Addis Ababa University
College of Education and Behavioral Studies
Institute of Psychology

Psychosocial Experiences of Podoconiosis Patients' the Case of Wolayta Zone

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July, 2010
ADDIS ABABA

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Psychosocial Experiences of Podoconiosis Patients' the Case of Wolayta Zone

A Thesis Submitted to the School of Graduate Studies in Partial Fulfillment of the Requirements for the Degree of Master of Arts in Social Psychology

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Acknowledgment

Thanks be to God first. I would like to express my deepest gratitude to my advisor Girma Lemma for his unreserved and constructive comment and directions while carrying out this research in every kind of difficult situations.

My deepest gratitude also goes to my mother Amarch Asale for her emotional and psychological support for my educational carrier in general and this thesis in particular. This thesis is dedicated to her. Mom, I am indebted to you.

My deepest gratitude also goes to my beloved uncle Ato Matthews Asale and his wife Dinbernsh Mitku for their continual support in every difficult situation I go through in my life. They supported me materially and psychologically when I need them. I am indebted to you. God Bless You.

I am also thankful to my brother Mesay Otoro, who helped me by providing Laptop and Mebratu Belete, Eshetu Mathewos, Eshetu Genemo and other friends of mine who have helped me in different aspects. Finally, I also want to thank from deep of my heart Ato Meskele Ashine, Head of Mossy Foot Treatment and Prevention Association and all staffs of Mossy Foot Treatment and Prevention Association for their unreserved support.

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Abstract

The main purpose of this study was to assess the psychosocial experiences of podoconiosis patients. To this end, the study examined the psychosocial experiences of 120 podoconiosis patients of which 12 purposively selected podoconiosis patients participated in the in-depth interview. Each patient's were selected from patient register document by using systematic sampling. The instruments employed in the study were interviewer administrated questionnaire and semi structured interview. The questionnaire includes Rosenberg Self-Esteem scale, SRQ20, and Likert scale type questions developed by the researcher. Methods of data analysis employed in the study were descriptive statistics, bivariate correlations, one way ANOVA and multiple regressions. The results of quantitative and qualitative analyses of the data disclosed that podoconiosis patients experience negative social experience like displacement, interpersonal relationship problems, marriage problem, decision making problem. The patients have low self-esteem and high mental distress. Males experience more negative social experience and high mental distress than females, and the older age group patients' experience less negative social experience and mental distress than younger podoconiosis patients. The self-esteem of the patients decreases when their educational status increases whereas mental distress decreases with increasing education level. When the severity level of the patients increases their negative social experience and mental distress increases. Sex and severity level have positive correlation with social experience and mental distress whereas age of the patients is negatively correlated with the social experience and mental distress. Physical disability, economic challenge, absence of counseling service, bad smell of the leg, societal negative reactions were the major problems which hinder podoconiosis patients to integrate into the wider community. Performing religious rituals, discussing with family, friends and relatives, and aggressive way of acting are some of the coping strategies used by the patients to manage their stress. On the basis of the findings the study finally provided discussions. Providing counseling service for podoconiosis patients, integrating the disease into the health care system of the country, and civil societies and professionals should play their part to address the psychosocial problems of podoconiosis patients are among the recommendations provided based on the study.

Chapter One

Introduction

1.1 Background of the Study

Wolayta has a population of about 2.0 million with a natural population growth rate of 3%. The average family size is 8 to 10 persons per house holds. The infant mortality rate is 200/1000 live births. Over 95% of the population earns their living from subsistent farming, which makes the population contact frequently (Wolyta Zone information Desk, 2010). Wolayta is one of the most densely populated areas in the country with average of 640 people Km2. The average land holding is said to be 0.4 ha/family. Famine, drought and epidemics of various communicable diseases repeatedly struck wolayta. The elephantiasis patients' survey conducted in the seven woreda of wolayta Zone in September 2005 showed that the prevalence of podoconiosis exceeds 5.0% (Desta, Meskele, & Gail, 2005). Although there is a high number of an elephantiasis case in the area, there is no program set to act on this problem in the region (Price, 1988).

Podoconiosis (endemic non-filarial elephantiasis) is a chronic disease characterized by the development of persistent swelling of plantar foot which progresses to the dorsum of the foot and encompasses lower leg slowly. It is non-infective disease, usually results from crystalline blockage of the lymphatic system of the limb, and almost always affects the lower limbs, especially the feet and rarely extends above knee. Most of the time when the disease advances it is accompanied by a number of acute episodes. Finally the disease may end up in a permanent feature of elephantiasis of varying degree (Price, 1984).

Podoconiosis (endemic non-filarial elephantiasis) has been recognized as a specific disease entity for over 1000 years and is widespread in tropical Africa, Central America and North India, yet it remains a neglected and under-researched condition (Davey, 2007).

From the time of the Roman Empire, travelers recorded anecdotes about people with progressive swelling of the feet. A more detailed reference to 'swollen legs' appears in the

Tibetan translation of a fourth century revelation originally recorded in Sanskrit as the second book of Rgyud-Bzhi (the 'four tantras'). However, it was not until c.905 Persian physician Rhazes first distinguished elephantiasis 'of the Greeks' (lepromatous leprosy) from that 'of the Arabs' (most probably non-filarial elephantiasis) (Price, 1984a).

In the 1770s, the adventurer James Bruce gave a graphic description of the elephantiasis he saw in Gondar, northern Ethiopia:

> *the chief seat of this disease is from the bending of the knee downwards to the ankle; the leg is swelled to a great degree, becoming one size from bottom to top, and gathered into circular wrinkles...from between these circular divisions a great quantity of lymph constantly oozes. It should seem that the black colour of the skin, the thickness of the leg, its shapeless form and the rough tubercules or excrescences, very like those seen upon the elephant, gave the name to this disease...*

As Pankhurst put Bruce obtained permission from the emperor, Ras Mikhail, to treat a sufferer, using a range of regimes and medications, but beyond assuaging the patient's thirst with a constant supply of whey, no treatment (including hemlock, mercury and tar-water) appeared effective (as cited in Davey, 2007).

El Razi described the clinical feature of the disease as far as 10AD. In 1784 Handy named the disease '*the glandular disease of the Barbados*' and he gave the idea that the disease could be lymphatic in origin. Later on in 1806 the work of Alder concluded that the disease is in the lymphatic vessel. The elephantiasis was explained by filariasis in 1878 but monographs in 1885 and 1886 identified that there are filarial and non-filarial types of elephantiasis (Price, 1990).

Through the 18th and 19th centuries, the pathogenesis of elephantiasis was gradually elucidated through Hendy's study of the lymphatic system in affected people. Wucherer (in Brazil), Lewis (in India), Manson and Bancroft all recognized the role of filarial parasites in elephantiasis, and for a time it was concluded that all elephantiasis was filarial (Gail, 2007). Towards the end of the nineteenth century, the discrepancy between distribution of elephantiasis and distribution of filarial in North Africa, Central America and Europe prompted revision of this theory. For a time, streptococci were considered to be causative agents, but detailed description of patients in Guatemala (and persistently negative tests for filarial and streptococci) led Robles to infer that the elephantiasis he was seeing was an endemic condition closely associated with walking barefoot (Price, 1984).

Progress in recognizing the international distribution of non-filarial elephantiasis came as Cohen suggested the use of the term ' idiopathic lymphoedema' in place of the local terms 'verrucosis lymphatica' in Kenya and 'mossy foot' in Ethiopia (Cohen, 1960 cited in Gail, 2007). The work of Oomen in the 1960s and Price in the 1970s was notable for distinguishing and concentrating on non-filarial elephantiasis (Gail, 2007). Price's extensive research on non-filarial elephantiasis helped him establish the term podoconiosis for non-filarial elephantiasis in Ethiopia (from the Greek for foot: Podos, and Dust: Konos) which has gained widespread acceptance (Davey, 2007).

The real cause of the disease was not identified till recently; several studies done to find the cause of elephantiasis in Ethiopia have failed to show infectious cause, indicating the high probability of podoconisis studies confirmed that red clay soil of endemic area that is rich in fine particles (mostly less than 10 micrometer) of silica and almunosilicates play a significant role in the pathogenesis (Price, 1987).

In Ethiopia the clay soil derived from volcanic rocks covers more than 200,000 km2 where more than 20.5 million people live and farm the fertile soil. These people are exposed for geochemical substances that cause the disease (Destas k etal, 2002).

In Wolayita digging and weeding by hands are usual ways of cultivation, especially with the elephantiasis patients who are the poorest groups in the area. These direct and indirect contacts with soil lead to higher prevalence of non-filarial elephantiasis or moosy foot disease in the area. Although the communities are fully aware that the direct soil contact on bare feet exposes them to the disease, their low income does not allow them to wear shoes to prevent the disease (Price, 1988).

1.2. Statement of the problem

Podoconiosis is a geochemical, (non filarial) elephantiasis caused by the absorption of ultrafine silica particles from the soil through the skin of the feet (Price, 1988, Davey et al, 2007). In Ethiopia, 11 million people are at risk through exposure to irritant soil, and an estimated 500,000 to1 million people are affected nationwide (Desta et al., 2003). The disease is highly prevalent and of major public health problem in Wolaita Zone, South Ethiopia (Desta et al, 2003) and has a considerable social, economic and psychological burden (Tekola et al 2006, Yakob et al, 2008).

Podoconiosis patients are socially outcast in the society and passing through the agony of physical, mental, and social trauma. They are exposed to every problem in the community (Berket, 2008).

The gross deformity, swelling of the legs, repeated ulceration and secondary infections make the patient not only socially outcast, but also hamper their production. The swelling ultimately became so heavy that the patients abandon the land cultivation. They become beggars in communities and finally move to towns as permanent beggars. The fact that one becomes an elephantiasis patient and a beggar has social stigma; he/she is deserted by friends, his/her children also share the psychological and social effects in the community (Tekola, 2006). His/her schoolmates desert a student who develops the disease. Once the patient, be it male or female, develops elephantiasis, the hope of marriage dims. After person develops the disease, his/her communication with other community members is in danger. If she is a girl she cannot be even employed as a housemaid. She cannot be involved in social activities. Even if she takes her products to market, consumers will not buy from her fearing contamination of the disease. The tormenting social and psychological effect is devastating to the patients (Mossy Foot brochure, 2009).

In general, social stigma against people with podoconiosis is rife, patients being excluded from school, denied participation in local meetings, churches and mosques, and barred from marriage with unaffected individuals (GebreHanna, 2005). Price (1974) reports one podoconiosis sufferer as having remarked that '*it would be better to have leprosy*', since stigma surrounding leprosy has diminished as a consequence of effective medicine and health care services.

Podoconiosis is thus more common than HIV infection or filarial elephantiasis in Wolaita Zone, yet it is hardly recognized outside endemic areas (Tekola, 2008). Podoconiosis has been present for centuries in Ethiopia, yet has received little attention from policy makers despite high prevalence and serious associated debility (Davey, 2008). This indeed, implies that more than ever before there is a need to make concerned effort to treat the socio emotional problems of podoconiosis patients by conducting specialized studies on how this stigma and prejudice affects the psychosocial life of the patients.

This study searches answers for the following basic questions:

- What are the major social problems podoconiosis patients faces?
- Do people with podoconiosis experience psychological problems?
- What problems do podoconiosis patients have in relation to integrating themselves into the general community?
- How do they cope up with the psychological and social challenges they face?

1.3. Objective of the Study

The study has the following general and specific objectives.

General objective

The general objective of this study is to examine the psychosocial experiences and coping strategies of people with podoconiosis. The study also attempts to assess the major problems the patients face in integrating themselves into the general community.

Specific objectives

The specific objectives of the study are to:

- Assess the social experience of podoconiosis patients.
- Assess their experience of mental distress.
- Determine their level of self-esteem.
- Assess the strategies that the podoconiosis patients employ to manage the problems they face.
- Pinpoint problems faced by podoconiosis patients in integrating themselves into the general community.

1.4. Significance

Podoconiosis is one of the ''neglected tropical disease'' to which little attention has been paid to it at both national and international health agenda (Davey, 2008).

Recently, the profile of the ''neglected diseases'' has been enhanced by a renewed interest by policymakers, including the new Director General of the World Health Organization (WHO, 2004). These diseases cause long-term morbidity, rather than high mortality, but have been overshadowed by higher-profile efforts to address malaria, tuberculosis, and HIV/AIDS (Molyneux, 2004). Recent studies show extensive and underestimated morbidity for the neglected diseases (King et al ,2005), totaling around 56 million cumulative disability-adjusted life years, which is more than for malaria and tuberculosis [Hotez, 2006).

Although the disease is widely distributed in Ethiopia and other countries, and has grave impacts on socio-economic development in addition to the patients' right to have access to medical care and treatment, it is surprising that podoconiosis has got very little interest and is almost neglected in Ethiopia and other countries (Davey, 2006). The problem is less researched and less recognized by governmental and non-governmental organizations. Few resources have been made available for podoconiosis prevention and control, or research activities.

Therefore, this study is expected to hold the following as its significance.

- Help the rehabilitation and welfare programs for podoconiosis patients by providing the real psychosocial problems of the patients.
- Give insight into the psychosocial needs of podoconiosis patients for the wider community and Ministry of Health.
- Suggest viable strategies to curb the psychosocial problem of the patients to organizations working with the disease, and authorities of Ministry of Health.
- To raise the awareness level of the community outside and inside the endemic area.

1.5. Delimitation of the study

The scope of this study was delimited only to podoconiosis patients in wolayta zone. Hence, conclusion reached only considers patients in the stated zone. This Study mainly deals with exploring the psychosocial experiences and coping strategies used by podoconiosis patients. There are many psychological variables but the researcher was interested only to mental distress and self-esteem and social problems like marriage, decision making, participation, and interpersonal problems.

1.6. Operational definition of key terms

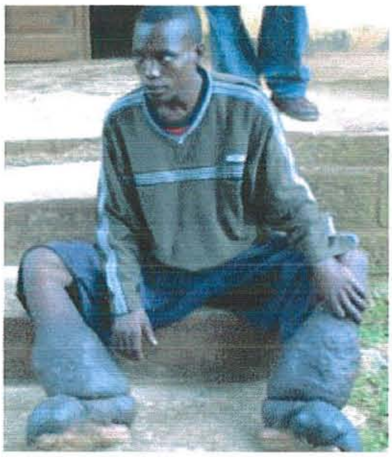
- Stigma – an attribute which makes a person to be seen with disrespect and disregard and which deprives him or her of the social advantages in life by being considered as a disreputable person.
- Discrimination- it is any distinctive, exclusive or preference made on the basis of being podoconiosis patient that has the effect on impairing equality of opportunity and unfair treatment.
- Self-esteem- the experience of feeling and knowing that one is competent to live and worthy of living and being happy.
- Mental distress- refers to a lack of psychological wellbeing affecting a person's thoughts, feelings, and behavioral functioning.

