the constitution sets out the states responsibility for the provision of necessary rehabilitation and support service for people with disabilities.

Proclamation No 101/1994 is a proclamation by TGE, and its objectives are to assist people with in society suffering from disabilities due to natural and manmade causes, to alleviate the problems of disability by creating appropriate access to job opportunities through appropriate training or skill, To eliminate discrimination and protect the rights of persons with disabilities to compete for and obtain employment based on their qualification.

JICA (2002), major problem of people with disabilities in Ethiopia are lack of public understanding, information on the status and number of disability, shortage of basic needs like health facilities and in accessibility to assistive devices. The program for medical rehabilitation for PWDs is aimed at furnishing devices to support missed or damaged organs and provide necessary health care. And its strategies include strengthening and expansion of medical rehabilitation services, making available strong referral hospitals.

Years have passed since the classical meaning of development was changed from a mere economic growth, expressed in the form of Gross Domestic Product (GDP) or Gross National Product (GNP), to state of Social Welfare , Political participation and rational distribution of national wealth. In this regard, countries are said to be truly developed if they have enabling social policies and practices, full political participation of their citizens, noticeable good governance practices, and respect of human rights; irrespective of racial, ethnic, religious, sex, tribe or any other form of discrimination (MOLSA, 2011)

Thus, recognizing the rights of PwDs and creating enabling environment has immense economic and social benefits for PwDs themselves and a nation at large.

While people with disabilities have higher rate of poverty than people without disabilities, many countries have tried to address this by providing social protection to poor people with disabilities and households (World Report on Disability, 2011, p.11). Their right to this protection is enshrined in Article 28 of the UN convention on the right of person with disabilities (UNCPRD) which recognise the "right of person with disabilities to social protection and to the enjoyment of that right without discrimination on the basis of disability.

2.13 Satisfaction of PWD in Using Prosthesis

Satisfaction with lower-limb prosthetics has been investigated in three studies from Vietnam (Matsen ,1999; Jensen, 2007). Two of the studies indicated that 10% or less of patients were dissatisfied with their ICRC polypropylene prosthesis, while the third reported that amputees had limited ability to perform rigorous physical activity but were relatively satisfied with their prosthesis. The majority were satisfied with the service they received. In Iran, where both high and low-cost technologies were used for the production of prostheses and patients were dissatisfied with the durability and cosmetic appearance of the

device, and complained that the assistive devices tore their clothes. Patients indicated high levels of satisfaction for fit and ease of donning the assistive device, but were dissatisfied with the process of service delivery (Malovecka, Minarikova & Foltan, 2015).

According to the finding from the study in developing African countries majority of the prosthetic devise used by the person with physical disability. From the study in Malawi 90% and Sierra Leone 86% of prosthetic devices were in use by patients. Patients used their prosthesis an average of nine hours a day in both Malawi and Sierra Leone (Magnusson, 2014). Despite reporting high levels of utilization significant amount of patients reported pain and wounds associated with use of their device.

Poor satisfaction in using may be related to adverse of using prosthesis devise by person with physical disability. Different studies showed that different type of adverse effects due to prosthesis use; Problems with wounds, skin irritations, or pains were reported by 14.4% and 28% of the patients studied by different scholars (Demers, weiss-Lambrou & Bernadette, 2000)

Despite the fact problem related to prosthetic devices has contribution for satisfaction of the prosthetic devise user, in developing countries patients also training received, coordination between professionals, and ease of keeping their prosthetic device clean affects their satisfaction level (Magnusson, 2014)

Moreover, Individual's perception towards their own body image distorted due to Limb amputation and the consequences as they attempt to adjust to their new condition may affect the level of prosthetic user satisfaction. This distorted perception towards once own body image has been directly linked to depression, as results of feelings social discomfort (Rybarczyk , Nicholas

& Nyenhuis ,1997). Even though, once own body image has been directly linked to depression and the cosmetic appearance of their prosthetic device improve the depression state of the amputated individuals and the significantly improve their satisfaction towards the device (Magnusson, 2014). In addition, the appearance or aesthetics of a prosthetic limb is important to amputees and can influence their opinion or acceptance of the prosthesis. Unsatisfactory prosthetic aesthetics are likely to negatively impact how amputees view their body. Therefore, improving prosthesis aesthetics may have a positive impact on an individual's body image and consequently improve their psychological well-being t (Rybarczyk , Nicholas & Nyenhuis ,1997)

On this Chapter, I was reviewed relevant literature including Disability ,Prevalence of Disability in Ethiopia,Physical disability,Amputation and prosthesis limb,Utilization of Prosthesis limb,International Charters and Police on PWDs and also Satisfaction of PWD but still there is a gap on satisfaction of lower prosthesis limb users.The next chapter will present what kind of method the researcher will use.

CHAPTER THREE

3. Methods of the Study

This chapter will include Methods of the Study, Sampling procedure and sample size, Method of Data Collection, Method of Data Analysis and Ethical Consideration. So that, we see each of them by one by how it works in this specific study.

3.1 Philosophical Stance

The researcher perspective about reality is constructivism, individuals seek understanding of the world in which they live and work. They develop subjective meaning towards certain objects or things. These meanings are varied and multiple, leading the researcher to look for the complexity of views rather than narrow the meanings into a few categories or ideas (Creswell, 2014, pp. 31-32).

Despite, a subjective reality and the need to see life as they live it, there is always a room for a reasonable judgment particularly in the course of analysis whilst developing this study document. There is no particular sense in limiting the facilities of the mind in any inquest. Meaning, a reasonable judgment is important and was employed as a mechanism of analysis added to opinion and imagination (Kenneth & Todd, 2011).

3.2 Research Design

An appropriate research design is important to any research as it guides the process for collecting the desired data and also the process for analyzing that data. The general principle is that the research strategy or the methods or techniques employed must be appropriate for the questions you want to answer (Robert,2003, p.13).

Institutional based cross-sectional study design was employed. During the study period ,from April 2016 to May 2016 G.C data were collected using structured questionnaires and as a supplement in-depth interviews were done .

Qualitative research does not attempt to quantify results through statistical summary or analysis and also seeks to describe various aspects about behaviour and other factors. In other hand quantitative research data are often in the form numbers (Abiy,Alemayehu, Daniel, Melese and Yilma (2009).

3.3 Study Area and Period

Addis Ababa is the capital city of Federal Democratic Republic of Ethiopia with a population of 3, 384,569 (CSA, 2007) and is divided in to 10 administrative sub cities and 99 Kebeles. There are 38 hospitals in Addis Ababa, among these, 10 are owned by Government 5 of them are administered by Federal Ministry of Health (FMOH) and 5 are under Addis Ababa Health Bureau (AAHB) and the rest 18 are NGO and Private owned hospitals. Among those Hospitals four (POC, ALERT Hospital, Black Lion Hospital and Menagesha rehabilitation center) are engage in physical rehabilitation service which enhancing mobility by reduce restrictions on walking and promote engagement of people with disabilities in various socio-economic activities in society (MoLSA, 2011).

The study was conducted at two selected physical rehabilitation centers; Prosthesis and Orthotic Center(POC) is one of the governmental physical rehabilitation center which is actively engage in providing prosthesis and orthotic device ,walking aids and physiotherapy treatment for PWD including lower prosthesis limb users. According POC nine month (from july2015 - march /2016) report 14,304 clients got different service.

The second selected rehabilitation center for this study is Menagesha Rehabilitation Center which is registered as an Ethiopian Resident charity, while playing a leading role in physical rehabilitation service such as manufacture and customized fitting of prosthesis limbs, orthotic device, walking appliance and wheelchair and also educational and psychological support. In addition this rehabilitation center helping people to help themselves through income generation initiatives. In 2015, around 6500 clients got one or more service from Menagesha rehabilitation center. The study was conducted from April - May, 2016.

The reason for selection of the above two physical rehabilitation centers are ; at the time of this study both centers actively engaged in provision of prosthesis and orthotic service for lower prosthesis limb users and other people with physical impairments and according to the information I got from these rehabilitation centers there was no previous research conducted in which focused on satisfaction of lower prosthesis limb users.

3.4 Target Population

3.4.1 Study Population: The study populations were all adult with lower limb amputation and use lower prosthesis device and come to POC and Menagesha Rehabilitation Center for any service.

3.4.2 Study participants: Those sampled lower prosthesis limb users who visited POC or Menagesha Rehabilitation Center during the data collection period.

3.5 Inclusion and Exclusion Criteria

- Inclusion Criteria

All adult prosthesis users available in the selected rehabilitation centers during the study period and willing to participate in the study.

- Exclusion Criteria

Lower Prosthesis Limb Users unable to communicate and critically ill at the time of data collection.

3.6 Sampling and Sample size

3.6.1 Quantitative Study

The sampling procedures for this study, participants are lower limb amputee, from both sex, at the age of 18 or older and also received prosthesis limb and different service from the physical rehabilitation centers. The needed sample size for quantitative study was calculated using single population proportion formula.