- Psychosocial experience – ones psychological experience such as self esteem and mental distress. And social experience dimension such as type of relationship with family, marriage relations, friendship, interaction, participation, and decision making.
- Coping mechanisms- according to Folkman and Lazarus (1980), it is the cognitive and behavioral effort made, to master, tolerate, or reduce external and internal demand and conflicts among them.
- Integration problem- not to become fully a member of a community rather remaining a separate group because of one's disease.

Chapter Two

Review of Related Literature

2.1 What Is Podoconiosis (Meaning and Naming)



Picture from MFTPA

Before the 10 A.D among Arabian travelers in Ethiopia used to say that there were specific type of people in Abyssinia who can shade themselves from the sun with their own foot (Price, 1974). This is to describe the physical appearances of the disease. In fact the travelers at that time consider these patients as people with specific 'race'. In the ancient Greece there were pictures showing podoconiosis patients shading themselves with their own foot from the sun. Podoconiosis is nonparasitic form of elephantiasis. Podoconiosis was named and characterized by the late Ernest Price to make a distinction from elephantiasis which occurs in the presence of microscopic, thread like parasitic worms such as wuchuria bancrofti, brugia malayi and B.timori, all of which transmitted by mosquitoes (Price 1990). He described the clinical features of swelling and deformity of the legs associated with enlargement of the draining lymph nodes. It is seen in susceptible families of bare-footed farmers in well-defined fertile volcanic highland zones of Africa, Central and South America, and Indonesia, and also in the lowlands irrigated by rivers from these highlands. It is caused due to the absorption of silica particles from the soil, through the feet of someone from a susceptible family. Price's

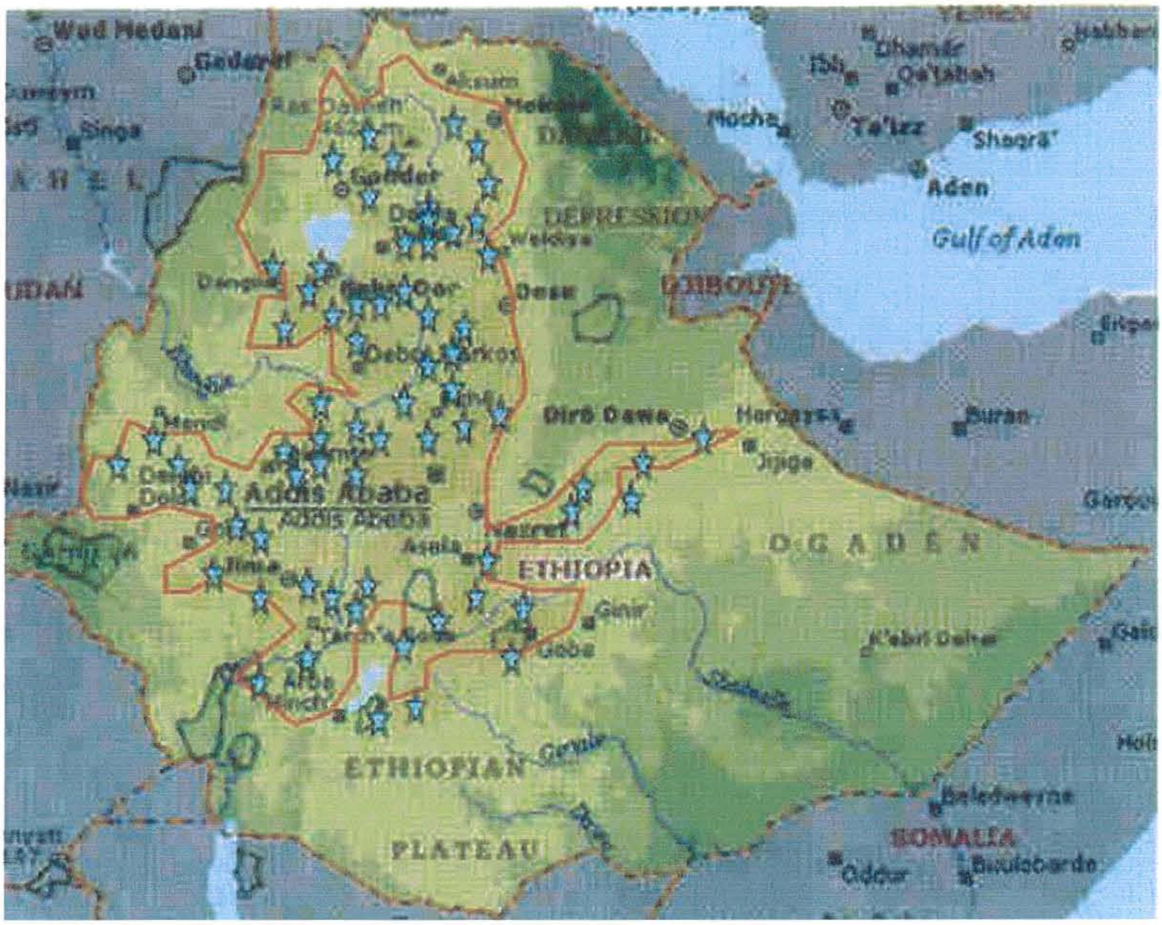
Price's histopathological examination of lymph nodes showed him to contain birefringent particles. Accordingly, he identified the epidemiological association between the local type of soil and disease. He confirmed this association by microanalysis of the particles in diseased tissue, showing sub-micron aluminosilicate and silica, which are characteristics of the clay fractions of the local soil.

The absorption silica particles from the soil cause the patient's lymphatics to fibrose, and obstruct and femoral nodes to enlarge. This in turn makes his/her legs and feet swell, and progress through stages which are described as "water bag", "rubbery", and "wooden." Finally, his legs become hyperkeratotic, "mossy", and nodular. Lymph may ooze through his/her skin, which may be secondarily infected by fungi or bacteria (Davey, 2007). And elephantiasis refers only to late stage of the disease while it takes several months to years to develop elephantiasis, and the term podoconiosis is more appropriate than elephantiasis and includes all stages to advanced level (Berket, 2008).

Elephantiasis is associated in the public mind with 'the elephant man', the carnival stage name of Joseph Merrick. The name refers to the resemblance of the sufferer's limbs to the thick, baggy skin on the limbs and trunks of elephants (Wikipedia). According to recent research conducted by Berket (2008) in wolayta zone the community has local name which they use to refer podoconiosis. Podoconiosis is a well-recognized condition in the wolayta people. The disease has a local name that also serves as an insult is ***Kita*** or ***Inchricha*** meaning swollen, describes the clinical condition of the disease.

2.2 Prevalence of Podoconiosis

Podoconiosis is highly prevalent in Uganda, Tanzania, Kenya, Rwanda, Burundi, Sudan, Egypt and Ethiopia. The worst affected area is Ethiopia, where up to 6% of the population is affected in endemic areas (Davey, 2007). Ethiopia is one of the countries in which podoconiosis is an important public health problem in endemic areas of red clay soil like Wolayta zone, where the prevalence of the condition exceeds 5% (Desta K. et al,2002).



Source: MFTPA leaflet

Key:
*Distribution of the disease

It is mostly a disease of agrarian people who work bare foot, particularly on red clay soils of volcanic areas. Studies have shown that it is related to the distribution of red clay soil derived from volcanic rocks, particularly basalt (Tekola, 2005). The distribution of the disease is higher in the most fertile areas of Ethiopia (high altitude over 1200 meters). Podoconiosis is present over approximately one-fifth of the land surface of Ethiopia. Prevalence estimates have been made exclusively in Ethiopia. Early estimations of prevalence made using counts of attendees at fifty-six markets ranged from 0.42 to 3.73% (Oomen, 1969), and further investigation in wolayta zone, SNNPR demonstrated prevalence of 5.38% across five markets. In the village of ocholo, located at 2000m altitude in the mountains west of lake Abaya, Southern Ethiopia, elephantiasis was present in 5.1% of long-term residents(Mengistu et al., 1987), while in two resettlement schemes in ilubabor, Western Ethiopia, 9.1% of long -term residents were affected, and

5.2% of people resettled some 7-8 years previously (Kloos et al., 1992). More recent population-based survey in northwest (Birrie et al., 1997) and Southern Ethiopia, Wolayta Zone (Desta et al., 2003), have documented prevalence of 6% and 5.4%, respectively. In wolayta Zone Sixty-four percent (64%) of cases occurred in the economically productive age groups. Male to female ratio was 1:0.98, reflecting nearly equal distribution in both sexes (Desta et al, 2002).

2.3 Belief on Cause of podoconiosis in wolayta community

The wolayta community perceives that the causes of the disease are multiple including supernatural, spiritual, biological and physical. The most common cause identified by respondents was hereditary. Some strongly suggested the disease to be strictly genetic while some describe that even if genetic predisposition is critical it could be caused sometimes by some other factors (G/Hanna, 2005).

According to G/Hanna (2005) the second most frequent reason given to be the cause of the disease is walking on dead snakes and other small animals like frog. It is believed that snakes have poison that make the foot to swell even if after they are dead. Most of the community who believe the dead snakes as a reason for podoconiosis associated the events with going out into the forest.

Cold weather and accident are also mentioned frequently to be the cause of the podoconiosis. People strongly associated cold weather with recurrent attacks (G/Hanna, 2005).

The wolayta society also believes that direct contact with the patients such as sleeping together and sharing footwear, and indirect contacts such as having accident with sharps like needle that have been used by patients and fly to transmit the disease (G/Hanna, 2005).

2.4 Prevention and control of podoconiosis

Podoconiosis could easily be prevented, remedied and treated at early stage but remains incurable at advanced level. Knowing early symptoms and signs is very important in prevention and control activities (Price, 1984). The early symptoms are "burning sensation" on plantar surface of the foot, persistent localized unexplained itching in one or other forefoot and "knocking" big toes (knocking together with each step as they walk). Early signs of podoconiosis development are splayed fore foot (widening of the fore foot which gives the foot spatula-like appearance), plantar oedema when at rest, pachydermic fore foot, increased skin markings, the "block toes" and the large second toe (Price, 1983).

The early stages of podoconiosis can be reversed by simple foot hygiene measures and use of footwear, while advanced disease requires plastic surgery after prolonged elevation of the affected leg (Price 1975). The disease can also be completely prevented if those living on irritant soil wear shoes consistently from early childhood (Davey, 2007).

Soft 'water-bag' swelling in a 20-year-old man.
Photo: Ewenat GebreHanna.

Moss, nodules and ankylosis of the ankle joint in 50-year-old man. Photo: Gail Davey.

Nodules, moss and shiny 'band' compression by sandal.
Photo: Gail Davey.

In wolayta the strong belief of the disease to be hereditary has made people to think that the disease is unpreventable. According to the society the best method to prevent the disease from appearing is to avoid marriage with those who have patients in their family. Otherwise if the condition is found within the family only the lucky one will escape from having the disease. The other way to prevent the disease is to avoid events that may predispose to acquiring the disease. Some of these are going into the forest, steeping on evil spirited items and direct and indirect contact with patients (G/Hanna, 2005).

According to recent research conducted by Berket (2008) in wolayta zone shows that the majority of the community has knowledge of that good personal hygiene and wearing shoes could prevent the disease.

The majority of community members have an experience of shoe-wearing at least once in their life time. According to the researcher contrary to this, only 55.2% of the total research participants were wearing shoes during the interview session. The most common reason given for not wearing shoes were; being unable to afford shoes, shoes being uncomfortable to walk and work in, having difficulty finding the correct size , experiencing an unpleasant smell from shoes, wishing not to surprise the community by wearing shoes, and not having shoes (Bereket, 2008). From this we can see the high vulnerability of the community to podoconiosis.

2.5 Belief on Treatment of podoconiosis in wolayta community

Podoconiosis patients seem not to have range of options for the treatment of their condition. The most agreeable option for the treatment of the disease is the Mossy Foot Treatment and Prevention Association treatment site, which is a relatively new project in the area (Mossy Foot brochure, 2002).

And also some patients visit holy waters and herbal treatments but for a very short session. The 'coffee', which is prepared in the locality using coffee tree leaf and spices like garlic, black cumin, rue, lemon grass and sacred, basil is used during attacks to relieve pain. Patients claim the 'coffee' to be a good painkiller especially to relieve the cramps they encounter during cloudy days (G/Hanna, 2005).

2.6 Physical and Psychosocial Impact of Elephantiasis

Information on psychosocial impact of podoconiosis is scarce. Therefore in this study literature related to psychosocial impact of podoconiosis taken from research conducted in lymphatic filariasis. Lymphatic filariasis or Elephantiasis is caused by several rounds, coiled and thred-like parasitic worms belonging to the family filaridea; these parasities after getting deposited on the skin penetrate on their own or through the opening created by mosquito bites to reach the lymphatic system whereas podoconiosis is caused by the absorption of ultrafine silica particles from the soil through the skin of the feet. The chronic manifestations of filariasis can have significant, and often very negative, social impact (WHO, 2007). The chronic disabling manifestations of this disease, including lymphoedema of the limbs, breasts and external genitalia, have a profoundly detrimental effect on the quality of life of the affected individuals. The degree of social disability varies between cultural settings, but the degree of stigmatization appears to be directly correlated with the severity of the visible disease (www.who.int/bulletin/ volumes/85/6/ 06-031047/en). In conservative contexts, affected individuals avoid seeking treatment for fear of drawingattention to their condition. Failure to treat the disease results in recurrent acute febrile attacks and progressive damage to the lymphatic system. Without access to simple hygiene advice, sufferers are unable to prevent further progression of the outwardly visible complications of lymphatic filariasis (WHO, 2007). Similarly, people with podoconiosis bear social problems as discussed earlier and almost all people with podoconiosis seek treatment at advanced level. This in turn decreases the chance of controlling or reversing the disease at early stage. At late stage podoconiosis is almost irreversible and incurable (Fasil, 2005). This phenomena is elaborated in the work of Breket (2007) that the proportion of podoconiosis patients accessing treatment facilities in each woreda, in wolaita zone range from 1%-30%. And almost all patients seek care at advanced level. Initially they try to conceal themselves so others do not recognize them and no stigma and discrimination will occur to them (Bereket, 2007). Price recognized podoconiosis as non-filarial elephantiasis. Both filarial and non-filarial elephantiasis are an important public health and socio-economic problem worldwide. Therefore the summary of psychosocial impact of lymphatic filariasis also works for podoconiosis patients since both are similar in many aspects as discussed above and are a psychosocial burden to the sufferers. Here are some of the summaries about major physical and psychosocial impacts of elephantiasis.

2.6.1 Impact on activities of daily living

Physical impact is very evident to the victims and because of the manifestations of edema especially in the lower extremities, resembling like the feet of an elephant, making it more difficult for them to move around and do their activities of daily living. Most of the victims also experience thickening of the skin and having undesirable odor. Because of these manifestations, they are often not employed or cannot walk in the farm thus making life a day to day struggle (WHO, 2007).

Recent research conducted in Sri Lanka showed that elephantiasis patients reported difficulty in walking, in doing housework due to the swollen limbs, and the severe types of the disease associated with difficulty in standing and using the toilet. The other activities that patients reported difficulty in performing were climbing stairs, walking uphill, drawing water from well, getting into bus, holding railing in a bus, sitting and lifting heavy objects (Wijesinghe et al,2007).

Similarly podoconiosis cases suffer from impaired health status. The disease does not directly cause death but complications arising when the disease advances are debilitating. Swollen legs and other parts frequently get infected and lymphatic obstruction limits movement. The public health and socioeconomic importance of podoconiosis in rural areas is indicated by its debilitating effects, which prevents more severely affected persons from pursuing farming and other activities and most patients become beggars. The gross deformity, swelling, repeated ulceration and secondary infection make the swelling severe and decrease quality of life. Besides people with podoconiosis, when the disease advances, become less productive and pass working time at home or in bed. This predisposes them for psychological problems like sense of incapability and others (Desta et al, 2002, Fasil T., 2005, G/Hanna, 2005).

2.6.2 Interference with activities

Students with elephantiasis reported that the disease interfered with their education. This was mainly due to the patients feeling that their fellow students rejected them(less friendly/isolated/no spontaneous invitation to join in group activities) and resulting them not following classes regularly (Wijesinghe et al, 2007).

The severity and the frequent attacks of podoconiosis have an impact on the school performance of patient students. Students are obliged to miss classes and even to drop out of school for a year and more due to their illness. The reaction of other students in the classroom whenever patients have difficulties with their legs during attacks, which is mostly associated with bad smell, have contributed to the low performance of student and has caused some of the students to drop out of school. The things that are found outside of school; the perception of the society to patients has made students to be hopeless in their education. Podoconiosis affected students are perceived to be unsuccessful and they are taken as a reference for bad performance (G/Hanna, 2005).

And according to Wijesinghe et al (2007) Employed patients repeatedly reported that the disease interferes with their occupation due to the swollen limb/s. This was in the form of loss of work time, inability to do heavy work, stigmatization, being penalized by supervisors and co-workers and being given less overtime work. And survey carried out on currently employed, unemployed and retired in Sri Lanka, claimed they lost their jobs due to elephantiasis. Most of those who had lost jobs were laborers doing heavy works, but also included a photographer and an artist who had to give up their professions due to upper limb swelling and army personnel who had to give up active combat due to lower limb swelling (Wijesinghe et al, 2007).

Elephantiasis also interfered with religious activities in Sri Lanka. This was due to inability to squat to worship in Buddhist temples, as well as being reluctant to go to places of worship for fear of others noticing their swollen limb (Wijesinghe et al, 2007).

Leisure activities such as sports and other recreational activities were also affected due to the physical difficulty in doing such activity as well as feeling shy to interact with peers (Wijesinghe et al, 2007).

2.6.3 Interactions with Society

One of the major problems elephantiasis patients' faces is difficulty to get along with the community, friends, and work mates. They felt that they were totally rejected by society (laughed at, not included in social activities, isolated). Even within their own families patients had problems interacting with them (Wijesinghe et al, 2007).

Wolayta society has a strong social norm the society sticks together during day-to-day activities. The social events like funerals, weddings and market are the measures of social acceptability in the society. Who will be together during social event is determined by the social position of individuals in the society. Podoconiosis patients are treated differently during such occasions. They are isolated from the rest of attendants. They are given a separate seat and they are served food in isolation. Their plates will be taken care of separately so that the disease is not going to be transmitted to others (G/Hanna, 2005). According to the research conducted by G/Hanna, put the experience of podoconiosis patients' social experience as follows; first of all there is a status for social life. Social relations are made between healthy individuals not with someone poor and crippled. Even if they wanted to do it the society would not allow the patients. Because nobody will give them place in the social life, don't consider them as a human being and they are seen inferiorly they don't have a chance other than being sorry of their bad luck. They live their life wishing their death. They say 'God why don't you kill me?' This differential treatment of patients is strongly associated with the stage of disease the patient have. Those with early stage and middle stage disease are more comfortable as compared to those with severe and advanced disease. This is because those with the early stage can conceal their condition. Apart from the isolation of patients by the society, they also isolate themselves. This is to avoid painful remarks and comments forwarded by others towards them. This may be due to the bad experience of patients in the past or the experience they see on other patients. The isolation has an impact on the social performance and their psychology. This is reflected on how they deal with others by self-isolation during social events and in school.

Although patients are members of different social activities they don't have equal representation in events. In 'Idirs' where everyone is a candidate for leadership patients are less likely to serve as leaders. This is because of the physical and financial position of patients in the society. And the other problem is healthy people are not willing to elect patients as leaders taking the disease into consideration. Although patients believe that they are capable of working healthy neighbors will not take that into account (G/Hanna, 2005).

And podoconiosis pateints face problems related to interaction with society in this way, too; the name given for the diseases is one of the worst insults in the locality (Bereket, 2007). Podoconiosis patients bear social burden whose cost is very expensive. For example, the most common reason about cause of the disease held by wolayta community is hereditary. This belief makes difficulty on arrangement of marriage between the unaffected members of a community and affected members of a community because the unaffected community members do not allow marriage between families of podoconiosis patients. Another misconception that makes interaction difficult is that the belief the unaffected members of general community have about physical contact. According to research the community believes that direct contact with the patients such as sleeping together and sharing footwear, and indirect contacts such as having accident with sharps like needle that have been used by patients transmits the disease(Price,1974). Because the community believes direct and indirect contact is the potential cause of the disease they avoid direct and indirect physical contact with the patients. This in return hampers smooth social interaction between affected community members and unaffected community members. In wolayta community as stated above in any social event podoconiosis patients are given a separate seat and they are served food in isolation. Their plates will be taken care of separately so that the disease is not going to be transmitted to others. Only few people believe protective footwear can prevent the disease (GebreHanna, 2005).

The other widely held belief by the general community in wolayta zone that makes interaction even worse is the belief about prevention mechanism of the disease. To avoid events that may predispose them to acquiring the disease people perform different traditional mechanisms. Some of these are banning going in to the forest, stepping on evil spirited items and forbid direct and indirect contact with patients (GebreHanna, 2005). For example, the belief of avoiding direct and indirect contact as a possible way to prevent podoconiosis disease makes interaction more difficult because people avoid any form of contact with patients for fear of contracting the disease.

And also according to recent research conducted in wolayta zone by Berket (2008) shows the existence of intense stigma towards podoconiosis patients. The attitude of the community towards podoconiosis patients is stigmatizing and discriminating (Berket, 2008). His research findings support the premises. Some of the major findings from his research illustrates that more than fifty percent (50%) of the research participants told him that they would not eat with someone with podoconiosis case, 35% said that they would not buy items from someone with podoconiosis, 48.8% responded that they don't believe that people with podoconiosis can perform work like anyone else. Generally all the above discussed points show the intense stigma podoconiosis patients face in wolayta community and interaction problem they have due to disease.

2.6.4 Martial and Sexual problems

Moreover, chronic manifestations of Filariasis can have a significant, and often very negative, social impacts. It has a profoundly detrimental effect on the quality of life the affected individuals that even marital and sexual problems will be a big issue in relation to this disease (Wijesinghe et al. 2007). The majority of patients have sexual and marital problems respectively, which they attribute to their swollen limbs.

The marital problems varied from the spouse nagging and being unsupportive towards treatment to totally rejecting and avoiding all physical contact with patients (Wijesinghe et al, 2007).

One of the difficulties of podoconiosis patients in wolayta is during marriage arrangements. Due to the strong belief of the society that the disease is hereditary willingness to marry podoconiosis patients is nil. The problem with marriage is not only limited to the patients themselves. It is also reflected on patients' families. This is expressed by the way people dig into the family history for the evidence of podoconiosis before any marriage arrangement (G/Hanna, 2005). In wolayta community no matter healthy he/she is during marriage the family history of podoconiosis matters more than anything.

According to WHO (2007) women bear a double burden in societies where much of their role and identity is dependant upon marriage and the ability to give birth to children. Young unmarried women with elephantiasis may be forced to lead a reclusive existence in an attempt to hide their illness or because their limited marriage prospects make them a burden to their families (WHO, 2007).

The patients opinion was that these problems were either solely or mainly due to their swollen limb/s. It was seen that more females than males reported marital and sexual problems. This was not surprising as males are generally less reluctant to admit and discuss their problems, while females are more responsive towards admitting these issues and discussing them. Similar problems such as unsuitability for marriage, sexual dysfunction and divorce attributed to the elephantiasis have been reported in many studies (WHO, 2007).

2.6.5 Patients' feelings regarding the swollen limbs

Another major problem elephantiasis patients experience includes Emotional as well as Spiritual. In addition, affected individuals avoid seeking treatment for fear of drawing attention to their condition. Failure to treat the disease results in recurrent acute febrile attacks and progressive damage to the lymphatic system. Without access to simple hygiene advice, sufferers are unable to prevent further progression of the outwardly visible complications of Filariasis (Wijesinghe et al, 2007).

The majority of sufferers perceived their swollen limbs as being a problem affecting their lives and had varying feelings regarding it. Some reported feelings of depression, of which some have suicidal thoughts. The other feelings or concerns expressed were inconvenience in always having to wear long garments to hide the swollen lower limbs, inability to wear normal foot wear, feeling of being a burden to the family, inability to do a job, intense fear of being rejected by society, worried about not being able to get married due to the swollen limb and that their whole life changed due to the illness. And majority of the patients feel lonely and isolated because of the swollen limb (Wijesinghe et al, 2007).

2.7 Psychological distress and suffering due to elephantiasis

Here the researcher review research findings conducted on effect of sever cases of elephantiasis on the psychological functioning of Dominican Women's'.

The psychological states of Dominican women with chronic elephantiasis of the leg investigated by Bobbie et al (2008) and according to the research finding Women of all ages described a pervasive sense of psychological distress. Themes of psychological distress that emerged were embarrassment and shame; sadness, depression, and fear; personal and social losses; social isolation; enacted stigma; and hopelessness and despair (Bobbie et al, 2008). Even if the research deals on exploring the Dominican women's psychological sates it is much helpful to explore and understand the situation of all patients; especially the psychological burden of the patients. Above all it can give us insight and framework about the psychological problems faced by podoconiosis patients'.

2.7.1 Embarrassment and shame

A common experience of elephantiasis patients according to the study in Dominican Republic was embarrassment associated with the disfigurement of the leg. Even women with less severe stages of disease described being ashamed of their legs as follows: "Everyone says something about my leg. 'Look at your ugly leg! Is your leg getting somewhat relieved?' I get so embarrassed." Women also described embarrassment related to their inability to wear shoes or specific types of clothing: "I can't go out because I can't put my shoes on. My clothes don't fit, my pants don't fit, and my shoes don't fit. It makes me so depressed!" Women described experiences of being teased, as well as feelings of shame associated with embarrassment and fear of discrimination. A few women described teasing from adults, but generally children teased them: "Sometimes the children in the street mock me. Sometimes they say, 'Hey, look, she has a fat leg bigger than the other,' but they don't call me really bad names." Most women had internalized feelings of shame: "Sometimes I don't walk. I hide my leg. I am ashamed. I have one good leg and the other bad. I can't even look at other people's legs. My leg is so fat." Women particularly tried to hide the condition in social situations: "I feel bad. Some people can look normal when they are sick: but in my case that does not happen. People look at me as if they were looking at something strange, very, very strange, something they have never seen" (Bobbie et al, 2008).

2.7.2 Sadness, depression, and fear

All women described being depressed at some point: "Honestly, how am I not going to feel sad? I very get depressed and it goes deep. I am always anxious." Other women expressed specific fears that created emotional distress and depression: "I think that my leg is going to explode or maybe they will cut my leg off. I cry so much. My tears are many. I am so afraid." and also women added by saying: "Well, I get really depressed when I am sick with the leg. When I have a crisis, I think there is no escape from this leg. I buy so many medications and nothing helps." (Bobbie et al, 2008).

2.7.3 Personal and social losses

According to the research finding Women expressed loss across multiple domains of their lives, many of which help them define themselves as women in personal and social ways: "I have many emotional losses. My intimate relations with my husband have decreased because I just don't feel well. There are many things that have decreased." Many women grieve a loss of normalcy: "I am sad because I always have to wear pants. I feel so depressed because I can't make my life normal. My life has changed a lot. You feel sick all the time. Doctors don't know what you have. It is not the same to feel like a healthy person as opposed to a sick person. It is such deep sadness that you can't imagine." Women also expressed sadness over loss of occupational roles: "It is very bad because I am rarely gone to my business anymore. I cannot spend too much time standing up. My legs are so swollen. It is sad for me." Some women even revised their occupational roles by labeling themselves as sick: "I don't dedicate myself to anything because I am a sick person. What am I going to dedicate myself to?" The loss of function often resulted in a loss of independence and contributed to social losses as well: "You cannot just get up and go for a walk by yourself. You have to have help. I am changed now. I don't go on outings anymore. It makes me sad." Social Isolation While functional loss, embarrassment over the disfigurement of the leg, and lack of appropriate footwear were most often described as reasons contributing to social isolation, women also described other situations: "My other daughters treat me badly. They don't look at me because of this disease. I feel bad because they don't treat me the way they treated me before. They don't help me. They stay away. I think they are afraid or repulsed. Because of this disease, they don't love me." Although other people isolated some women, other women isolated themselves: "I feel sad. I don't go out unless it's really necessary. I am always locked up. I don't like people looking at my legs. I feel very depressed and sad. I get drunk around here sometimes. I am alone, and I don't spend time with anyone anymore."(Bobbie et al, 2008).