The formula for calculating the sample size was:

Where $$n = \frac{Z^{2}_{1-\alpha/2}\, p(1-p)}{d^{2}}$$

n …….. the desired sample size

p ……93 % proportion of people with lower prosthesis limb satisfaction.(W.H.Van Brakel, 2010)

Z ∝/2 …… Critical value at 95% CI (1.96)

d……the margin of error b/n the sample and the proportion= 4%

The sample size was calculated using single population proportion formula as stated above. As a result, a total of 173 lower prosthesis limb users were included based on the assumption of 95% confidence interval, margin of error 4%, 93 % proportion of people with lower Prosthesis limb users' satisfaction in Addis Ababa. Based on the result from the calculation, prosthesis limb users were proportionally allocated to each of the selected rehabilitation center by looking the last three months report of the centers before the study period. So that, ninety four (54.3%) from POC and seventy nine (45.7%) from Menagesha Rehabilitation Center by using convenient sampling method because users come to these rehabilitation centers randomly.

3.6.2 Qualitative Study

The sample size in a qualitative case study research will be about ten cases Creswel (2014, P. 180). The researcher stop collecting data when the categories (or themes) are saturated: when gathering fresh data no longer sparks new insights or reveals new properties Charmaz as cited in Creswel (2014). The study included eight lower prosthesis limb users and from both sex and aged from 18 and older.

To select those eight participants for this study purposive sampling technique was utilized. The reason why the researcher chooses purposive sampling is that, for the sake of meeting directly lower prosthesis limb users and to investigate their satisfaction (Creswel, 2014, P.180).

3.7 Data Collection Instrument

In this study both primary and secondary data sources were utilized. Primary data was gathered by using structured questionnaires and in-depth interview .These was done with the aim of ensuring the validity and trustworthiness of the study by gathering data from multiple sources.

The sources of secondary data were journals, books, published and unpublished reports in relation to the topic under study. The two basic data collection instruments were structured questionnaire and in-depth interview guide.

3.7.1 Structured questionnaires

Structured questionnaires were adapted from Quebec User Evaluation of Satisfaction with As-sistive Technology; QUEST 2.0 (Demers R et.al, 2000) and some modification were made in line with the objectives of this study. The modification including avoiding question related to other assistive device.

QUEST comprises 16 items in total. Ten relate to user satisfaction with their prosthesis devices (dimensions; weight; ease of adjustment; safety; durability; simplicity of use; comfort; effectiveness), while six relate to service delivery (service delivery programme; repairs and servicing; quality of professional services; follow-up services) (Demers R et.al, 2000). QUEST uses a five level response scale: 1) Not satisfied at all; 2) Not very satisfied; 3) More or less satisfied; 4) Quite satisfied; and 5) Very satisfied (Demers R et.al, 2000). QUEST is a standardized form which identifies the sources of user satisfaction and dissatisfaction in relation to assistive technology and service (Demers R et.al, 2000). The instrument is widely used with wheelchair users, with the objective of following-up on users' satisfaction (Chan &Chan , 2007; Samuelsson & Wressle , 2008). QUEST has been demonstrated as a valid and reliable assessment tool (Demers et.al, 2000, Wessels , De Witte , 2003).

Specific questions related to prosthetic rehabilitation services was adapted from a literature review of relevant questionnaires, checklists, and clinical experience(Gallagher &, Maclachlan ,2004). Questions about how often prosthesis devices caused pain and prosthesis years of use included. Additional questions was also asked about satisfaction with the

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prosthesis device and service, with particular reference: 1) The training received by the user to facilitate their usage of their prosthesis device. 2) The level of coordination of prosthetic and orthotic services with other rehabilitation professionals; 3) How easy it is to keep the prosthesis device clean; Finally questions about; 4) The user's ability to pay for costs associated with receiving the prosthesis device and service.

The questionnaire was prepared in English and translated into Amharic and pre-tested prior to the actual data collection on 17 respondents in one of the physical rehabilitation centers, in similar population group and modified (because the adapted QUEST questionnaire was not only focus on prosthesis device but it also include other assistive device) before actual data collection is commenced and cronbach's alpha 0.833 was found, so the investigator found the data collection tool valid and reliable. The structured questionnaires were administered and collected by two data collectors who were health professionals with experiences in data collection. One day training was given for data collectors on how to collect the data and other related procedures and continuous follow up and supervision was made by the investigator throughout the data collection period.

3.7.2 Interview

The researcher had conducted face to face semi-structured interviews with participants. The interview guide was prepared by the researcher based on the general research questions and the specific objectives. In-depth interviews were undertaken with eight lower prosthesis limb users of physical rehabilitation centers .It was conducted until saturation and last for an average time 30-45 minutes and was recorded in tape recorder. The recorded responses was transcribed to written notes in Amharic and then translated into English for analysis.

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3.8 Study Variables

Dependent variable: Satisfaction of lower prosthesis limb users

Independent variable:

- Socio-demographic factors (Age, Sex, Religion, Ethnicity, Educational status, marital status, Employment status and income)
- The prosthesis device related factors (Prosthesis types , current condition of device, Daily use in hour, Number of years in using the device, Number of devices used , difference between Prosthetic devices or non-amputated limb, pain while using the device ,support from family and friends and relationship of using prosthesis device and being functional.
- Physical rehabilitation service related factors (Follow-up, Device cost affordability, Prosthesis device repair service and training for using the device and coordination of rehabilitation staffs.

3.9 Methods of Data Analysis

In analyzing the data collected through the above different data collection instruments, there were categorized into major idea for their basic research questions.

3.9.1 Quantitative Data Analysis

Quantitative data checking, cleaning and coding was done by the researcher before entry into the computer statistical program SPSS

Data was entered; cleaned and analyzed using SPSS version 20. Univariate analysis was conducted using frequency, percentage and presented in the form of texts and tables. Logistic

regression analysis was used to identify factors associated with the satisfaction of prosthesis user due to lower limb amputation. Binary analysis was used to determine the association between different factors and the outcome variable. Multiple logistic regression analysis was used to control for possible confounding variables. Those variables which show significant association on bivariate analysis (P-value < 0.05) were adjusted to each other to identify independently associated variables. P-value and 95% confidence interval (CI) for adjusted odd ratio (AOR) was used in judging the significance of the associations. P-value less than 0.05 were taken as a cut off point to declare significant association.

3.9.2 Qualitative data analysis

The data analysis for qualitative research generally categorized in to data collection, organizing data in some meaningful form, understanding and analyzing data, interpreting and presenting (Creswell, 2003, p.190). More specifically, there are three approaches that I followed for the data analysis for this study.

Firstly, data was collected from eight participants through in depth interview, arranged and organize into files, folders and other forms. This involves "transcribing interviews, typing up field notes, or sorting and arranging the data into different types depending on the sources of information" (Creswell, 2003). The recorded data through in depth interview was transcribed. Secondly, the investigator was made sense out of in-depth interview data collected, about the satisfaction of lower prosthesis limb user, by reading and re-reading the entire data (Creswell, 2007).

The final step was presenting information about the overall satisfaction of lower prosthesis limb users which related to their prosthesis device and service and it was found through data analysis process, in to readable and understandable form (Creswell, 2007).

3.10 Data Quality assurance

Data quality was assured using different techniques:

- Questionnaires and Semi structured interview guides was prepared properly. Pilot test was carried out for the structured questionnaire with some clients of physical rehabilitation centers. These were done to ensure the feasibility and clarity of some of the tools designed for the interviewees.
- According to Creswell (2009, p.190) validity of qualitative research is met by using certain procedures such as checking the accuracy of the findings. He recommends the use of multiple strategies should enhance the researcher's ability to assess the accuracy of the findings and to convince the readers. The qualitative finding was supported by quantitative.
- Problems encountered at the time of data collection were reported immediately and appropriate action was taken. For example, if participant emotional disturbed at the time of data collection, the data collectors immediately stop the procedure and give them rest.
- The questionnaires items were checked for missing values and inconsistency.
- The in depth interview with eight participants was conducted by the researcher for smooth communication and to understand the issue in detail.

3.11 Ethical Consideration

As disability is one of the sensitive issues, PWDs need to be carefully considered in any research. In this regard, official ethical clearance was secured from the School of Social Work and was submitted to the Physical rehabilitation centres. On the other hand, the researcher first introduced the purpose, scope and expected outcomes of the study to the centers managers. Then, the privacy and confidentiality of lower prosthesis limb users were addressed before the interview. In addition, appropriate informed written and verbal consents were taken from the respondents. Anyone who was not willing to participate was excluded from the study; and during the interview, respondents who was interested to avoid specific questions or discontinue the interview was allowed to do so. Beside, confidentiality (not exposing their personal issues to others or secrecy) of the participants was maintained during and after the interview and participant register by code on the questionnaires sheet to ensure anonymity.