2.7.4 Enacted stigma

Bobbie et al (2008) showed how a few women in Dominican Republic described examples of discriminatory experiences known as enacted stigma as follows: "Approximately 2 months ago, I felt very bad. My self-esteem was on the floor because of a specific person. A person who does my pedicure and manicure suddenly told me she was risking herself when she did my feet because I had a contagious disease. She told me this in front of several people and made me feel so bad and embarrassed." The stigmatizing situations described by women were most frequently associated with fear of contagion: "A nephew of mine called me smelly at a family reunion. And my son said I had a rotten leg and rejected my attentions. He said he was afraid of it. I had to find someone to tell him that it was not contagious, but he didn't believe it." Women more often described examples of perceived and felt stigma, which often are internalized feelings associated with embarrassment and shame.

2.7.5 Hopelessness and despair

For some women their situation was so psychologically distressing that they felt hopeless and described great despair: "Sometimes when I am depressed, I start to think, 'Can it be that God does not remember me?'" Some women felt that their entire lives centered on their leg: "I have felt desperate. I feel so sad that it commands my life. I am hopeless. I think that medicine will not find a cure for me." Women even described thoughts of wishing they were dead: "I have thought sometimes that it would be better to be dead because then I can stop suffering." (Bobbie et al, 2008).

2.8 Impacts of podoconiosis in health and life

2.8.1 At individual level

Podoconiosis cases suffer from impaired health status. The disease does not directly cause death but complications arising when the disease advances are debilitating. Swollen legs and other parts frequently get infected and lymphatic obstruction limits movement. The public health and socioeconomic importance of podoconiosis in rural areas is indicated by its debilitating effects, which prevents more severely affected persons from pursuing farming and other activities and most patients become beggars. The gross deformity, swelling, repeated ulceration and secondary infection make the swelling severe and decrease quality of life. Besides people with podoconiosis, when the disease advances, become less productive and pass working time at home or in bed. This predisposes them for psychological problems like sense of incapability and others (Desta et al, 2002, Fasil T., 2005, G/Hanna, 2005).

2.8.2 At community and national levels

The magnitude of podoconiosis indicates that podoconiosis is a major public health and economic problem in Ethiopia. The presence of so many disabled adults in a largely subsistence economy represents a considerable drain on limited resources to provide food and shelter. At advanced level the disease forces patients to become highly dependent on others. They have little options left as they can not involve in routine agricultural and other activities. The high prevalence of the disease calls for investment and intervention. Developing countries like Ethiopia will be tempted to allocate limited resources to podoconiosis. But it is true that the incapacitating and debilitating effect of the disease could have detrimental role on development of the country (Price, 1974, Price, 1983, and G/Hanna 2005).

2.9. Health professionals' knowledge, beliefs, perceptions and practices toward podoconiosis

Although the disease is widespread and well known in Wolayta society, health professionals from different health facilities that render service to the community have misconceptions about the cause, prevention and treatment of podoconiosis. This reflects lack of awareness about the disease. All the health professionals who participated in a qualitative study believed that the disease is infectious and is transmitted by a vector like that of filariasis. The word 'elephantiasis' was the name used by health professionals to indicate the disease. They were found to have mistaken the disease for filariasis, onchocerciasis, and schistosomiasis.

They also believed that there is medical treatment for 'elephantiasis' which was not accessible in the Wolayta Zone. They also suggested that to prevent the disease, monitoring and controlling the breeding site for the vector, i.e. mosquito, is essential. According to them vector control mechanisms that can be applied at the stage of larva or adult could avert the spread of the disease (Desta et al, 2002, Fasil, 2005, G/Hanna 2005).

2.10 Theories related to stigma and discrimination

Stigma is a mark of disgrace that sets a person apart from others. When a person is labeled by illness he/she are no longer is seen as an individual but as part of a stereotyped group. Negative attitudes and beliefs toward this group create prejudice which leads to negative actions and discrimination. (Western Australia Department of health, 2009).

Stigma = Stereotyping ⇨ Prejudice ⇨ discrimination

There are a number of approaches to the explanation of why stigma and discrimination develops in a society. The major one's are:

2.10.1 Psychoanalytic theory

As Govia and Kushwa, psychoanalytic theory argued that certain personality traits may incline people toward some form of prejudice (as cited in Waganesh Abeje, 2004). From this theory I am interested to give emphasis the Freudian defense mechanism, specifically to projection. According to Freud projection is transferring unacceptable motives or impulses to others. For example, a man who feels a strong hostility toward a neighbor perceives the neighbor as being hostile to him. When I see this theory model from podoconiosis patients point, the general community may not recognize their act of discrimination. The podoconiosis patients' inability to participate in local meeting or social gathering or being excluded from school may not be seen as caused by the unaffected people or society rather it is projected towards podoconiosis patients. Rather than acknowledging the hostility or stigma towards podoconiosis patients, the general community may say instead podoconiosis patients are hostile towards them.

2.10.2 Identity theory

This theory suggests that we have a need for distinctiveness of social identity. We favor our in groups to the exclusion of others (scott, 2000). Thus we tend like able and successful and to favor members of our in groups at the expense of out group members because of the boasts or self esteem. From this point of view, podoconiosis patients are easily identifiable from others because of their big leg. Therefore, they may easily exposed to stigma and discrimination for two reasons (1) they radically depart from some societal standard of beauty (2) they may be viewed as burdens to themselves, their families and to society as a whole (Michael,2005).

2.10.3 Social psychological theory

- **Direct inter group conflict: competition as a source of prejudice**

It is an axiom of life that the things that people value most such as goods, jobs, nice homes, high status, education, are always in short supply. This serves as the foundation of the oldest explanation of prejudice called realistic conflict theory. According to this view prejudice stems from competition among social groups over valued commodities or opportunities. In short prejudice develops out of the struggle over jobs, adequate housing, good schools and other desirable outcomes (Minaye, 2005).

- **Social categorization: The 'us' versus 'them' effect**

People generally divide the social world around them into two distinct categories us and them. Social dominance theory is a cause of prejudice. Social dominance theory assumes that societies tend to be organized in hierarchies, with some groups at the top and others at the bottom. Some individuals especially high in it choose to enforce the hierarchy by serving in positions of authority (Minaye, 2005).

- **Early experience**

The role of social learning is crucial. We learn whom to hate and when to hate at different instances. In our own families, neighbors, ethnics, or country level we are told to like or hate this or that ethnic group, this or that religious group, this or that political group, this or that type of occupation and so on (Minaye,2005).

2.11. Coping

The definition of coping implies different conceptual issues Folkman (2004), in the coping and health research has developed the following three concepts. First, depending on what the person is dealing with, coping is a dynamic process, not stable but under goes changes, thus its flexibility nature is a challenge for researchers. Second, coping is multi dimensional because its measures include various kinds of problem-and emotion-focused coping. Third, coping scales most often inherently lack internal consistency unlike in the measures of other constructs, such as attitudes.

According to Google website coping in psychology is:

- The process of managing taxing circumstances, expending effort to solve personal and inter personal problems, and seeking to master, minimize, reduce or tolerate stress or conflict.
- The psychological process following any stressful situation.
- The process by which people try to mange the stress they experience.

The nature of coping, at times, is flexible and as described by skinner and Wellborn cited in Sutton (2004), 'coping is an organizational construct that describes how people regulate their own behavior, emotion, and motivational orientation under conditions of psychological distress.'

As Lazarus (1993) cited in Santrock (2002), believed that two general types of coping can be distinguished, problem focused and emotion focused. In problem focused coping, individuals squarely face their problems and try to solve them. In emotion focused coping individuals respond to stress in an emotional manner, especially calling on defense mechanisms.

In the podoconiosis situation, an example of problem focused coping may be to seek information about treatment options and concentrating on the strength they have than concentrating on their legs situation. On study conducted in Dominican Republic woman showed how they employ problem focused coping in the face of challenge in this way;
One woman described her philosophy: *' 'life doesn't have anything to do with a leg. I saw a girl on television, a girl who was born without arms and only one leg, and she studies computer and dance. Do you think that I would like to commit suicide because of my leg? Impossible! I have legs and walk wherever I want (Bobbie, 2008)!*

And seeking medical treatment and information about their disease is also problem focused coping mechanism. Woman expressed hope for new information and treatments: *"I had been so depressed because I hoped for a cure. Now I am feeling better because the doctor gave me information about this condition. Before, I did not know anything. I hope for more (Bobbie, 2008).''*
And some elephantiasis patients employ assertive way to mange the stress they face. They assertively manage situation that are particularly hurtful. One woman of elephantiasis patient said as follows;
''the other day someone told me that in order for me not to suffer anymore I should cut my leg off. I told him that was stupid and hung up the phone on him (Bobbie, 2008)!''

Thus, in emotion-focused coping, individuals might avoid the problem or deny it exists, rationalize when happens or laugh about it. It would also include calling a close friend to discuss about the challenge they have or to share feelings with others (Lebim, 1997).

Some of emotion focused coping mechanisms employed by patients include;

Concealment

The initial response of the patients is to hide about their disease from their family and other community members. In relation to this idea Heijnder (2002) said that in trying to conceal their disease, people employed several strategies to avoid attention. This coping mechanism was supported by a research conducted in wolayta zone by Berket. According to him initially podoconiosis patients try to conceal themselves so that others do not recognize them and no stigma and discrimination will occur to them (Berket, 2007). Further investigation also proved that patients use concealment as coping mechanism. According to GebreHanna (2005) the differential treatment of patients is strongly associated with the stage of disease the patient has. Those with early stage and mild disease are more comfortable as compared to those with severe and advanced disease. This is because those with the early stage can conceal their condition.

Avoidance, Denial, and Wishful thinking

Avoidance may include physical (displacement) and social avoidance of situation and denial or minimization of prejudice and discrimination is another form of emotion focused coping mechanism (ji and Savnderson, 2003).

Avoidance coping involves physical and/or social withdrawal. For example, the persons whose disease was exposed to other community members adopt a strategy of covering. They took all possible steps to reduce the saliencies of their stigma for others. To do so, they may displace their home place and try to avoid steam-tented situation. This avoidance often goes hand in hand with selective affiliation with other persons affected by the same disease.

If these people can't avoid or find alternatives to situations in which stigma may create stress, they may withdraw socially. For example, they may avoid comparing themselves with nonstigmatized people. In relation to this idea Waxler (1981) said that by avoiding social comparisons without group members, stigmatized people are able to avoid the stress that might otherwise result from acknowledging that others are doing better than they are.

Another type of managing stress inducing situation is denial or minimization of prejudice and discrimination. Heijnder (2002) demonstrated that stigmatized people do not make claims of discrimination even when the objective evidence points strongly to the possibility that the poor outcomes they have experienced were due to prejudice. This is a strategy to mange the stigma, because it avoids stress by denying the existence of the problem.

There may also be an element of wishful thinking in minimization of prejudice effects. The belief that others have behaved in a discriminatory fashion robs stigmatized people of the sense that they can control and be socially accepted by others. One way to cope with these unsetting perceptions is to wish that those with power are kindly disposed toward stigmatized people and therefore would not discriminate against them (Ashanalla, 1987 cited in Waganesh 2004).

Humor

Sometimes elephantiasis patients use joking on their leg as a coping mechanism and they feel better when they joke on their leg (Bobbie, 2008).

According to Bobbie (2008) elephantiasis patients used humor to cope one woman put her experience as follows: "*When people laugh at me, I cooperate with them because if I don't they'll continue making fun of me. So if they ask, 'Why is your leg that fat?' I say it's because it ate lot and is now very full. Then they move on (Bobbie, 2008).*''

Prayer and religious rituals

Another emotion focused coping strategy Elephantiasis patient's employ to manage the stress they encounter is prayer and religious faith (Bobbie, 2008). According to Bobbie (2008), he put how woman use prayer and religious faith as coping mechanism as follows from their perspective ''*.........then I decided to leave it up to the Lord because the Lord can fix everything.*" Women across all stages elephantiasis gained strength to cope from religious faith: "*I am a woman who prays a lot. The people who have faith in God and live through prayer don't let themselves be dominated by the depression. Even if it takes over you, one tries to reject it with God's help.*" Even when teased, women used faith to cope: "*When I notice that they want to tease me, I take my Bible and start reading it. That's what I do.*" Some women, accepting of their condition, used faith to cope with their limitations and to provide hope for improvement: "*The Lord gives me the power always. I hope he helps me get better and gives me the strength to walk to church again. I ask the Lord for my health.*" A number of women considered the possibility of a future miracle: "*If the Lord wants, he can give a miracle to anyone. All you have to do is have faith.*"

Podconiosis patient also use holy water as a way to cope the challenge they face in wolayta community (G/Hanna, 2005).

Emotional support of family and friends and taking care of others as a coping strategy

When coping with podoconiosis, as with other major life stressor, seeking social support is an important coping mechanism used by patients by discussing the challenge they encountered and friends and families can provide important empathy, sympathy and compassion (Bobbie, 2008).

To put an example from the work of Bobbie how getting social support helps them feel better and helps them to manage the stress as follows;

One woman explained this coping mechanism as follows: "*My husband comforts me, my neighbors give me advice, people come to pray and they give me advice. Always they are there for me.*" Some women identified their affiliation with close neighbors and friends in preventing social isolation and assisting in problem solving: "*Thank God I don't get isolated by the people I work with. On the contrary; they try to help me find solutions for my problems. They tell me, 'Go to the doctor,' they always have me on their minds.*"

Some women participated in research conducted in Dominican Republic described caring for others as a coping strategy: "*I have this little glass case with little treats and juice in it so I can earn some money. I have always wanted to take care of my children and because of that, I try to work despite this condition (Bobbie, 2008).*"

Support from others with the same condition

Attending support groups or self-help groups, voluntary groups whose members combine their energies and effort in an attempting to cope with or over come a common problem, can foster a feeling of we are all in this together that can help diminish a feelings of social isolation and loneliness (Leiblum, 1997).

Similarly Bobbie (2008) showed how women elephantiasis patient employee helping each other in the same situation as a coping mechanism of their challenge. They get relief by discussing and supporting each other in the same condition. Occasionally woman would talk about the need to support other women with this condition: "*We cannot lose hope; we should be lifting each other's spirits. I am not ashamed of anything, and, of course, people will always talk. But we cannot pay attention to them because then you get sad and you feel more ashamed. Those of us with this problem, we should help each other (Bobbie, 2008).*"

And another emotion focused coping mechanism elephantiasis patients employ to mage the stress they face is by comparing their condition with others who had conditions worse than their condition. This mechanism helps them to feel better.

One woman said: '' *every time I go out, I see people with worse condition than mine; those are things that comfort me (Bobbie, 2008).*''

For the most part, coping is better when it involves problem focused coping that involve active problem focused planning, networking, and information seeking while self or partner blaming and avoidance/ denial are counter productive and ultimately destructive (Brodzinsk, 1990).

Chapter Three

Methods

3.1 Research Design

This study was conducted on podoconiosis patients to examine psychological and social problems associated with it. In order to attain the stated objective, both quantitative and qualitative data collection instruments were employed. In the case of quantitative data, a set of questionnaires that include both close and open-ended questions were used. And qualitative data were elicited by using interview in order to explore and put the findings from participants' point of view. Therefore, both questionnaires and in depth interview were used as tools of data collection.

3.2 Study area/setting

The study site was wolayta zone. It is one of the zones in southern Nations Nationalities and People's Region (SNNPR). Wolayta zone has twelve woredas. It is among the densely populated zones in the region (CSA, 2009). The main source of livelihood for wolayta people is agriculture followed by trade. The language spoken in the zone is Wolayta Language, which is one of the languages in the *omotic* family. This research was conducted in Mossy Foot Treatment and Prevention Association outreach clinics. The researcher selected these clinics based on the following reasons: MFTPA is the only organization that gives treatments to podoconiosis patients and many patients in the zone use the service of MFTPA much of which is available for free or at a nominal fee.

3.3 Population

The population of the study was podoconiosis patients in MFTPA outreach clinic. There are 240 patients registered in the patient register in the outreach clinics during the study time.

3.4 Participants of the study

The participants of the study were podoconiosis patients in the outreach clinic who attended MFTPA treatment serviced at the time of data collection. To select the outreach sites the probability sampling technique was employed. Since it was quite impossible to incorporate all the patients coming to get treatment in all the outreach clinics, four outreach clinics among the eight outreach clinic sites were selected using simple random sampling through lottery method. Namely; Bombay, Gesuba, Gununo, and Boditti outreach clinics were selected.

Subjects were selected from four MFTPA out reach clinics during the study period that was conducted for two and half months. Each patient was selected from a daily patient register document by employing systematic sampling method. It means out of 240 patients registered in the outreach clinic 50 %(120) were selected by employing systematic sampling. 120/240=1/2 proportion-every second patient from the list were selected. And 12 purposively selected patients participated in the face-to-face interview. The 12 patients were selected based on considering their age range (all age rages included), economic activity, and their severe negative experience.

3.5 The research instrument

In order to gather data a pre-tested, interviewer administrated questionnaire comprising mainly close-ended questions and some open ended questions was used. In addition to questionnaire as instrument of collecting data quantitatively, a face-to face in-depth interview was conducted in order to get data from participants view point that support the data elicited from a set of questionnaire. Those questions addressed to participants in the form of interview included; demographic characteristics, social problems and questions related to coping mechanisms and integration problem faced by podconiosis patients. A total of 12 podoconiosis patients participated in the face-to-face interview by recording their voices using a tape recorder.

A structured questionnaire was used for the quantitative survey. The first section of the questionnaire was seeking information related to socio-demographic issue. The second part included questions developed by the researcher to assess the social life of the podoconiosis patients. To assess the psychological problems faced by the patients a standardized test was administered; these included,

A. The Rosenberg self-esteem scale

The Rosenberg Self-Esteem Scale (RSE; Rosenberg 1965) was used in an attempt to achieve a unidimensional measure of global self-esteem of podoconiosis patients. It was designed to be a Gutman scale, which means that the RSE items were to represent a continuum of self-worth statements ranging from statements that are endorsed even by individuals with low self-esteem to statements that endorsed only by persons with high self-esteem. Rosenberg (1965) scored his 10-question scale that was presented with four response choices, ranging from 'strongly agree' to 'strongly disagree'. Multiple studies have been conducted to investigate the validity and reliability of the RSE. And their results have shown that the scale is a valid and reliable unidimensional measure of self-esteem.

The score ranges from 0-30. Those scores below 15 were indicating low self-esteem; scores between 15 and 25 was considered as normal, and those scores above 25 was high self-esteem (Rosenberg, 1989). With regard to scoring, the scale ranges from value of 3 to 0 i.e. SA=3, A=2, D=1, SD=0.

B. Measuring mental distress

The Self Report Questionnaire was used for data collection in this study. This instrument was developed by the WHO to screen for psychiatric disturbance in primary health care settings in low-income countries (WHO, 1994). The SRQ is not expected to diagnose mental illness but was designed to indicate mental distress. It is used as a first-stage screening instrument for the second-stage clinical interview.

The SRQ20 reflects the multidimensional nature of 'mental illness' and has been used as both a mental health screening instrument at an individual level, and as a way in which depth and dimension to their studies of broader social health issues, including: social exclusion (Hamid, 2001).

In 1993, the World Bank and the World Health Organization (WHO) produced a new method for measuring the burden of ill health, which not only considered mortality but also took morbidity into account (World Bank, 1993). This new form of analysis ('Global

Burden of Disease') raised the profile of mental health because it found that mental health problems, although directly causing very little mortality, are responsible for a significant share of morbidity. The WHO formally recommends the SRQ20 studies and reports the validity and reliability of the instrument (WHO, 1994).

The SRQ was used for data collection in this study. This instrument was developed by the WHO to screen for psychiatric disturbance in primary health care settings in low-income countries (WHO, 1994). The SRQ is not expected to diagnose mental illness but was designed to indicate mental distress. It is used as a first-stage screening instrument for the second-stage clinical interview

The questions ask about features of common mental disorders, particularly anxiety and depression. The instrument had 24 items and was originally known as SRQ-24. Four of the items were meant to identify probable cases of psychotic disorder, but were excluded from the questionnaire after several validation studies because of very low sensitivity. SRQ-20 is now the most widely used version of the instrument and was used in this study. SRQ was supposed to be self-administered, with 'yes' or 'no' response to each question. However, because of the high illiteracy rate in Ethiopia and other countries of the same status, it has been used in an interview format. This study also employed the interview method. Respondents were asked about experiencing symptoms of mental distress over the past 1 month. SRQ has been previously translated into Amharic, validated and subsequently used for epidemiological studies in clinical and community settings in Ethiopia. In the validation study of SRQ using expert clinical interview as a gold standard, a cut-off point of 8/9 was recommended for general outpatient clinic attendees and 4/5 for urban community studies (Kortman, 1988). For rural community studies 10/11 was used as a cut-off point (Alem et al, 1999). Four general coordinators working at outreach clinics were trained to interview subjects using SRQ. They conducted the interview privately after the subjects had got the treatment. And the researcher checked completed questionnaires for consistency and completeness on a daily basis.

3.6 Methods of data collection

MFTPA Approval: before the data collection was started the association was contacted through letters of cooperation from Addis Ababa University Institute of Psychology in person by the researcher to explain the research ideas. Further four outreach clinic coordinators were requested to cooperate with the researcher by assisting through out the data collection process. For all research participants, they were given explanation about the study. They were assured that they will not be identified and that all their response will remain anonymous, and they were free to choose either to collaborate in the research activity or not. And necessary clarifications on how to respond to the questionnaire were provided. The participants were encouraged to ask questions if anything was vague during the administration of the instruments and to respond honestly and genuinely.

Amharic language questionnaire was dispatched to 120 respondents who were attendants of treatment in the outreach clinic. Data were collected using a pre-tested, interviewer-administered questionnaire. All questionnaires were filled out, due to the close supervision of the coordinators and researcher.

For those participants in the face to face interview, the consent of participants was obtained prior to any recording of their voices for data collection purpose. The respondents had been informed of the right to refuse to be recorded or even withdraw their recording at any point of the research process.

The questionnaire was originally developed in English and then translated to Amharic. A professional translator who is MA degree student in Linguistic did the translation then the data was collected through Amharic. Very small number of respondents didn't understand Amharic in that case the researcher and coordinators asked them in Wolaitinga since both the researcher and coordinators well know both Amharic and Wolaitinga.

After finalizing the preparation of instruments, pilot tests were conducted, and inappropriate items were modified. The responses of pilot study respondents were coded (scored) and the internal consistency (reliability) of items was computed using SPSS (version 17.0). Accordingly, in the pilot testing the reliability check made has shown cronbach's alpha of 0.731 for social experience, 0.825 for mental distress, and 0.65 for self-esteem.

3.7 Data analysis

The completed and crosschecked data was analyzed by employing both descriptive and inferential statistics. This task was done with the help of Statistical Package for Social Scientists (SPSS version 17). Before proceeding with the actual statistical analyses, assumptions associated with the use of each of the analysis were checked. Furthermore, alpha of 0.05 was determined for all significance levels. After data from respondents coded and organized, different statistical analysis techniques were employed based on different purposes.

1. To summarize respondents' demographic characteristics descriptive statistics such as means, standard deviations, and percentages were computed.
2. Percentages analysis was employed to examine the frequency of social experience, self-esteem level, and mental distress of the patients'. And also percentages were used to examine the frequency of coping mechanism and integration problem of the patients.
3. To examine the interrelationship among variables (demographic and psychosocial), Pearson's r was employed.
4. Analysis of Variance (ANOVA) and multiple regression analysis were used to analyze the significant effect of each demographic variable on psychosocial experience and the extent of varying effects of each demographic variable on psychosocial experience.
5. Finally, the data gathered through in-depth interview were analyzed qualitatively with the use of quotation from the interview participant's point of view.

Chapter Four

Results

Different statistical techniques were employed in the analysis of variables which are included in the present study. Descriptive statistics (percentages, means, standard deviations and frequencies) were used to analyze the extent and variations of the scores of the measures considered in the study. Intercorrelations among predictor and outcome variables were computed to show the interrelationship among variables.

Analysis of Variance (ANOVA) and Multiple Regression Analysis were also employed to examine the significant effects, mean differences among variables and independent effects of each predictor variables on the criterion variable, respectively.

Finally, the interview result with selected podoconiosis patients was triangulated with the result obtained from the questionnaire.

4.1. Background characteristics of participants

One hundred twenty podoconiosis patients participated in the present study. The predictor variables were podoconiosis patients' age, sex, marital status, economic activity, educational status, and severity level of the disease. Table 1 below shows some general background characteristics of the research participants.

Table 1: Background Characteristics of the Patients (N=120).

No	Variables	Categories	No.	Percentage
1	Sex	Male	67	55.8
		Female	53	44.2
2	Age	15-19	13	10.83
		20-25	14	11.66
		26-30	36	30
		31-35	23	19.16
		36-40	18	15
		41-45	4	3.33
		46-50	7	5.83
		51-55	5	4.16
3	Educational Status	Illiterate	76	63.3
		Read and Write	3	2.5
		Elementary	25	20.8
		Secondary	16	13.3
4	Marital Status	Unmarried	59	49.2
		Married	43	35.8
		Widowed	11	9.2
		Divorced	7	5.8
5	Economic Activity	Farmer	46	38.3
		Daily laborer	2	1.7
		Hand craft	9	7.5
		Trading	43	35.8
		Others	20	16.7
6.	Severity	Stage 1	20	16.7
		Stage 2	47	39.2
		Stage 3	53	44.2

As shown in Table 1, a total of 120 podoconiosis patients were involved in the final analysis of the data. Out of 120 patients, 57 (55.8 percent) were males and the rest 53 (44.2 percent) were females.

The table above also shows that the participants' age ranges from 26-30 years 36 (30 percent) and 23 (19.17 percent) participants' age ranges from 31-35. Among respondents, whose age ranges from 41-45 were only 4 (3.33 percent). With respect to the educational status of the patients, 76 (63.3 percent) were illiterates, 25 (20.8 percent) of them are from elementary school, 16 (13.3 percent) of them are from secondary school and only 3 (2.5 percent) were able to read and write. Concerning participants marital status, the majority 59 (49.2 percent) were unmarried and 7 (5.8 percent) were divorced. With regard to economic activity, the majority of the patients were farmers 46(38.3 percent) followed by trading, 43 (35.8percent) and small number of patients were daily laborers 2 (1.7 percent). With regard to severity, the majority of patients were severely affected 53 (44.2 percent) followed by moderate level of severity 47 (39.2 percent) and mild level of severity 20 (16.7 percent).

4.2. Social experience of podoconiosis patients.

Table 2: Frequency of podoconiosis patients' social experiences (N=120).

No	Items	Agree		Neutral		Disagree	
		No	Percent	No	Percent	No.	Percent
1	I am forced to displace my home town/woreda after I become podoconiosis patient.	23	19.2	1	.8	96	80
2	I am forced to depart my family due to the disease.	25	20.8	2	1.7	93	77.5
3	I lost my friends due to the disease.	108	90	-	-	12	10
4	I have no power of decision making either in my home or in my local community for I have podoconiosis.	88	73.3	1	.8	31	25.8
5	I have equal access to attend wedding and funeral ceremony as persons who aren't victims of podoconiosis.	14	11.7	-	-	106	88.3
6	It is difficult for me to use public service such as recreation center, clinic, market etc due to the disease.	109	90.8	-	-	11	9.2
7	I don't participate in religious holy days' (meskel, epiphany, Id Al Adah etc) celebration with the general community due to the disease.	108	90	-	-	12	10
8	I face interpersonal relationship problems with my spouse/children/family/neighbors after I become a podoconiosis patient.	115	95.8	-	-	5	0.04
9	I don't like to bring myself into public meetings, social gathering, cultural practices, etc after I become a podoconiosis patient.	109	90.8	-	-	11	9.2
10	It is difficult to get an appropriate partner for marriage(if the respondent is single) and or to my children to get married to non patients' individuals or families (if they have family)	116	96.7	-	-	4	3.3
11	Unaffected community members' laugh/insult/rumor when they see me.	102	85	-	-	18	15
12	People point at me when they see me at different social confrontation.	92	76.7	-	-	28	23.3
13	I can freely share cloth or other materials with people who don't have the disease.	-	-	-	-	120	100
14	Even if my marriage still continues the love between my spouse and me is not as good as it was before I contracted the disease.	42	35	68	56.7	10	8.3
15	I have been proposed for marriage (for those boys and girls in appropriate age for marriage).	48	40	13	10.8	59	49.2

As shown in table 2, overall the social experiences of podoconiosis patients are negative except for item number one and two, in these items the number of patients experiencing displacement from their home town or home is very small compared to other types of social experiences they face. Out of 120 patients who participated in the study 96 (80 percent) are not displaced from their home or woreda after they become podoconiosis patients, and only 23 (19.2 percent) agreed that they are forced to displace their home town. Concerning whether they are forced to depart their family due to the disease, 25 (20.8 percent) have the experience of displacement but the majority 93 (77.5 percent) have not experienced displacement. Form this we observed that majority of podoconiosis patients have little experience related to being displaced their home town or family. But regarding to the loss of friends, the majority 108 (90 percent) agreed that they lost their friends due to the disease.