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CHAPTER FOUR

4. Finding and Discussion

4.1 Finding

General Information

A total of 173 participants were involved in this study, ninety four (54.3%) were from Prosthetic and Orthotic Center while seventy nine (45.7%) were from Menagesha Rehabilitation Center.

4.1.1 Socio-demographic characteristics of respondents

Among the participant 145 (83.8%) were male and the mean age of the participant was 45.4 (SD=13.6) with 63 (36.4%) of the participants were in the age group of 46-60 years. The majority of the respondent 100 (57.8%) were married, 126 (72.8%) were orthodox Christian in religion and Amhara and Oromo accounts 40.5%, 34.7% respectively. Significant number of the participants 72 (41.6%) had primary school (1-8) education, whereas 61 (35.3%) of the participants were civil servant. On the other hand, 48(27.7%) of them earn <=605 ETB a month, with their mean monthly earning being 1839.7 Ethiopian Birr (SD±1765.8) (Table 1).

Table 1: Socio-demographic Characteristics of lower prosthetic limb users in POC and Menagesha Rehabilitation Center.

Characteristic		Frequency	Percent
Sex	Male	145	83.8
	Female	28	16.2
	Total	173	100.0
Age	<= 30	25	14.5
	31- 45	58	33.5
	46 – 60	63	36.4
	60+	27	15.6
	Total	173	100.0
Marital status	Married	100	57.8
	Single	54	31.2
	Divorced	19	11.0
	Total	173	100.0
Religion	Orthodox	126	72.8
	Muslim	23	13.3
	Protestant	24	13.9
	Total	173	100.0
Ethnicity	Amhara	70	40.5
	Tigre	23	13.3
	Oromo	60	34.7
	Other*	20	11.6
	Total	173	100.0
Educational status	Illiterate	18	10.4
	Read and write	10	5.8
	Primary education (1-8)	72	41.6
	Secondary education (9-12)	45	26.0
	Diploma and above	28	16.2
	Total	173	100.0
Employment status	House wife	2	1.2
	None-employee	34	19.7
	Civil servant	61	35.3
	Private employee/Merchant	52	30.1
	Farmer	9	5.2
	Other (Student)	15	8.7
	Total	173	100.0
Monthly income	<= 605.00	48	27.7

	605 – 1500	48	27.7
	1500 – 2500	31	17.9
	2500-3500	24	13.9
	3500+	22	12.7
	Total	173	100.0
Service provider institution	POC	94	54.3
	Menagesha	79	45.7
	Total	173	100.0

*Includes Welayita, Gurage, Hadiya, Gedo and Sidama

4.1.2 Cause of disability, type, condition and use of prosthesis device

Table II presents the underlying cause of disability and the type of prosthesis device used. The most common causes of disability were violence (gunshot, heavy weapon) followed by traffic accidents, other accident due to falling down and fracture, 38.2%, 33.5% and 17.9%, respectively. Hundred percent of the assistive devices were lower limb prostheses and among the respondent 78% of the participants use Transtibial or below knee prosthesis device.

The study participants used their prosthetic devices for median of 12, range 5–16 hour per day. However, approximately two third of the prosthetics devices, that were in use need repairs, according to, the study participants opinion. According to the result, One fourth of (25%) the clients use elbow crutches and the most common situation was that they use crutches together a with a prosthetic devices. Patients using below knee prosthetic devices walked without walking aid or orthotics device more often than patients with above knee prosthetic devices (85% vs 15%, $p = 0.042$). Only 6.9% of patients had a wheelchair. Thirty nine percent of the respondent used their prosthesis device for more than ten years. In addition, the one third of prosthesis device user it is second prosthesis device in their life time.

Based on respondent opinion technical problem like, a height difference between the none amputated leg or the other side lower limb prosthesis accounts 41%. Twenty four percent

reported that they experienced pain while walking when using the prosthesis device and majority of the participant 54.3% reported that they never experienced pain while using their device.

Despite the pain experience and difference in the height of their prosthesis device, most of the study participants (83%) reported that the device has positive impact for being functional in the society as showed in the table II below.

Table 2. Cause of disability, type and condition of prosthesis device of lower limb prosthetic users in POC and Menagesha Rehabilitation center (n = 173)

		Frequencey	Percent
cause of amputation	Violence	66	38.2
	Road traffic accident	58	33.5
	Other accidents and fractures	31	17.9
	Dibeties, non-healing wound	18	10.4
	Total	173	100.0
Type of prosthesis device used	Trans tibial	135	78.0
	Trans femoral	38	22.0
	Total	173	100.0
prosthesis device use in hours per day	5-8 hours	17	9.8
	9-12 hours	107	61.8
	13-16 hours	49	28.3
	Total	173	100.0
prosthesis device current condition	Broken cannot used	19	11.0
	In use but needs repair	122	70.5
	In use and in good condition	32	18.5
	Total	173	100.0
use of walking aids in addition to prosthesis device	None	74	42.8
	Canes	43	24.9
	Elbow crutches	44	25.4

	Wheelchair	12	6.9
	Total	173	100.0
prosthesis device use in year	Less than 1 year	26	15.0
	1-5 year	24	13.9
	5-10 years	55	31.8
	Greater than 10 years	68	39.3
	Total	173	100.0
Number of prosthesis device used since amputation	<= 1	43	24.9
	2	59	34.1
	3	40	23.1
	3+	31	17.9
	Total	173	100.0
difference between Prosthetic devices or non-amputated limb	No	101	58.4
	Yes	72	41.6
	Total	173	100.0
pain due to the prosthesis device	None	94	54.3
	At rest	21	12.1
	While walking	42	24.3
	Both at rest and while walking	16	9.2
	Total	173	100.0
positive relationship of using prosthesis device and being functional in the society	Yes	144	83.2
	No	20	11.6
	Idon't know	9	5.2
	Total	173	100.0

4.1.3 Satisfaction level of LPLU with their prosthesis device and related service

Since the cumulative score for overall satisfaction of prosthesis user towards their prosthesis device and related service was skewed, the median of the cumulative score for overall satisfaction of patients towards prosthesis device and related service has been taken as a demarcation threshold to classify as satisfied and dissatisfied. The ratings of the participants on all 16 items divided into the two domains. According to the median demarcation threshold, most participants indicated that they were satisfied with their devices and service. The percentages of participants who indicated 'satisfied' (4 on the scale of 1 to 5) or 'very satisfied' (5 on the scale

of 1 to 5) were combined to determine a percentage of individuals who are satisfied. There were 76.6% (mean 3.6, SD 0.8), 66.6% (mean 3.5, SD 0.79) and 70.5% (mean 3.7, SD 0.69) of participants satisfied with their device, service, and total respectively. Only a few participants were not satisfied at all with device (1.6%), service (6.5%), and total (4.1%).

Among the sixteen indicators, when median has been used as a demarcation threshold for each indicator, prosthesis users were relatively highly satisfied with shape of the prosthesis device (87.9%), dimension of the prosthesis device (85.5%), training for using his/her prosthesis device by the service delivering institution (83.8%), prosthesis device meets his/ her need (77.5%) and prosthesis device well fit with his/her limb/limbs (75.1%). However, many prosthesis users were found to be dissatisfied with affordability of the prosthesis device (60.1%), Positive change in your life due to the prosthesis service (45.7%), Durability and support of family and friends while using his/her prosthesis device service (29.5%), as showed in table 3 below.

Table 3: Satisfaction level of LPLU towards their prosthesis device and related service in POC and Menagesha Rehabilitation Center.

	1*	2*	3*	4*	5*	Satisfaction ¥
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Device satisfaction mean score	2.7(1.6)	26.2(15.1)	11.5(6.6)	107.9(62.4)	24.7(14.3)	133(76.6)
Shape	4(2.3)	7(4.0)	10(5.8)	131(75.7)	21(12.1)	152(87.9)
Dimensions	1(0.6)	21(12.1)	3(1.7)	127(73.4)	21(12.1)	148(85.5)
Prosthesis device easy to use	1(0.6)	32(18.5)	12(6.9)	107(61.8)	21(12.1)	128(74.0)
Weight	2(1.2)	37(21.4)	5(2.9)	112(64.7)	17(9.8)	129(74.6)
Easy adjusting his/her prosthesis device parts	1(0.6)	35(20.2)	9(5.2)	106(61.3)	22(12.7)	128(74.0)
Comfortable	3(1.7)	19(11.0)	22(12.7)	101(58.4)	28(16.2)	129(74.6)
Durability	4(2.3)	30(17.3)	18(10.4)	89(51.4)	32(18.5)	121(69.9)
Pain free	4(2.3)	35(20.2)	7(4.0)	98(56.6)	29(16.8)	127(73.4)
Prosthesis device well fit with his/her limb/limbs	2(1.2)	29(16.8)	12(6.9)	116(67.1)	14(8.1)	130(75.1)
Prosthesis device meets his/ her need	5(2.9)	17(9.8)	17(9.8)	92(53.2)	42(24.3)	134(77.5)
Service satisfaction mean score	11.3(6.5)	22.8(13.2)	23.7(13.7)	94.8(54.8)	20.5(11.8)	115(66.5)
Repairs and servicing his/her prosthesis device by the service delivering institution	6(3.5)	22(12.7)	12(6.9)	105(60.7)	28(16.2)	133(76.9)
Training for using his/her prosthesis device by the service delivering institution	5(2.9)	17(9.8)	6(3.5)	114(65.9)	31(17.9)	145(83.8)
Coordination of prosthetic service with other rehabilitation service	4(2.3)	19(11.0)	21(12.1)	101(58.4)	28(16.2)	129(74.6)
Affordability	20(11.6)	38(22.0)	46(26.0)	65(37.6)	4(2.3)	69(39.9)
Positive change in your life due to the prosthesis service	12(6.9)	22(12.7)	46(26.6)	82(47.4)	12(6.9)	94(54.3)
support of family and friends while using his/her prosthesis device	21(12.1)	19(11.0)	11(6.4)	102(59.0)	20(11.60	122(70.5)
Total satisfaction mean score ¥¥	7.0(4.1)	24.5(14.2)	17.6(10.2)	101.4(58.6)	22.6(13.1)	124(71.7)