Table 2 also shows the question whether the participants have the power of decision making in their home or local community after developing the disease; eighty eight (73.3 percent) replied that they don't have any power of decision making in their home or local community and 31 (25.8 percent) agree that they have decision making power in their home or local community. Concerning their experience on access to participation in social ceremonies like wedding and funeral in the community, the majority 106 (88.3 percent) of the patients experienced unequal access to participate in wedding and funeral ceremonies or in other words they were not given equal opportunity to involve themselves in these social activities. Where as 14 (11.7 percent) replied that they have still had equal access to participate in wedding and funeral ceremonies. And also the majority 108 (90 percent) agreed that they don't feel that easiness or it is difficult for them to use public services.

Podoconiosis patients' experiences regarding to participation in religious holy days', the majority 108 (90.8 percent) cannot participate in holy days' due to the stigmatizing attitude of the society. Concerning to the interpersonal relationship problems with children, neighbors, spouses, and family members, the majority 115 (95.8 percent) have faced difficulty in interacting people around them. This is due to the stigma they face from the unaffected community members. And 109 (90.8 percent), research participants do not like to bring themselves into public meetings, social gathering, cultural practices, etc. after they developed the disease.

And podoconiosis patients have difficulty of getting marriage partner and for those who already have children, their children have difficulty to marry non patients' individuals or someone from unaffected family members, in line with this 116 (96.67 percent) of the participants of the study responded that they have difficulty of getting appropriate partner for marriage and to their children to get married to non patient individuals or families. In line with the above stated experience, majority of the patients 102 (85 percent) agreed that unaffected community members laugh or insult or rumor when they see them. Ninety two (76.6 percent) of the research participants agreed that people point at them at different social confrontations. Concerning sharing experiences of resources and other materials between patients and unaffected community members, 120 (100percent) said they have no experience of freely exchanging items between them and unaffected community members. And 42 (35 percent) of patients responded that the love relationship within their marriage is not as good as it was before. At last the majorities, 59 (49.2 percent) of unmarried podoconiosis patients are not proposed to marriage even if they are at their marital age. From this we can observe that the patients' social experience was distasteful

According to interviewee result, the major social problems reported by podoconiosis patients were restricted participation in the community, interpersonal relationship problem, marriage, decision making, and displacement.

A. Social participation problem

One of the social problems podoconiosis patients' faced was their inability to participate in various activities of the community. This resulted from either the belief from the patients' side that the unaffected members of the community stigmatize or discriminate them because of their disease or from the pessimistic reaction of the unaffected community members towards podoconiosis patients.

A patient described how he was discriminated by his own families as follows;

> *A podoconiosis patient is not seen equal to others by the community. Two years ago my dad died accidentally. Up on his death my families didn't informed me about his death. Due to this I cannot attend his funeral ceremony. When I asked my brother why he did like this to me. An unexpected reply I got from my brother as; it's not a big deal whether you are there or we don't feel like our family members to be*

> *insulted in front of many people because of your leg. We the patients are not in a position even to attend the funeral ceremony and are left alone in the darkness.*

And another 18 year old girl referred her difficulties she faced as a result of the disease as follows;

My family members were the first to isolate me, insult me, by which I was restricted not to go outside.

Even if some of the patients are ready to participate in social activities they were denied the access due to the discriminating attitude of the society. One 36 year old patient expressed his experience as follows;

> *Here in Wolayta there is a tradition of working together in group. If some one builds a house all the neighboring people work together and help that person. And next time if you have a task to be performed those people whom you helped come and help you. After I become a podoconiosis patient no one invites me to such gathering and they are not even ready to call me.*

According to the interviewee some patients also didn't like to participate in social activities as this 30 year old woman put her belief as follows;

> *I don't like to be with people because I don't feel comfortable in the presence of others. Most of the times I don't like to come into view in public places and gathering. It depresses me a lot.*

B. Interpersonal relationship experiences of podoconiosis patients.

Podoconiosis patients also face interpersonal relationship problems because of the societies stigmatizing and discriminating attitude to their disease. Majority had the difficulty in interacting with their friends, family, and relatives.

A 22 year old podoconiosis patient explained his experience as follows;

> *As you know in Wolayta culture sharing of cloth among friends is very common practice when you are in need of it for some special occasion. If someone has a good cloth or shoe he will lend you at the time of request. One day I asked my intimate friend to lend me his cloth for a day and his replay was heart breaking and unexpected. He said am I going to burn the cloth after you have used it?*

A high school teenager explained his interpersonal relationship experience as follows;

> The *friend whom I consider as my best insulted me in front of many students by saying smelly boy.*

A married woman explained the rough relationship with her husband in this way;

> *My husband always tells me that he cannot opt for divorce due to the oath he made in front of people and the God during our wedding ceremony. We live inside the same roof but we were not sleeping and eating together.*

C. Decision making experiences of podoconiosis patients

The consequences of Podoconiosis disease also gave an impact in the ability of the patients' participation in decision making process in their community or at their home. People give much attention to their leg than to their views.

A lady who was one of the victims of podoconiosis described her helplessness to participate in decision making process in her local church as follows;

> *A year ago there was Election Day in our local church for a leader and as like other members of the church, I too was ready to give my vote for a church leader whom I considered the capable. Upon counting the number of hands raised, the deacon didn't count my hand. Immediately, I told him that he didn't count my hand but he didn't mind for me, rather he continued counting the other hands which were raised. He knows me well that I am a podoconiosis victim, which was the reason for his ignorance and skipping me.*

Podoconiosis patients have difficulty of participating in decision making not only in wider community but also at their home; which was revealed by the occurrence of one podoconiosis patient at his home who explained the situation more clearly. He said;

> *When I lay down rules in my home my children's do not abide by the rules and ignore me and disrespect me. Before I was a podoconiosis patient everything what all I say to them, they did it, but now the things changed as I developed the disease, they don't want me with them and are always feeling curse for having such kind of father.*

D. Displacement experiences of the patients

Some podoconiosis patients have experience of displacement from their home or neighbors because of the negative reaction of the society.

A young girl explained her displacement experience as follows;

> *When my leg started to swell my step dad was not happy to continue living with them. Always he insults me by using emotion touching words for instance * 'kita.[•] and makes me angry. Then I decided not to live with them and went out but no one was ready to accept me as a housemaid. Now one Christian person took me to his home to live with them in turn I help them by grazing cattle*

[•] means swollen or mege egir in Amharic

E. Marriage

One of the difficulties the podoconiosis patients face is getting partner for marriage for those who are in need of marriage and to their children to get married to nonpatient families. Many people believe persons affected with podoconiosis including their family members should not have a loving relationship, get married or have a child and some think the question of marriage relationship is disgusting.

A 27 year old girl explained how the disease is an obstacle to get a partner in this way;

> *I am in appropriate age to marriage but still no one proposed me for marriage. My friends are married now. I know that I am a beautiful girl but this disease made obstacle to my prospect of getting husband.*

One male patient also added by saying like this;

> Girls *are not willing to marry individuals like me affected by the disease.*

The patients also have a great probability of making divorce with their spouse after developing the disease. The unaffected partner doesn't want to continue living with the affected individual in the same roof. The experience of one woman explains this phenomenon best;

> *We were a happy family and we loved each other very much. But after I developed the disease everything changed, my husband is not happy with the situation. Before we make divorce he comes home very late, this is unusual behavior he showed after I developed the disease. Then from time to time our relationship became rough. Finally he told me that he don't want to live with me. Now he got married for other girl and they are living together.*

4.3. Psychological experience of podoconiosis patients

4.3.1. Self-esteem level of podoconiosis patients.

Table 3: Frequency of podoconiosis patients' self-esteem level (N=120).

Variable	Level of self-esteem	Frequency	Percentage
Self-esteem	High (greater than 25)	-	-
	Normal range(15-25)	22	18.3
	Low (less than 15)	98	81.6

*** The score ranges from 0-30. Those scores below 15 were indicating low self-esteem; scores between 15 and 25 was considered as normal, and those scores above 25 was high self-esteem (Rosenberg, 1989)*

As can be seen in table 3, the majority of podoconiosis patients are in the lower range of self-esteem 98 (81.6%). And 22 (18.3 percent) of patients are in the normal range of self-esteem followed by zero (none) of the patients are in the higher range of self-esteem. From this we can conclude that, majority of the patients have low self-esteem. And none of the podoconiosis patients participated in the study are in the higher range of self-esteem.

4.3.2. Mental distress of podoconios patients

Table 4: Frequency of podoconiosis patients' with yes response in SRQ20 (N=120).

Items with 'yes' response	Number of respondents	Percentage %
2	4	3.3
4	2	1.67
8	5	4.17
10	3	2.5
11	6	5
14	9	7.5
15	11	9.17
16	18	15
17	19	15.83
18	16	13.3
19	27	22.5

*** to decide the existence of mental distress cut-off score is used, most of the time the cut-off points used in studies among low-income developing countries rural community is 10/11 (WHO, 1994) means if the individual respond yes for 10/11 items in SRQ20 we can say the individual has mental distress, if below 10/11 'yes' no mental distress. But I used 11 as cut-off point because in previous studies in Ethiopia 11 was commonly used as a cut-off point (Alem, 2002).*

As can be seen from table 4, the majority of the respondents 27 (22.5 percent) said 'yes' for 19 items in SRQ20, followed by 19 (15.83 percent) patients' for 17 items in SRQ20. The least of all is that 2 (1.67 percent) patients said 'yes' for four items in SRQ20 scale. Therefore, we can infer from table four that 14 (11.7 percent) of podoconiosis patients involved in the study have no mental distress. The majority 106 (88.3 percent) of podoconiosis patients suffer from mental distress.

Table 5: Frequency table of suicidal ideation reported by podoconiosis patients' (N=120).

Item	Number of patients yes response for the item	Percent %
Has the thought of ending your life been on your mind?	96	80

Out of the 20 items in SRQ20, one item enquires about suicidal ideation.
When frequencies for this item was run separately to estimate the prevalence of suicidal ideation; the result showed that 96 (80 percent) of the research participants had suicidal ideation because of the disease as can be seen from the table 5 above.

4.3.3. Psychosocial experiences across age, sex, educational status, marital status, economic activity, and severity of podoconiosis patients'. (N=120)

Table 6: Number of Cases, Means and Standard Deviations (Sex vs. Psychosocial Experience) (N=120).

Sex		Social experience	Self-esteem	Mental distress
Female (n=53)	Mean	33.3774	12.8113	17.2830
	Std. Deviation	6.32828	1.93208	3.60756
Male (n=67)	Mean	35.5672	13.0896	18.2985
	Std. Deviation	3.89337	1.67632	1.53756

As it can be seen from the above table 5, there was no significant difference in the mean score of participants' sex on their self-esteem. When the mean scores of participants' assessed, male patients mean (M= 13) on the self-esteem were not significantly greater than the mean scores of their female counterparts (M=12.8). But there is a significant difference between males and females in regard to social experience. When the mean scores of females (M=33.377) and males (M=35. 567) is compared, males mean negative social experience is higher than females mean negative social experience, this means males have more negative social experience than females. With regard to mental distress, there was very slight difference between males and females, males were higher in mean score of mental distress (M=18.298) than females (M=17.28), which refers to males were higher than females in experiencing mental distress.

Table 7: Number of cases, means and standard deviations (age vs. psychosocial experience) (120).

Age		Social experience	Self-esteem	Mental distress
15-19 (n=13)	Mean	32.3077	12.5385	15.6923
	Std. Deviation	3.90266	1.56074	1.70219
20-25 (n=14)	Mean	34.5000	13.1429	17.6429
	Std. Deviation	5.24404	2.07020	2.81772
26-30 (n=36)	Mean	35.7778	12.9722	18.5278
	Std. Deviation	4.00079	1.55813	.60880
31-35 (n=22)	Mean	36.7273	12.7727	18.6364
	Std. Deviation	2.45302	1.37778	.72673
36-40 (n=19)	Mean	33.0526	13.2632	18.001
	Std. Deviation	4.51508	2.20711	.60698
41-45 (n=4)	Mean	36.0000	12.7500	19.0000
	Std. Deviation	1.41421	2.98608	.00000
46-50 (n=7)	Mean	29.5714	13.0000	15.5714
	Std. Deviation	8.54122	1.41421	5.88380
51-55 (n=5)	Mean	22.6000	13.4000	10.6000
	Std. Deviation	6.38749	3.13050	6.02495

As can be seen from the above table 7, there was difference in mean score of social experience among 15-19 age group (M=32.3) and 20-25 age group (M= 34.5), 36-40 age group (M=33.05).

There was also difference in mean score of social experience between 51-55 age group (M=22.6) and 46-50(M=29.57). 46-50 age group mean social experience(M=29.57) is different from mean social experience of 41-45,36-40,31-35,26-30,20-25,15-19 age group. Patients' social experience between age group 15 - 19 and 41-45 have differences and the experience of age group 46-50 and 51-55 have a great difference compared to other age groups. And the age groups 51-55 have the lowest mean score on social experience. This refers the age group 51-55 experience less negative social experience compared to other age groups. When we come to self-esteem, the mean score across different age group has no difference on self-esteem. In other word when compared the mean score of self-esteem across different age group, their mean score have no much difference. In regard to mental distress, there was mean difference among 41-45 age groups (M=19) and 15-19 age group (M=15.7) and 20-25 age group (M=17.6). And also between 46-50 age group(M=15.57) and 41-45 age group(M=19), among 51-55(M=10) and 46-50, 41-45,36-40,31-35,26-30,20-25,15-19 age group. When the mean score for mental distress compared across different age group, the mean score for age group 51-55 was the lowest of all. And the age group 46-50 have also low mean score compared to 15 -19 up to 41-45 age group.