Note. n: number of participants, Satisfaction scores range from 1 to 5 with 1 'very unsatisfied at all', 2 'unsatisfied', 3 'neutral, 4 ' satisfied' and 5 'very satisfied'

¥=Classified by using a median score of that specific indicator as a demarcation threshold

¥¥= classified by using overall summary median score as a demarcation threshold.

Table 3: Satisfaction level of LPLU towards their prosthesis device and related service in POC and Menagesha Rehabilitation Center.

	1*	2*	3*	4*	5*	Satisfaction ¥
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Device satisfaction mean score	2.7(1.6)	26.2(15.1)	11.5(6.6)	107.9(62.4)	24.7(14.3)	133(76.6)
Shape	4(2.3)	7(4.0)	10(5.8)	131(75.7)	21(12.1)	152(87.9)
Dimensions	1(0.6)	21(12.1)	3(1.7)	127(73.4)	21(12.1)	148(85.5)
Prosthesis device easy to use	1(0.6)	32(18.5)	12(6.9)	107(61.8)	21(12.1)	128(74.0)
Weight	2(1.2)	37(21.4)	5(2.9)	112(64.7)	17(9.8)	129(74.6)
Easy adjusting his/her prosthesis device parts	1(0.6)	35(20.2)	9(5.2)	106(61.3)	22(12.7)	128(74.0)
Comfortable	3(1.7)	19(11.0)	22(12.7)	101(58.4)	28(16.2)	129(74.6)
Durability	4(2.3)	30(17.3)	18(10.4)	89(51.4)	32(18.5)	121(69.9)
Pain free	4(2.3)	35(20.2)	7(4.0)	98(56.6)	29(16.8)	127(73.4)
Prosthesis device well fit with his/her limb/limbs	2(1.2)	29(16.8)	12(6.9)	116(67.1)	14(8.1)	130(75.1)
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Repairs and servicing his/her prosthesis device by the service delivering institution	6(3.5)	22(12.7)	12(6.9)	105(60.7)	28(16.2)	133(76.9)
Training for using his/her prosthesis device by the service delivering institution	5(2.9)	17(9.8)	6(3.5)	114(65.9)	31(17.9)	145(83.8)
Coordination of prosthetic service with other rehabilitation service	4(2.3)	19(11.0)	21(12.1)	101(58.4)	28(16.2)	129(74.6)
Affordability	20(11.6)	38(22.0)	46(26.0)	65(37.6)	4(2.3)	69(39.9)
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support of family and friends while using his/her prosthesis device	21(12.1)	19(11.0)	11(6.4)	102(59.0)	20(11.60	122(70.5)
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¥=Classified by using a median score of that specific indicator as a demarcation threshold

¥¥= classified by using overall summary median score as a demarcation threshold.

4.1.4 Factors affecting satisfaction the level of LPLU towards their prosthesis device and related service

In binary logistic regression analysis, overall prosthesis user satisfaction towards their lower limb prosthesis device and related services showed statistically significant association with marital status of the prosthesis user, monthly income in Ethiopian Birr, years of prosthesis device in use, users prosthesis device type, difference between Prosthetic devices or between prosthetic device and non-amputated limb and pain in using the prosthesis device (p-value < 0.05) (Table 4). However, This data did not show statistically significant association between overall satisfaction of prosthesis device user and age group, sex, educational status, employment status, cause of amputation, prosthesis device use in hours per day, prosthesis device current condition, use of walking aids in addition to prosthesis device, Number of prosthesis device used since amputation and positive relationship of using prosthesis device and being functional in the society with (p-value >0.05) (Table 4).

When adjusted odds ratios were calculated among the above listed significantly associated variables, statistically significant associations were found between overall satisfaction of prosthesis device user with marital status of the prosthesis user, monthly income in Ethiopian Birr, years of prosthesis device in use, users prosthesis device type, difference between Prosthetic devices or between prosthetic device and non-amputated limb and pain in using the prosthesis device (p-value < 0.05) with goodness of model fit (Hosmer and lemshow test=0.6) (Table 5).

As indicated in Table-4, Married lower prosthesis limb user are eighteen times more likely to be satisfied with their prosthesis device and related service than users who are divorced (AOR= 8.36; CI 1.84-37.98, P- value 0.007). Similarly, it was found that

respondents earn more than 3500 Ethiopian birr monthly were about twelve times more likely to be satisfied than those who did get less than or equal to 605 Ethiopian Birr (AOR= 12.87; CI 1.78-92.9). In this study, it was also found that respondents who used prosthesis device for more than ten years are five times more likely to be satisfied in their prosthesis device than those who used for less than one year (AOR=5.57; CI 1.23-25.22: P- value .001).

In addition, study participant who used transtibial (below knee) prosthesis device three times more likely to be satisfied trans femoral (above- knee) prosthesis device users (AOR=3.30; CI 1.16-9.38: P-value 0.004). Moreover, prosthesis users who did not face problem related to difference between prosthetic devices and non-amputated limb were three times more likely to be satisfied than those users faced problem related to difference between prosthetic devices and non-amputated (AOR=3.30; CI 1.16-9.38; P-value 0.024). Finally among prosthesis device user respondents didn't experience pain related to the device seven times more likely satisfied than those who experienced in having pain during both walking and rest due to the prosthesis device (AOR=6.99; CI 1.46-33.39; P-value 0.015).

Table 4: Factors affecting Satisfaction of lower prosthesis limb users towards their prosthesis device and related service in POC and Menagesha Rehabilitation centers.

	General prosthesis user satisfaction level			95% C.I.for Crud odd ratio				95% C.I.for Adjusted odd ratio		
	Not satisfied	Satisfied	Crud odd ratio	Lower	Upper	p-value	Adjusted odd ratio	Lower	Upper	p-value
Marital status										
Married	23	75	**3.986**	**1.470**	**10.803**	**.006***	**8.362**	**1.841**	**37.984**	**.007***
Single	15	40	**3.259**	**1.127**	**9.428**	**.017***	**6.847**	**1.414**	**33.152**	**.029***
Divorced	11	9	1				1			
Monthly income in birr										
3500+	2	20	**10.000**	**2.102**	**47.578**	**.011***	**12.879**	**1.784**	**92.977**	**.004****
2500-3500	5	19	**3.800**	**1.220**	**11.835**	**.013***	**9.191**	**1.608**	**52.526**	**.021^**
1500 - 2500	5	26	**5.200**	**1.711**	**15.808**	**.031***	**5.695**	**1.176**	**27.575**	**.004****
605 - 1500	13	35	2.692	1.149	6.310	.211	2.105	**.655**	**6.763**	**.023***
<= 605.00	24	24	1				1			
Prosthesis device use in year										
Greater than 10 years	9	59	**5.619**	**1.981**	**15.935**	**.026***	**5.574**	**1.232**	**25.222**	**.001****
5-10 years	17	38	1.916	.734	5.004	.426	1.846	.407	8.371	.184
1-5 year	11	13	1.013	.333	3.084	.626	.667	.132	3.387	.982
Less than 1 year	12	14	1				1			
Type of prosthesis device used										
Trans tibial	31	104	**3.019**	**1.423**	**6.408**	**.024***	**3.309**	**1.166**	**9.385**	**.004***
Trans femoral	18	20	1				1			
Difference between Prosthetic devices &/or non-amputated limb										
No	15	86	**5.130**	**2.503**	**10.513**	**.000****	**3.309**	**1.166**	**9.385**	**.024***
Yes	34	38	1				1			
Pain due to the prosthesis device										
None	11	83	**16.600**	**4.852**	**56.795**	**.000****	**6.993**	**1.464**	**33.396**	**.015***
At rest	8	13	3.575	.903	14.153	.070	.986	.163	5.956	.988
While walking	19	23	2.663	.787	9.014	.115	.552	.112	2.714	.464
Both at rest and while walking	11	5	1				1			

* Statistically significant P<0.05. ** Statistically high significant P<0.005. Reference categories are indicated by 1

4.2 Discussion of Quantitative Research

A literature search had revealed low incidence of publications relating to patient satisfaction in terms of prosthetic medical devices. Publications in this area tended to focus on assessment of tools with regards to varying the methodology, translating or adapting it for other languages and nationally validating the process. Those that evaluated patient satisfaction with prosthesis device, related to demographics that were contrary to the information held on the patient files of this study. For example, one study rated similar prosthesis device factors of weight, fit, durability, pain free, free of abrasiveness, ease of application, comfort, and appearance, but the patients were veterans of the Vietnam War (Berke et al., 2010).

This study has revealed that the overall Satisfaction of lower prosthesis limb users towards their prosthesis device and related service was 71.7 % and this is lower than reports from other studies conducted in Vietnam (93%) (Brakel, 2010). More over the finding is lower than the study conducted in Malawi with mean score for Device and service 3.9 and 4.4, respectively (Magnusson et,al, 2014). The possible reason for these difference might be those studies t use different method of calculating the demarcation threshold and use of different number of indicators to generate the summary score of overall participant satisfaction. Whereas, study conducted in Vietnam the overall satisfaction of the respondents with prosthesis device was calculated from single question's response. However, my finding was comparable with finding in Taiwan and America with the overall satisfaction of 68.9% and 75.5%, respectively (Chen , et al, 2014, Pezzin, 2004). In addition the finding in prosthesis device satisfaction was comparable with the study conducted in Sierra Leone with mean score of 3.7 and study conducted in America veterans overall satisfaction (mean ± SD = 3.7 ± 0.9) (Magnusson et.al, 2014, Diane .2009)

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According to my finding, the two most common cause of lower limb amputate was violence (gunshot) and road traffic accident, which were roughly equal, although violence was more common for prosthetic patients. Studies from Vietnam, Cambodia, and El Salvador show that 79% or more of patients became impaired due to trauma. In addition In Malawi and in Sierra Leone, the two causes of impairment were trauma and disease (Magnusson et al, 2014, Matsen , 1999, Brakel , 2010, Jensen ,2005/6, Eide ,2013). These studies primarily included below-knee prosthetic users (Matsen , 1999, Jensen , 2005). I made result comparison of those studies with result of this study. Even so, there is some caution, to be considered as my study includes above knee prosthesis users. But, the studies in Malawi and Sierra Leone also included above-knee prosthetic and orthotic users, it could be comparable (Magnusson et,al, 2014). The average age of study participants in this study 31-45 years old was quite similar to the studies conducted in Malawi and Sierra Leone, Vietnam, Cambodia and El Salvador, where age varied between 35 and 51 years (Magnusson, 2014& Jensen, 2006). When investigating utilization of prosthetic devices, the majority of lower prosthesis limb users used the device 9 -12 hours per day and consistent with previous studies from Malawi and Sierra Leone, Vietnam, Cambodia, and El Salvador, where 8-15 hours of wear time per day was reported. Magnusson et al (2014), Matsen(1999), Brakel (2010) , Jensen(2005)&(2005).

In this study only one fourth of the participants prefer to use elbow crutch.However, 10% of patients in Malawi and 41% in Sierra Leone preferred to use crutches at least at certain times. This difference might be due to that the devices used in Sierra leone were not designed for high activity levels than our setting. Malawi study but found low use of walking aid like crutch, the difference might be due to the geographical difference between my study setting and Malawi (Magnusson et al, 2014).

Almost half of the study participants fill pain due to using of their prosthesis device while walking, at rest and both walking and rest. In Malawi and Sierra Leone one third users always or often experienced pain related to usage of their prosthesis (Magnusson et al, 2014). In Vietnam, studies reported that between 2 and 10% of amputees experienced pain when using their ICRC polypropylene prosthesis (Brakel , 2010 &Jense, 2005). A third study from Vietnam also indicated a similarly low incidence of pain for amputees (Matsen , 1999). Three percent of patients in Cambodian study and 28% in El Salvador, reported pain while using their prosthesis (Jensen ,2006). A larger percentage of prosthetic users in this specific study setting had pain while using their device compared to the prosthetic users in the above listed countries, even though the same ICRC technology was used. The reasons for this may be that, in my study more than 81% prosthesis device need repaired or replaced. But, in Malawi and Sierra Leone, about half of the assistive devices needed repairs or replacing entirely. However, the study in the Vietnamese one quarter of the patients' devices required repair work and 7% needed a new device (Magnusson et al, 2014, Brakel, 2010). A contributing factor to differences in the results might also be that the Vietnamese patients participated in the study roughly two months after receiving their prostheses (Brakel , 2010), while in my study the time since receiving service was longer And my finding might be biased due to the fact that most client come in the rehabilitation center for servicing or repairing their prosthesis device.

The item with the lowest satisfaction scores for prosthesis devices was affordability, which confirms that most of the prosthesis device need repair or replacement. Moreover, pain related to the prosthesis device was a major problem. The item with the third lowest satisfaction scores was Durability, which is why; most of the participants come in the rehabilitation center for repairing and servicing.

Almost half of the study participants fill pain due to using of their prosthesis device while walking, at rest and both walking and rest. In Malawi and Sierra Leone one third users always or often experienced pain related to usage of their prosthesis (Magnusson et al, 2014). In Vietnam, studies reported that between 2 and 10% of amputees experienced pain when using their ICRC polypropylene prosthesis (Brakel , 2010 &Jense, 2005). A third study from Vietnam also indicated a similarly low incidence of pain for amputees (Matsen , 1999). Three percent of patients in Cambodian study and 28% in El Salvador, reported pain while using their prosthesis (Jensen ,2006). A larger percentage of prosthetic users in this specific study setting had pain while using their device compared to the prosthetic users in the above listed countries, even though the same ICRC technology was used. The reasons for this may be that, in my study more than 81% prosthesis device need repaired or replaced. But, in Malawi and Sierra Leone, about half of the assistive devices needed repairs or replacing entirely. However, the study in the Vietnamese one quarter of the patients' devices required repair work and 7% needed a new device (Magnusson et al, 2014, Brakel, 2010). A contributing factor to differences in the results might also be that the Vietnamese patients participated in the study roughly two months after receiving their prostheses (Brakel , 2010), while in my study the time since receiving service was longer And my finding might be biased due to the fact that most client come in the rehabilitation center for servicing or repairing their prosthesis device.

The item with the lowest satisfaction scores for prosthesis devices was affordability, which confirms that most of the prosthesis device need repair or replacement. Moreover, pain related to the prosthesis device was a major problem. The item with the third lowest satisfaction scores was Durability, which is why; most of the participants come in the rehabilitation center for repairing and servicing.

As table 4 shows percentage distributions of respondents 'satisfaction with 10 different aspects of their prosthetic device; shape, dimension, socket fit, comfort, durability, weight, pain free and ease of use, easy for adjusting and meet the need of respondent. Comparable levels of satisfactions were observed in the study conducted America with the prosthesis socket fit (75.5%) and weight (77.1%) (Malovecka, Minarikova & Foltan, 2015) and higher in study conducted Slovak Republic with the weight (63.2%), fit (53.4%) (Ivon , 2015) and lower result observed in the level of satisfaction related to ease of use of the prosthesis, with 86.4% with same study (Ivon ,2015). More -over, the finding of the study indicated higher levels of satisfaction related to prosthesis comfort observed that of the American study and Slovak Republic , with nearly one third of all (lower-limb) amputees expressing dissatisfaction with the comfort while standing or sitting in American study and 22% in Slovak Republic (Liliana , 2004 & Ivon ,2015).

According to the results of this study no significant gender, age, and educational level differences in satisfaction scores. The results were consistent with the findings of Geertzen's and Taiwan study in which it was demonstrated that consumer satisfaction with prosthetic and orthotic facilities did not differ by age and gender (Chen, 2014& Geertzen). Inconsistent results in the literature indicated that socio demographic characteristics were only minor predictors of satisfaction (Keith, 1998)

Generally, regression analysis of this indicated that satisfaction of prosthesis devices was significantly influenced by marital status, type of prosthesis, number of years that prosthesis device in used, Difference between Prosthetic devices or and non-amputated limb and

pain when using the prosthesis. Comparable finding was showed in study conducted in America co responding to pain (Liliana , 2004).

4.3 Finding and Discussions for Qualitative Study

The qualitative finding also supports the above findings in quantitative study; In this study eight lower prosthesis limb users were participated. The participants are within the 23- 67 age range of both sex. Five of the participants are married and two of them are single and the remaining one is divorced. Most participants indicated that they were satisfied with their devices and service.

Table 5.Background information about prosthesis users .