Hence, depending on the above table, the mean social experience of podoconiosis patients with age range 51-55 was less negative than other age groups. It means with increasing in age the negative social experience of podoconiosis patients decrease as can be seen from the mean score in the table. On the other hand, the mean score for mental distress of the patients with older age was lower than that of mean mental distress of young and middle aged patients. From the table we can refer that with increasing age the mental distress decreases. And there was no difference in mean score across different age groups in regard to self-esteem. The mean score for self-esteem across various age groups does not show much difference.

Table 8: Number of cases, means and standard deviations (educational status vs. psychosocial experience) (120).

Educational Status		Social experience	Self-esteem	Mental distress
Illiterate (n=76)	Mean	34.9211	18.1711	13.000
	Std. Deviation	5.20452	1.78429	2.59997
Read and write (n=3)	Mean	30.6667	18.0011	17.9868
	Std. Deviation	10.11599	2.30940	9.53939
Elementary (n=25)	Mean	33.9600	12.6800	15.6875
	Std. Deviation	5.35786	1.62583	1.66633
High school (n=16)	Mean	34.8125	10.8750	18.1200
	Std. Deviation	3.95337	1.78419	1.49304

As the mean score depicted in table 8 manifested that the social experience of the subjects across different educational statuses didn't showed much difference except for read and write. On the other hand the self-esteem of the respondents becomes lower when their educational status became increased. As opposed to self-esteem, mean computation for mental distress shows, the degree of mental distress increased as the educational level increased.

Table 9: Number of cases, means and standard deviations (marital status vs. psychosocial experience) (N=120).

Marital Status		Social experience	Self-esteem	Mental distress
Unmarried(n=59)	Mean	34.4576	12.9831	18.3390
	Std. Deviation	4.57626	1.63466	.97574
Married (n=43)	Mean	33.9767	13.0233	16.9302
	Std. Deviation	6.57009	2.09862	4.19407
Widowed(n=11)	Mean	37.7273	12.8182	18.4545
	Std. Deviation	2.49363	1.77866	.68755
Divorced (n=7)	Mean	34.7143	12.7143	18.4286
	Std. Deviation	1.25357	1.25357	1.13389

As can be seen from the above table 9, the mean score for social experience showed that the widowed patients have a higher mean score (M=37.7) in negative social experience than other marital status groups. This refers that the widowed experience more negative social experience than others. In regard to self-esteem, there was no much mean difference across marital status. That means the mean score for self-esteem across marital statuses had no difference. In regard to mental distress the married ones have lower mean score for mental distress (M=16.93) compared to other marital status groups. This refers the married ones had lower mental distress than other marital status group.

Table 10: Number of cases, mean and standard deviations (economic activity vs. psychosocial experience) (N=120).

Economic Activity		Social experience	Self-esteem	Mental distress
Farmer (n=46)	Mean	33.4348	12.9783	17.0652
	Std. Deviation	6.08697	2.00543	3.82624
Laborer (n=2)	Mean	29.0000	13.0000	18.5000
	Std. Deviation	12.72792	1.41421	.70711
Handicraft (n=9)	Mean	36.3333	13.0000	18.5556
	Std. Deviation	2.23607	1.32288	1.01379
Trading (n=43)	Mean	35.6279	13.0930	18.5814
	Std. Deviation	4.57750	1.75681	.58686
Others (n=20)	Mean	34.8500	12.6500	17.7000
	Std. Deviation	3.81514	1.66307	2.55672

As can be seen from table 10, there was mean difference between laborers (M=29) and farmers (M=33.43), farmers (M=33.4) and hand craft (M=36.33), farmers (M=33.43) and trading (M=35.6). The mean score for social experience of laborers is lower than that of other patients involved in other economic activities(M=29), this shows that laborers had less negative social experience compared to others. When we come to self-esteem, there was no mean score difference among various economic activities. And also there was no mean difference for mental distress across different economic activity.

Table 11: Number of cases, means and standard deviations (severity vs. psychosocial experience) (N=120).

Severity		Social experience	Self-esteem	Mental distress
Stage 1(n=20)	Mean	33.8511	13.1064	15.3191
	Std. Deviation	6.21701	1.68585	2.90372
Stage 2(n= 47)	Mean	35.0377	13.000	17.7000
	Std. Deviation	4.59519	2.02414	3.68962
Stage 3(n=53)	Mean	37.200	12.8302	18.3774
	Std. Deviation	4.38951	1.62594	.96529

As it can be seen from table 11, there existed mean score difference on social experience across severity. The mean score for social experience of stage one is the lowest of all; which refers to low negative social experience for stage one patient compared to others. With regard to self-esteem there is very slight difference across severity levels. In other words, according to the table when the severity level increases there is a slight variation on their self-esteem. From the table we can see that when the severity level increases the self-esteem of the patients very slightly decreases. With regard to mental distress there exists a mean differences between the mean of stage 1 (M=15.3) through the mean of stage 2 (M=17.7) and the mean of stage 3 (M=18.4). From this we can see that stage three patients experience more mental distress than stage 2 and stage 1. And stage 2 patients experience higher level of mental distress than stage 1 patients.

4.3.4. Bivariate correlation among the predictor and outcome variables.

Another point was to check whether there exists relationship between predictor variables (patients' sex, age, marital status, educational status, severity and economic activity) and psychosocial experience. Table 11 – below shows the intercorrelations among these variables.

Table 12: Intercorrelations among Predictor and Outcome Variables (N= 120).

		Intercorrelations							
	Variables	2	3	4	5	6	7	8	9
2	**Sex**	-.388	-.092	-.079	.807**	.36	.210*	.077	.188*
3	**Age**		-.466**	.387**	-.476**	-.08	-.286**	.07	-.325**
4	**Educational status**			-.275	.025	.032	-.046	-.103	-.024
5	**Marital status**				-.060	.018	.083	-.0033	-.051
6	**Economic activity**					-.026	.175	-.023	.165
7	**Severity**						.25**	-.051	.133**
8	**Social experience**							.003	.523**
9	**Self-esteem**								.175
10	**Mental Distress**								-

** p < .01   * p< .05

As it can be observed from the bivarate correlation results in table 12, the predictor variables (age, sex) revealed statistically significant correlation with social experience and mental distress. Specifically, sex of the patient had positive correlation with social experience and mental distress. This means the males experience more negative social experience and mental distress and the females experience less negative social experience and mental distress. The age of the patient was negatively correlated with social experience and mental distress. When the age of the patients increases the mental distress decreases and when the age of the patients decreases the mental distress increases. And also when the age decreases the negative social experience of the patients' increased and when the age increases the patients negative social experience decreased. In other word, the older podoconiosis patients' experience less negative social experience compared to younger and middle-aged patients. The negative social experience of the young and middle-aged patients is higher or intense compared to that of older ones. And severity level of the disease is also positively correlated with social experience and mental distress. In other words, when the severity level increased from stage 1 to stage 2 to 3 the negative social experiences of the patients also increased and similarly when the severity decreased from stage 3 to 1 the negative social experience of patients decreased. And the mental distress level of the patients also increased with increase in severity and decreased with decrease in severity.

However, the predictor variables, educational status, marital status, and economic activity, did not show any significant relationship with any of the psychosocial experience.

4.3.5. The effects of sex, age, educational status, marital status, economic activity, and severity level on psychosocial experiences of podoconiosis patients.

Once the bivarate correlation analysis among the predictor and outcome variables was examined, the next task was testing the effects of each predictor variables on the three types of outcome variables namely social experience, self-esteem, and mental distress. Hence, analysis of variance (ANOVA) was conducted for the three types of psychosocial experience, taken simultaneously as outcome variables, with podoconiosis patients sex, age, educational status, marital status, economic activity, and severity level.

Hence, in this section the independent effects of each predictor variables on three types podoconiosis patients psychosocial experience taken as outcome variables was examined using analysis of variance. The results of ANOVA tests are summarized in table below.

Table 13: Analysis of variance: Independent variables and outcome variables (Social experience, self-esteem, and mental distress) (N=120).

Effects	Outcome variables	Df (total)	F	Sig.
Sex	Social experience	119	5.431	.021
	Self-esteem		.71	.400
	Mental distress		4.324	.040
Age	Social experience		2.954	.000
	Self-esteem		.900	.618
	Mental distress		3.408	.000
Educational status	Social experience		.798	.497
	Self-esteem		2.277	.043
	Mental distress		3.638	.015
Marital status	Social experience		1.567	.20
	Self-esteem		.085	.968
	Mental distress		2.726	.047
Economic activity	Social experience		1.550	.180
	Self-esteem		.088	.994
	Mental distress		1.970	.088
Severity	Social experience		.804	.450
	Self-esteem		.297	.744
	Mental distress		1.992	.141

As can be seen from table 13 above, the ANOVA test of significance revealed the effects of sex on podoconiosis patients social experiences at (F (1,118) =5.431, $p<0.05$) and mental distress level of the patients at (F (1,118), 4.324, $p<0.05$). Similarly, the result of ANOVA test of significance depicted the significant effect of podoconiosis patients age on social experience of the patients at (F (30,119) =2.95, $p<0.05$) and mental distress level of the patients at (F (30,119) =3.415, $p <0.05$). And also as can be seen above in table 12, educational status had significant effect on mental distress of podoconiosis patients ($F(3,119) = 3.638, p<0.05$) as well as on their self-esteem ($F(3,119) = 2.277, p < 0.05$). Social experience of podoconiosis patients is not influenced by educational status of the patients as depicted in the above table at p-value of 0.05.

And as depicted above in the table 12, marital status had a significant effect on mental distress of podoconiosis patients ($F(3,116) = 2.7, p< 0.05$). And the other outcome variables in the table are not influenced by marital status of the patients at p-value of 0.05.

But economic activities of the patients have no effect on outcome variables namely social experience, self-esteem, and mental distress of the podoconiosis patients at p-value of 0.05. Similarly, as can be seen in the above table 12, the level of severity of the disease has no effect on the outcome variables at p-value of 0.05.

4.3.6. Multiple regression analysis on predictor variables across social experience, self-esteem, and mental distress.

Table 14: Regression analysis results summary on podoconiosis patients self-esteem across predictor variables (N=120).

R	R Square	Adjusted R Square	Std. Error of the Estimate
.303[a]	.092	.026	1.76759

Analysis of Variance table

	Sum of Squares	df	Mean Square	F	Sig.
Regression	35.061	8	4.383	1.403	.023
Residual	346.805	111	3.124		
Total	381.867	119			

Variables in the equation

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Sex	.942	.573	.262	1.644	.103
Age	.029	.026	.153	1.104	.272
Educational status	-.024	.172	-.016	-.141	.023
Marital status	-.132	.213	-.063	-.620	.537
Economic activity	-.209	.177	-.194	-1.183	.239
Severity	-.234	.225	-.096	-1.038	.301

Multiple regression analysis revealed that the predictor variables (sex, age, educational status, marital status, economic activity, severity) combined together added are significantly able to the prediction of podoconiosis patients self-esteem (F (8,111) = 1.403, $p< 0.05$) accounting for 9.2 percent variance and the remaining 90.8 percent is accounted for other variables not included in the study. Among the variables educational status contributed more to the variance on the prediction of outcome variable (B= .63, t=.141, $p< 0.05$).

Table 15: Regression analysis results summary on podoconiosis patients social experience across predictor variables (N=120).

R	R Square	Adjusted R Square	Std. Error of the Estimate
.408[a]	.501	.122	4.87670

Analysis of Variance Table

	Sum of Squares	Df	Mean Square	F	Sig.
Regression	537.411	6	89.569	3.766	.002
Residual	2687.389	113	23.782		
Total	3224.800	119			

Variables in the question

	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
Sex	1.531	1.573	.147	.973	.332
Age	-.260	.067	-.472	-3.903	.000
Educational status	-.847	.463	-.190	-1.831	.070
Marital status	1.301	.574	.215	2.269	.025
Economic activity	-.471	.486	-.150	-.970	.334
Severity	.097	.614	.014	.158	.875

Multiple regression analysis revealed that the predictor variables (sex, age, educational status, marital status, economic activity, severity) combined together added significantly to the prediction of podoconiosis patients social experience ($F(6,119)=3.76$, $p<0.05$) accounting for 50.1 percent of variance and the remaining 49.9 was accounted by other variables which are not included on the study. Among the predictor variables age of the respondents had greatly contributed to the variance (Beta=.472, t=3.903, $p<0.05$) followed by marital status (Beta= .215, t 2.26, $p < 0.05$).

Table 16: Regression Analysis results summary on podoconiosis patients mental distress across predictor variables (N=120).

R	R Square	Adjusted R Square	Std. Error of the Estimate
.412[a]	.384	.125	2.51912

Analysis of Variance Table

	Sum of Squares	df	Mean Square	F	Sig.
Regression	146.203	6	24.367	3.840	.002[a]
Residual	717.097	113	6.346		
Total	863.300	119			

Variables in the equation

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	T	Sig.
Sex	.350	.813	.065	.430	.668
Age	-.136	.034	-.477	-3.951	.000
Educational Status	-.514	.239	-.223	-2.152	.033
Marital status	.214	.296	.068	.722	.472
Economic activity	-.164	.251	-.101	-.655	.513
Severity	.473	.317	.129	1.489	.139

As depicted in table 16 above, the predictor variables included in the study combined together contributed significantly to the prediction of mental distress (F (6, 119)= 3.84, $p<0.05$) accounting for 38.4 percent of variance. The remaining 61.6 percent is accounted for by other variables not included in the study. Among variables age had a strong power of variance on the prediction of outcome variable (B=.477, t=3.951, $p<0.05$) followed by educational status (B= .223, t= 2.152, $p < 0.05$).

4.4. Integration problems of podoconiosis patients

Table 17: Frequency table of integration problem reported by podoconiosis patients

Item	Response	Frequency	Percentage
What problems do you have in relation to integrating yourself into the general community?	Physical disability	64	53.3
	Absence of counseling service to enhance their well-being	20	16.7
	Bad smell of the leg.	6	5
	Societal negative reaction	14	11.7
	Economic	16	13.3

As can be seen from table 18 above, podoconiosis patients reported problems which hinder them to make integration with the wider community. Among the factors, physical challenge was reported by 64 (53.3 percent) of podoconiosis patients. The next problem as rated by the respondents was absence of counseling service provided to them in order to make them easily integrate with the community. Societal negative reaction towards the patients, economic challenge, and bad smell of the leg were reported as the major challenges in the integration process by 14 (11.7 percent), 16 (13.3 percent), and 6 (5 percent) podoconiosis patients respectively. To support the above findings from the patients' point of view, the researcher triangulated the finding with the interview result and the interview result showed major integration problem faced by podoconiosis patients are; physical and economic, absence of counseling service, bad smell of the leg, and societal negative reaction towards the disease.