	Name of users	Sex	Age	Cause of Amputation	Types of Prosthesis
1	Temsgen	M	39	Road traffic accidents	Transtibial
2	Tsige	F	64	Road traffic accidents	Transtibial
3	Hana	F	23	Non- healing wounds and fractures	
4	Yhune	M	52	Violence	Transfemoral
5	Marta	F	28	Road traffic accidents	Transtibial
6	Teferi	M	34	Non- healing wounds and fractures	Transtibial
7	Alemu	F	23	Violence	Transfemoral
8	Mohammed	M	67	Violence	Transtibial

CHAPTER FIVE

This is the final chapter of the study which contains conclusion, recommendation and social work implication as well.

5. Conclusions, Recommendations and Social work Implication

5.1 Conclusions

The present study showed that the current status of the overall satisfaction of respondents towards lower limb prosthesis device in the POC and Menagesha Rehabilitation Center was satisfactory. From the finding that, of 173 respondents only 71.7 % of patient was satisfied with lower limb prosthesis device and related services in spite of the fact that more than eighty percent of the prosthesis devices were in need of repair.

Patients using above-knee prosthesis devices were less satisfied with the device and service received than patients with below-knee prosthesis devices. Also married respondents were more satisfied in the overall prosthesis device and related service than divorced.

The variables associated with higher satisfaction with assistive devices were marital status, type of prosthesis, number of years that prosthesis device in used, Difference between Prosthetic devices and non-amputated limb (if there is no difference prosthesis users are satisfied on the contrary if their prosthesis device and non-amputated limb has difference their satisfaction reduced) and pain when using the prosthesis device.

The CRPD promotes the rights to access, to personal mobility, and to rehabilitation services, including prosthetic and orthotic services for persons with disabilities. In summary, this thesis demonstrated that there was still a need for significant progress in the promotion of equal rights and the implementation of rehabilitation services to persons with disabilities

according to the CRPD, in order for persons with disabilities people to have increased opportunities to take part in society.

5.2 Recommendations

- According to the finding of this study ,most of the prosthesis devices need repair and also most respondents complain pain which leads to dissatisfaction .So that, to increase patients' satisfaction, attention needs to be directed towards accessing follow-up and repairs services and addressing the general condition of prosthesis devices.
- Similarly, it was revealed that the comfort and affordability of the prosthesis device were characteristics that provided lower patient satisfaction. These issues require improvement in terms of the quality service provision by rehabilitation centers. Addressing those issues will improve the satisfaction of lower prosthesis limb users and it will has good contribution for progress life.
- Periodic prosthesis user satisfaction survey should be institutionalized to provide feedback for continuous quality improvement

5.3 Social work Implication

Social work is an empowering profession that facilitates positive change for individuals, groups, family, and communities; it is true that social workers are devoted to the underlying principles as social change, social justice, and equality of opportunity for the vulnerable, disadvantaged, and marginalized segments of the society NASSW (2005).

The study has great implication for the social work practice, in the area of policy, awareness creation and for further research. The study also has implication for all appropriate

stakeholders to improve the quality of prosthesis device and affordability of the physical rehabilitation centers service for people with limb amputation and also other physical disabled people .

Research Implications

There are many studies concerning the issue of people with disabilities the health sector on but all focus on the causes of disability and how to prevent. Only few focus on the psychological as well as wellbeing of PWD. This study has explored satisfaction of lower prosthesis limb users. However the sample size was small and it has included only lower limb amputee clients. Therefore a wide-ranging study that includes all lower prosthesis limb users and also upper prosthesis limb users would help to better understand satisfaction of lower prosthesis limb users socio-emotional support need of the sector. In addition study that includes prosthesis limb users' family and other professionals working in this area would also help to have a better intervention plan to promote satisfaction of prosthesis users.

Policy Implication

In my opinion people with disability and their association are expected to make an effort to fulfill the service they get from physical rehabilitation centers health care demand of the nation under challenging dissatisfied situation. Even though ,the Ethiopian PWDs policy states equal rights to access, to personal mobility, and to rehabilitation services, including prosthetic and orthotic services for persons with disabilities is one of its priorities practically more focus is provided the device. In this regard, satisfaction of prosthesis limb users should also receive enough attention. In summary, this thesis demonstrated there was still a need for significant progress in the promotion of equal rights and providing of the device that the concerned bodies need to give attention and take a close examination of the problem.

Consequently, the Ethiopian government and concerned bodies develop a policy on the quality prosthesis device and rehabilitation centers. In addition every health care institution should be legally responsible for developing organizational level interventions that are aimed at both reducing the problem related to provision of prosthesis device and clients satisfaction.

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Annex 1

Consent Form for prosthesis limb users

Good morning/Good afternoon dear participants.

My name is Hiwot Woldeyes .I am a post graduate student of School of Social Work in Addis Ababa University. Currently, I am investigating the Satisfaction of Persons with physical impairment and use lower prosthesis limb at physical rehabilitation centers of Addis Ababa for the partial fulfillment of the requirement for the Degree of Master of Social Work. For this purpose, I need to gather information from lower prosthesis limb users. I therefore, kindly request your willingness to respond the questions.

The participation with this research is purely voluntary and you might not have any immediate benefit. However your response to each question is very essential for the study purpose. If you are willing, I will contact you at a convenient place and conduct the interview. The session of the interview will take a maximum of forty five minutes. If it is appropriate, I will use the tape to record the conversation and will be deleted up on the completion of the study. In doing so, any of your personal profile and name will not be indicated rather it will remain anonymous and confidential.

Thank you for your kind cooperation!

If you are agree, put your signatures.

Participant Researcher

Signature _____ _____

Date _____ _____

Annex 2

The Satisfaction of lower prosthesis users

Interview Guide for prosthesis limb users

1. Background Information

Sex

Age

Religion

Marital Status

Address Region

Education status

Level of Income

Causes of impairment

2. Tell me about your life situation before the start of using prosthesis limb

Probing Questions/ideas

- Instant of the impairment
- Belief towards the causes of the impairment
- Attitudes towards prosthesis limbs
- Compare yourself with other prosthesis limb user peers
- Daily living activities

3. How do you join the rehabilitation centre?

Probing Questions/ideas

- Source of information
- Admission criteria

4. Tell me what have been changed in you after using prosthesis limb.

Probing Questions/ideas

- Can you access different Service?

- For how long you use the device

- Benefit from medical (physical) rehabilitation service

-How would you express your satisfaction in using the device?

5. What is your opinion towards prosthesis limb using?

6. What changes are occurred in life after the using the device?

7. Any idea you would like to add

Annex 3

A questionnaire to be filled by prosthesis limb users

Dear respondents:

I am conducting a study on the satisfaction of lower prosthesis limb users at POC and Menagesha Rehabilitation Center. I would like to ask you a number of questions. It will only take a few minutes to complete and your responses will be kept strictly private and confidential. Please complete the questionnaire by circling the number, which corresponds to your answer and by stating your answers fully when the space is provided.

Note: 1. you are not required to write your name

2. All questions raised here are equally important to attain the objective of the study. So, it is of great help not to leave any question unanswered or uncompleted.

Thank you in Advance for your cooperation!

PART ONE

Socio-demographic Characteristics of the Respondent

1. Age _____

2. Sex 1. Male 2. Female

3. Religion 1. Orthodox 2. Muslim 3. Protestant

. 4. Catholic 5. Other specify

4. Ethnicity _____

5. Educational status 1. Illiterate 2. Read and writes 3. Primary education (1-8)

4. Secondary education (9-12) 5. Diploma and above

6. Marital status 1. Married 2. Single 3.Divorced

4. Widowed 5. Separated

7. Employment status 1.House wife 2. Non-employee 3. Civil servant

4. Private employee/Merchant 5. Farmer f. Other_____

8. Monthly house hold income in Ethiopia Birr _____Birr/Other_____

9. What is the Cause of your Amputation?

1. Road traffic accidents 2. Cancer 3. Accidents

4. Diabetes 5. Violence 6. Malpractice in Health care

7. Congenital disorders 8. Non- healing wounds and fractures

9. Undefined cause 9. Other _____

10. Which type of Prosthesis Device you use?

1. Transtibial 2. Transfemoral

PART TWO

Question related to Respondent prosthesis use

11. Do you use your Prosthesis device on a daily basis or some other frequency?

    1. Daily 2. 3-5 times/week

    3. Less than 3 days/week 4. Not at all

12. If your answer for No 11, is on daily base how many hours do you use your Prosthesis device per day?

    1. Less than one hour 2. 1-4 Hours 3. 5-8 Hours

    4. 9-12 Hours 5. 13-16 Hours

13. How do you see the current condition of the prosthesis device?

    1. Never used 2. Broken cannot be used

    3. In use but needs repair 4. In use & in good condition

14. If you do not continue to use the prosthesis device the reason might be;

    1. Device has some kind of Problem 2. Lost interest in using the device

    3. Negative feeling about body image with the device 4. Other_____

15. Do you use any other Walking aids in addition to the prosthesis device ?

    1. None 2. Canes 3. Elbow crutches

    4. Axillary crutches 5. Wheelchair 6. Other_____

16. Number of years since you started using prosthesis device

    1, less than one year 2. 1-5 years 3. 5-10 years 4. More than 10 years

17. Number of prosthesis device used by respondents since amputation

    1. one 2. Two 3. Three 4. More than there

18. Do you think whether there is difference between Prosthetic devices or between prosthetic device and non-amputated limb

1. No 2. Yes

19. Do you feel pain due to the prosthesis device

1. None 2. While walking 3, at rest 4. Both While walking and at rest

20. Do you think that whether there is positive relationship of using prosthesis device and being functional in the society?

1. No I don't think 2. Yes 3. I don't have any idea

PART THREE

Items related to respondent Satisfaction with the Prosthesis device and the service, please mark 'X' in the space provide in accordance to the given alternative.

(N.B 1= Very unsatisfied 2=unsatisfied 3=Neutral 4=satisfied 5= very satisfied)

No	Items	1	2	3	4	5
21	Are you Satisfied with shape of the prosthesis device?					
22	How satisfied are you with the dimensions of your prosthesis device?					
23	How satisfied are you with how easy it is to use your prosthesis device?					
24	How satisfied are you with the weight of your prosthesis device?					
25	How satisfied are you with the easiness in adjusting the parts of your prosthesis device (is manageable)?					
26	How satisfied are you with how comfortable your prosthesis device is?					
27	How satisfied are you with the durability of your prosthesis device?					
28	How satisfied are you in relation to pain free device?					
29	Are you satisfied with how your device fit well?					
30	How satisfied are you with how effective your prosthesis device is (the degree to which your prosthesis device meets your needs?					
31	How satisfied are you with the repairs and servicing provided for your prosthesis device?					
32	How satisfied are you with the follow-up services for your prosthesis device?					
33	How satisfied are you with the training of your prosthesis device?					
34	How satisfied are you with the coordination of prosthetic services with other rehabilitation service (physiotherapist, community based rehabilitation worker, doctor, others)?					
35	How satisfied are you with affordability of the cost of the device?					
36	Are you satisfied with the support of family and friends while using the prosthesis device?					
37	Are you satisfied with the positive change in your condition by using the device?					
	Total					

አባሪ 1

የስምምነት የፈቃደኝነት ማረጋገጫ ቅጽ በሰውሰራሽ አካል ማዕከላት ለሚገኙ የሰዉ ሰራሽ አካል ተጠቃሚዎች

ህይወት ወልደየስ እባላለሁ:: በአዲስአበባ ዩኒቨርሲቲ የሶሻል ወርክ ትምህርት ክፍል የድህረ ምረቃ ፕሮግራም ተማሪ ስሆን ለሁለተኛ ዲግሪ መመረቂያ የሚሆን የማሚያ ጥናት በማድረግ ላይ እገኛለሁ፡፡ ጥናቱ በሰውሰራሽ አካል ማዕከላት በሚገኙ የሰውሰራሽ አካል ተጠቃሚዎች እርካታን ለመገንዘብ ትኩረት ያደረገ ነው፡፡ በመሆኑም ለጥናቱ ግብአት አላማ ሲባል በማዕከሉ በሚገኙ የሰውሰራሽ አካል ተጠቃሚዎች መረጃ መሰብሰብ ስለምፈልግ ላዘጋጀኃቸው ጥያቄዎች ተገቢ ምላሽ በመስጠት እንዲተባበሩኝ ፍቃደኝነቶን በአክብሮት እጠይቃለሁ፡፡

በዚህ ጥናት ላይ የሚኖረው ተሳትፎ በፍቃደኝነት የተመሰረተ ሲሆን ምንም አይነት የገንዘብ ክፍያ አይኖረውም፡፡ ሆኖም ግን የእርሶ ተሳትፎ በጥናቱ ላይ አብይ አስተዋፅኦ ይኖረዋል፡፡ ስለዚህ በጥናቱ ለመሳተፍ ፈቃደኛ ከሆኑ አመቺ ግዜ እና ቦታ በመምረጥ ከ45 ደቂቃ በማይበልጥ ጊዜ የድምፅ መቅጃ መሳሪያ በመጠቀም ቃለምልልሱን እናደርጋለን፡፡ በጥናቱ ጊዜ የሚያካፍሉን ማንኛውም አይነት መረጃ ምስጢራዊነቱ የተጠበቀ ከመሆኑ ባሻገር መመለስ ያልፈለጉት ጥያቄ ያለመመለስ፣ ጥያቄ ማብራሪያ የማድረግ፣ ከጥናቱ ራስዎትን የማግለል መብት ያሎት መሆኑን እየገለፅኩ በተጠቀሱት ነጥቦች ዙሪያ የሚስማሙ ከሆነ ከዚህ በታች ስምዎትን እና ፊርማዎትን በማኖር ስምምነቶን እንዲገልፁልኝ እጠይቃለሁ፡፡

የጥናቱ ተሳታፊ **ጥናቱንያካሂደው**

ስምና ፊርማ---------- ----------

ቀን ---------- ----------

አባሪ 2

ለሰውሰራሽ አካል ተጠቃሚዎች የሚቀርብ መሪ ጥያቄ

1. የተጠያቂው የግል መረጃዎች
   - ያታ
   - ዕድሜ
   - ሃይማኖት
   - የጋብቻ ሁኔታ
   - የመኖሪያ አድራሻ
   - የትምህርት ደረጃ
   - የገቢ ሁኔታ
   - የአካል ጉዳት ምክንያት
2. የሰውሰራሽ አካል ድጋፍ መጠቀም ከመጀመሮ በፊት የነበሮትን ህይወት ቢነግሩኝ
   የመነሻ ሃሳብ
   - የአካል ጉዳቱ መነሻ
   - ስለአካል ጉዳቶ ምክንያት ያሎት እምነት
   - ለሰውሰራሽ አካል ያሎት አመለካከት
   - እራሶን ከሌሎች የሰውሰራሽ አካል ተጠቃሚዎች አንፃር እንዴት ያዩታል
   - በየቀኑ የሚሰሩትን እንቅሰቃሴ ቢገልፁልን
3. እንዴት ወደ ሰውሰራሽ አካል ማዕከል ገቡ
   የመነሻ ሃሳብ
   - የመረጃ ምንጮ
   - በምን መስፈርት
4. የሰውሰራሽ አካል በመጠቀሞ ምን አይነት ለውጥ አገኙ
   የመነሻ ሃሳብ
   - የተለያዩ አገልግሎቶችን በማግኘት
   - ለምን ያህል ጊዜ የሰውሰራሽ አካሉን ተጠቀሙት
   - ከሰውሰራሽ አካል ማዕከል ያገኙት ጥቅሞች
   - የሰውሰራሽ አካሉን በመጠቀሞ ያጋጠሞት ችግር እና ውጣውረድ
   - የሰውሰራሽ አካል በመጠቀሞ ያሎትን እርካታ እንዴት ይገልፁታል
5. የሰውሰራሽ አካል በመጠቀም ላይ ያሎትን የግልአመለካከት
6. የሰውሰራሽ አካል መጠቀም ከጀመሩ በኃላ ምን አይነት ለውጠችን አስተዋሉ
7. መጨመር የሚፈልጉት ማንኛውም ሃሳብ ካለ

አባሪ 3

በሰውሰራሽ አካል ተጠቃሚዎች የሚሞሉ ጥያቄዎች

ውድ ተሳታፊዎች

የዚህ መጠይቅ አላማ በአዲስአበበ ዩኒቨርስቲ ለሁለተኛ ዲግሪ ማሟያ የመመረቂያ ፅሁፍ ግብአት የሚሆን መረጃ ማግኘት ነው፡፡ ጥናቱ የሚያተኩረው በአዲስአበባ ውስጥ በሚገኙ የሰውሰራሽ አካል ማዕከላት ውስጥ ሲሆን ትኩረተቱንም ያደረገው የሰውሰራሽ አካል ተጠቃሚዎች እርካታ ላይ ሲሆን የተወሰኑ ደቂቃዎች የሚወስዱ ጥያቄወቸ አሉኝ፡፡የምትሰጡት መረጃ ለጥናት እና ምርምር ብቻ እንደሚውል በመግንዘብ በትክክል እና በተዕግስት ሁሉንም መጠይቅ በትዕዛዙ መሰረት እንትመልሱ ስጠይቅ ለሚደረግልኝ ትብብር ከወዲሁ በማመስገን ነው፡፡

ክፍል I: ማሕበራዊና ኢኮኖሚያዊ መረጃዎች የሚመለከቱ ጥያቄዎች

1. የመረጃ ሰጪው እድሜ_____
2. የመረጃ ሰጪ ፆታ
   1. ወንድ 2. ሴት
3. የምን ሃይማኖት ተከታይ ነዎት?
   1. ኦርቶዶክስ 2. ሙስሊም 3. ፕሮቴስታንት
   4. ካቶሊክ 5. ሌላ /ይገለጽ/
4. ብሄር _____
5. የትምህርት ደረጃዎ ምን ይመስላል?
   1. ያልተማረ/ች 2. ማንበብና መጻፍ የምትችል/ የሚችል
   3. አንደኛ ደረጃና መለስተኛ (1-8) 4. ሁለተኛ ደረጃ (9-12)
   5. ከፍተኛ ደረጃ (ኮሌጅና ከዛ በላይ)
6. የጋብቻ ሁኔታ
   1. ያገባ/ች 2. ያላገባ/ች 3. የተፋታ/ች
   4. ባሏ/ ሚስት የሞተባት/በት 5. የተለያየ/ች
7. በአሁኑ ጊዜ ዋነኛ ሥራዎ ምንድነው? /አንድ መልስ ብቻ ያክብቡ/
   1. ስራ አጥ 2. የቤት እመቤት 3. ነጋዴ /የግልሥራ/
   4. የመንግስት ሠራተኛ 5. ተማሪ 6. ገበሬ 7. ሌላ /ይገለጽ/ _____
8. የርስዎ ወርሃዊ ገቢ በአማካይ ስንት ብር ይሆናል?_____ብር

   ሌላ /ይገለጽ/ _____

9. በምን ምክንያት ነው አግሮን ያጡት

1. በትራፊክ አደጋ 2. በካንሰር 3. በተለያዩ አደጋዎች

4. በስኳር በሽታ ምክንያት 5. በሌላ ሰው በደረሰ የአካል ጥቃት

6. ባለተገባ የህክምና አገልግሎት 7. በአፈጣጠርችግርምክንያት

8. ባልዳነ ቁስል እና በአጥንት ስብራት ምክንያት 9. ባልታወቀምክንያት

10. ሌላ ካለ ይግለፁ_____

10. ምን አይነት ሰውሰራሽ እግር ነው የሚጠቀሙት

1. ከጉልበት በታች የሚገጠም 2. ከዳሌ ጀምሮ የሚገጠም

ክፍል II <u>የሰውሰራሽ አካል አጠቃቀም ላይ ያተኮሩ ጥያቄዎች</u>

11. ሰውሰራሽ አካሎን በየቀኑ ነው ወይስ አልፎ አልፎ ነው የሚጠቀሙበት?

1. አዎ በየቀኑ 2. ከ3 እስከ 5 ጊዜበሳምንትውስጥ

3. በሳምንት ውስጠ ከ3 ቀን በታች 4. ከነጨራሹ አልጠቀምም

12. በተራ ቁጥር 11 ጥያቄ የመለሱት መልስ በየቀኑ ከሆነ በቀን ለስንት ሰዓት የሰው ሰራሽ አካሎን ይጠቀሙበታል?

1. ከ1 ሰዓት በታች 2. ከ1 እስከ 4 ሰዓት 3. ከ5 እስከ 8 ሰዓት

4. ከ9 እስከ 12 ሰዓት 5. ከ13 እስከ 16 ሰዓት

13. የሰውሰራሽ አካሎ አሁን ያለበትን ሁኔታ እንዴት ያዩታል?

1. ጥቅም ላይ እንዳልዋለ 2. የተሰበረ እና አገልግሎት የማይሰጥ

3. አገልግሎት የሚሰጥ ግን መታደስ የሚፈልግ

4. አገልገሎት እየሰጠ ያለ እና በጥረ ሁኔታ የሚገኝ

14. ለወደ ፊቱ ሰውሰራሽ አካሎን መጠቀም የማይቀጥሉ ከሆነ ምክንያቱ ምንድነው?

1. የሰውሰራሽ አካሎ ችግር ሰላለበት

2. የሰውሰራሽ አካሎ ለመጠቀም ፍላጎት ስላጡ

3. የሰውሰራሽ አካሉ በለኝ ተፈጥሯዊ አካሌ ላይ የሚፈጥረው ተፅዕኖ ስላለ

4. ሌላ ካለ ይገለፅ_____

15. ከሰውሰራሽ አካሎ በተጨማሪ ሌላ ለመንቀሳቀስ የሚረዳዎ መሳሪያ ይጠቀማሉ?

1. አልጠቀምም 2. ከዘራ 3. በክርን የሚደገፉት ምርኩዝ

4. በብብት ውስጥ የሚገባ ምርኩዝ 5. ተሽከርካሪ ወንበር

6. ሌላ ካለ ይገለፅ----------

16. ለምን ያህል አመት የሰዉ ሰራሽ አካሎን ተጠቀሙ

1. አንድ አመት 2. 1-5 አመት 3. 5-10 አመት

4. ከ10 አመት በላይ

17. አስካሁን ድረስ ስንት የሰዉ ሰራሽ አካል ተጠቀሙ

1. አንድ 2. ሁለት 3. ሦስት 4. ከሦስት አመት በላይ

18. በአርሶ አመለካከት በሰዉ ሰራሽ አካሎን እና ባልተጎዳ አካሎን መካክል የቁመት ልዩነት ያለ ይመስሎታል

1. አይመስለኝም 2. አዎ

19. የሰዉ ሰራሽ አካሎን ሲጠቀሙ ህመም ይሰማዎታል?

1. አይሰማኝም 2. አዎ በጉዞ ወቅት

3. አዎ በረፈት ወቅት 4. አዎ በጉዞ እና በረፈት ወቅት

20. የሰውሰራሽ አካል በመጠቀሞ ወደ ሕብረተሰበ በቀለለ እንድገብ ያመጣው አወንታዊ ለውጥ አለ?

1. አለ 2.የለም 3.አለውቅም

ክፍልIII

<u>የሚቀጥለው ክፍል የሰውሰራሽ አካል ተጠቃሚዎች ያላቸውን እርካታ የሚያመላክትነው፡፡ በመሆኑም እርሶ በተሰማሙበት ምርጫ ላይ እባኮትን የ × ምልክት ያድርጉ (1. በጣምአልረካሁም 2. አልረካሁም 3. ገለልተኛነኝ 4. ረክቻለሁ 5. በጣምረክቻለሁ)</u>

ተ/ቁ	ጥያቄዎች	1	2	3	4	5
21	በሰውሰራሽ አካሎ ቅርፅ የሚሰማዎት እርካታ ምን ያህልነው?					
22	በሰውሰራሽ አካሎ ወርድ እና ስፋት ያሎት እርካታ ምን ያህል ነው?					
23	በሰውሰራሽ አካሎ በቀላሉ ስለመጠቀም ያሎት እርካታ ምን ያህል ነው?					
24	በሰውሰራሽ አካሎ የክብደት መጠን እርካታዎ ምን ያህል ነው?					
25	በሰውሰራሽ አካሎ የተለያዩ ክፍሎችን ለማስተካከል በቀላሉ ለመገጣጠም በመቻሎ ያሎት እርካታ ምን ያህል ነው?					
26	የሰውሰራሽ አካሎ በሚሰጡት ምቾት እርካታዎ ምን ያህልነው?					
27	የሰውሰራሽ አካሎ ያለ ምንም ችግር አገልግሎት እየሰጠ በመቆየቱ ያሎት እርካታ ምን ያህል ነው?					
28	የሰውሰራሽ አካሎ ከሀመም ነፃ የሆነ አገልግሎት ስለመስጠቱ እርካታዎ ምን ያህል ነው?					
29	የሰውሰራሽ አካሎ በትክክል ስለመገጠሙ (አለመስፋት ወይም አለመጥበብ) ያሎት እርካታ ምን ያህል ነው ?					
30	የሰውሰራሽ አካሎ እርሶ ለሚፈልጉት አገልግሎት ስለመጥቀሙ ያሎት እርካታ ምን ያህል ነው?					
31	በሰውሰራሽ አካሎ የሚደረገውን የጥገና እና ተያያዥ አገልግሎቶች ላይ የሚሰማዎ እርካታ ምን ያህል ነው?					
32	ለሰውሰራሽ አካሎ የሚደረገው የክትትል አገልግሎት ላይ ምን ያህል እርካታ ይሰማዎታል?					
33	የሰውሰራሽ አካሎን መጠቀም እንዲጀምሩ እና እንዲቀጥሉ የተሰጠዎት የልምምድ አገልግሎት ላይ ምን ያህል እርካታ አሎት?					
34	በሰውሰራሽ አካል አገልግሎት አሰጣጥ ያለው የቅንጅት ስራ ላይ ምን ያህል ረክተዋል?					
35	ለሰውሰራሽ አካል የሚከፍሉት ክፍያ አቅምን ያገናዘበ ስለመሆኑ ረክተዋል?					
36	የሰውሰራሽ አካል በሚተቀመብት ወቅት ከጎደኞች እና ከቤተሰቦች በሚያገኙት ድጋፍ ምን ያህል ረክተዋል?					
37	የሰውሰራሽ አካል በመጠቀሞ በህይወቶ ላይ ያመጣው አወንታዊ ለውጥ በተመለከተ ምን ያህል እርካታ ይሰማዎታል?					