Physical and Economic Challenge

According to the interview finding, the major problem podoconiosis patients' face in integrating themselves in communities' activity was resulted from physical disability and this problem in turn led to economic challenge. The patients had lower limbs affected and there was a significant association with difficulty in walking, standing for a long time, and using toilet, this in turn may lead to loss of job and inability to work. This challenge was also an obstacle not to perform appropriate activities in the range of their potential so as making obstacle not to make economic integration within the community. In other words, they can not perform what they are supposed to perform at appropriate time and place compared to unaffected community members. Due to inability to walk long distance traders can't trade. Farmers are unable to farm their land due to associated pain on their legs. Sometimes even the patients are unable to participate in funeral ceremonies and other social activities that need them to walk long distance which in return contributed to isolation from community activities. Students miss class due to inability to walk and associated pain. The disease also forces students to drop out of school due to inability to walk long distance. This handicaps them not to become part of the educated labor force.

One high school student who is victim of podoconiosis put his physical disability in this way;

> *I always wake up early in the morning to go to school so as to be on time but it takes me more than 3 hours to reach to my school. In contrary the healthy students from my neighbor reach within 30 -50 minutes to the same school. Always I arrive late for school and the teachers don't let me in to the class. No one understands my problem. The students who come after me reach the school on time and laugh on me by saying he walks like 'tortoise'. I am a useless person because you know I can't even walk as sick people. Even I don't have the privilege of sick person. My situation is the worst of all. You feel sick all the time.*

A girl whose livelihood is dependant on trading explained how her physical challenge made an obstacle not to integrate with the general community as follows;

> *It is very difficult to go to market regularly to sell and if you don't sell regularly the income you will earn become less and even don't help you to fulfill your basic needs. And we the patients should go to far market outside of our Keble because people in our Keble don't buy our items, they know our disease. Because of difficulty of walking to market I will not involve myself regularly in trading so now I am becoming poor. God only have a way to my problem. Even if I do have knowledge of market and trading as unaffected people with podoconiosis, because of inability to walk long distance and stand I am not involving my self regularly in trading. This situation leads you to be totally dependant on others and people even your families are not happy to help you because they see you as a burden not as any productive individual. So the only left option is that becoming beggar. I am the unluckiest person in this world it is better to die than to live.*

And also the swollen limb affected the work due to physical challenge they face. Research participants reported incapability of carrying out their daily chores and loss of jobs due to the disease.

One farmer explained how the physical challenge due to the disease affected his work as follows;

> *I am destined to be poor because you know I am not capable of farming because of the physical difficulty associated with the disease. If you can't farm and see after your land appropriately your fate is to beg people for food. This is why I say I am destined to be poor. The acute attack of the disease lasts for a week and sometimes for two weeks. This time may be an appropriate time to seed or do some important activity related to farming. If you don't sow in appropriate time what is your fate? ...begging only begging.*

Another podoconiosis patient reported how the physical challenge due to the disease made him jobless as follows;

> *I was selected to join military personnel based on competitive criteria then it took me one and half year to finish the course. Right after I finished my training something strange thing started to happen on my leg that is my leg started to swell. No one was aware of the problem but it continued to enlarge from time to time. At last I realized that I will be pushed out of the military because I can't contribute for them with this swollen leg. I bitterly cried at that time for one thing I am losing my job which I supposed to lead my livelihood; second the pain of the leg combined with hopelessness forced me even to attempt suicide. But God Almighty is good in all the time, it is because of him I live currently but in the face of people I am a useless person.*

And a girl added on the above idea about how she lost her career. In the past she was a member of cultural dance group and now she no longer dance and told me how she lost her dream due to the physical challenge related to the disease. She said,

> *I am a member of cultural dance group and we used to show our dance performance at different places and at various festivals. At that time I am really enjoying my life because am doing what I am supposed to do. Since my childhood period my dream was to be a professional dancer, that was my dream and also I thought that I am achieving my dream when I see people appreciating and praising my performance after each show but unfortunately my leg started to swell then am forced to quit my dance and left the team. You know what this means to me? It means I lost my direction. Therefore, currently I am aimless and hopeless person in this world; the one who lost her dream.*

Reflection: *She started crying while she tells me about how she lost her dream due to the disease.*

One of the major problems of podoconiosis patients' is absence of counseling service which supports them in order to make productive life. Especially in wolayta there is no counseling service provided to the patients in order to cope-up in the face of psychosocial problems they face in their day to day activities. According to interviewee, availability of counseling service is crucial to cope up with the society's negative reaction and to have good looks towards them. In contrary, unavailability of counseling service in their locality magnifies their problem. The experience of another patient explains more about the importance of the counseling service and he put his experience as follows;

> *When my leg started to swell I didn't have any knowledge of why my leg started to swell or the cause behind this phenomenon. Immediately I went to health station to get treatment and to know my problem but no one was able to give me any information and treat my problem. I shocked a lot and started to cry day and night. After that, some people told me about the service delivered at Mossy Foot Treatment and Prevention Association. I decided to go to sodo clinic for accessing treatment; they gave me advice about how to appropriately handle the hygiene of my legs, offered a shoe. After getting the information from the outreach clinic I started feeling good but still we are not getting counseling service how to handle the social and psychological challenge we face. Knowing the skills how to behave and interact in the face of stigma and discrimination is helpful and you become productive, increases your self-efficacy and self-esteem. But we don't have such skill because there is no service delivered to us. If you see HIV/AIDS patients even if they know that they have a positive result they are given counseling support in order to make them handle their emotional problems and mental stress in the face of challenge they encounter. We need such kinds of services.*

Bad Smell of the Leg

One of the challenges podoconiosis patients face in integrating with the general community is that the bad smell of their foot. According to my interviewee the stinky smell of the feet forced them to isolate themselves from the social gathering, various ceremonies; in some cases students miss or drop school due to the bad smell of the leg.

Accordingly one high school student put the reaction of other students in the classroom wherever he have difficulties with his legs during attacks, which is mostly associated with bad smell, have contributed to the low performance and has caused him to drop out of school as follows;

> *My foot has a very bad smell. It has also a watery discharge. All students gather when they see me coming to school and all chants by saying the 'rotten egg' is coming. Some hold their nose when I pass them; some laugh and run away from me. When I enter to the class all students don't take a sit around me. Many students reported to the head of the school that they are not able to attend the class due to the smell of my foot in accordance with the request of the students the school master told me not to come to school. In reality I didn't even feel free to go to school because I feel ashamed. I have a potential as my age mates to learn but after I developed this disease my result started to drop because I don't listen to the lessons given in the classroom. And finally I quit my education in order to avoid the felling of shame and anxiety. It is better to stay home than going to school.*

This stinky smell of the leg is not problem only to students but also have a negative impact on others at various social gatherings. Here an experience of a man shows how the bad smell has an impact in their day-to-day life;

> *Our keble called the residents for a meeting on a special issue. After the chairperson of the keble presented the goal of the meeting and briefly explained the issue. Up on fear of my feet smell I took a seat at far behind of the room. Then a turn comes for the participants to raise question, give suggestion, and comment. As a resident I started to give a suggestion on the issue but in the middle of my speech I heard someone saying 'how the swollen gives an idea in this room in front of pure people.' And he repeated by saying you man we are pure people and we not smell like a rotten egg. If you want to give an idea search for your mates, especially those who smell like rotten egg. And many were laughing while the person speaks and in turn I quit my speech. Went home depressed and up on arrival to my home started to cry bitterly.*

Societal Negative Reaction towards Podoconiosis patients

Patients reported that societal negative reaction towards the people affected their social life. Due to the societal negative reaction they reported having problems interacting with the community, friends and family. The society's negative reaction towards patients reflected in many ways among them giving negative name or label to the patients, insulting, discriminating in various ways, refusal to get married to the patients and to their family member etc.

According to an old man podoconiosis patient, the community's insult at various social confrontations and gathering anyone who sees a podoconiosis patient anywhere laughs, insult, and discriminate the patients. Many people show sign of disrespect towards the patients; by separately sitting from them and by not inviting them in different societal gathering and ceremonies. The man told his experience as follows,

> *They insult us (podoconiosis patients). They call us kita/tobiya which means in Amharic 'mege eger' and in English 'swollen'. If podoconiosis patient students come on top in the class the teachers will say 'this crippled has answered this question. How comes you don't answer anything? If you are at the event of social gathering, in the first place no one gives you the chance to give an idea but if in chance you get the opportunity to raise an idea no one listens to your idea all refer to your leg they say look at him there is no difference between his legs and waist. How dare he is to give an idea? There is a tendency of looking down us in various social settings.*

And also neighbors of the patients insult at different ways. Due to this the patients feel shame and in turn they prefer to live in their own social world isolated from the general community. A widowed woman explained how her neighbor negative action affected her social life and led her to depression and hopelessness as follows;

> *Once while my neighbor was going her pee right in front of my door, getting angry at the scene, I asked why she was doing it. The replay I got was completely shameful and disappointing. She said,'' my pee is not wash down of a crippled rather it's clean and harmless.*

This negative societal reaction is not bound only to rough neighborhood interaction but also reflected in difficulties the patients face to get a marriage partner to them for those in appropriate age to marriage and to their children for those who have families.

One unmarried man explained how he is not capable of getting married till now and the difficulties he faced while trying to get a marriage partner. He put his idea as follows;

> *When I am 25 years of age I proposed a girl from my church for a marriage after a week she accepted my bid. Then after immediately she told me that she is not ready for a marriage the reason she provided me not to accept the offer is that she decided about the issue without deeply thinking it. But the true reason for not accepting my bid is that she heard that I am a podoconiosis patient from my neighbors. Most of the time While I ask girls for a marriage I will wear long and wide trouser so that the girls didn't detect the problems related to my leg easily. Once they identify that I am a podoconiosis patient they refuse my offer to marriage, though my case is not severe. I can easily walk, can stand relatively long hours, and use shoes since mine is stage one but if girls hear once I am a podoconiosis case they refuse to marry. After the failure of my first marriage proposal I asked 8 girls in a row for a marriage, when I ask them they say okay but after a while they refuse. I know why am not married until now it is my leg nothing else. Even if my leg is not severely affected it becomes an obstacle to get life partner.'*

The problem with marriage is not only limited to the patients. It is also reflected on patients' families. This is expressed by the way people dig into the family history for the evidence of podoconiosis before any marriage arrangement. No matter healthy he or she is during marriage the family history of podoconiosis matters more than anything. A podoconiosis affected father who have seven healthy children's, 3 girls and 4 boys asked about whether his children's can able to marry someone from a healthy family or whether those children in a marriage zone was proposed for marriage from someone from unaffected family, the man responded as follows;

> *I do have 3 children's in appropriate age for marriage but I hope it is difficult for them to get married to someone from unaffected family members. He/she should look for his/her mate from the swollen. You know a healthy man wouldn't ask my children's for a marriage because he/she is a child of a father affected by a podoconiosis so he/ she too a patient. There is no difference, I mean my disease affects my children's' marriage prospect no matter whether they are healthy or not.*

4. 5. Coping Strategies Used by Podoconiosis Patients

The stress which developed in podoconiosis patients due to negative social experience, low self-esteem, and high mental distress forces them to use various methods of coping strategies. The respondents were asked to choose most frequently used coping strategies that can explain their coping mechanisms. Results in table 17 below showed the type of coping mechanism they use and from the result we can see that most of the patients don't use only one type of method to mange their psychosocial problem but most of them employ mixed type.

Table 18: Strategies employed in managing the psychosocial problems faced by podoconiosis patients.

Item	Response*	Frequency	Percent
What kinds of strategies do you use to manage the psychosocial challenge you face?	Concealing the disease	22	7.2
	Restricting one's self from social participation	70	22.8
	Accessing medical care and treatment	80	26.1
	Withdrawing from social activities	65	21.2
	Praying and performing religious rituals	50	16.3
	Discussing with family, friends, and relatives	15	4.9
	Aggressively acting	5	1.7

* *here the patients responded more than once to the question*

As depicted in table 18, the majority of podoconiosis patients 80 (26.1 percent) use accessing medical care and treatment for coping with psychosocial challenges they encounter. Second, most used strategy to cope up with the challenge they face is restricting one's self from social participation by 70 (22.8 percent) of the patients. Praying and performing religious rituals, withdrawing from various social activities of the community, concealing ,discussing with family, friends, and relatives, and aggressively acting were reported by 50 (16.3 percent), 65 (21.2 percent), 22 (7.2 percent), 15 (4.9 percent) , and 5 (1.7 percent) of podoconiosis patients. From the above table we can see that small proportion of patients discuss about their problem with their family, friends, and relatives. In contrary, combined together, the majorities of the patients restrict and withdraw themselves from social activities. At last, the majority of the patients who use concealing their disease as a coping strategy are at the first stage of the disease. At this stage it is very easy to hide their legs compared to other two stages.

Concealing is widely used as coping strategy among victims of the early stage of the disease. The first stage of the disease is easier to hide from people than other stages.

And very little number of respondents used aggressively acting as their coping mechanism.

An interview with the selected podoconiosis patients also showed how the patients employ the above listed mechanisms in their day to day activities in order to handle the challenge they face.

One girl explained her experience as follows;

> *I used to wear wide and very long cloths when I want to go out. So people can't identify me easily. Even when I come to this clinic and in case if people ask me about where I am going, I will tell them am going to ask patient over here. I wear shoe, too.*

And a recently identified podoconiosis patient explained how she conceals the disease out of fear of rejection from the society as follows;

> *People in my village think that this disease is contagious therefore, I don't tell them about my condition out of fear of rejection. As result they interact with me as before. If they identify that I am a podoconiosis patient, even my friends will stop coming to my home, sitting and eating together. They will neglect and abandon me.*

And also according to the interview result, the patients restrict themselves from participating in various activities of the community. They don't like to involve themselves in public gathering, meeting, social cause group, and public holy days. One research participant told me how he restricts himself from public life so as not to face the stress emanating from the societies negative reaction as follows;

> *You know, I don't like to be where there are people especially I don't like to be with unaffected people because they ignore and reject the patients. It is now two years since I stopped going to church. Even if they don't insult me directly, I don't like to appear in places where healthy people gather.*

Podoconiosis patients also described getting medical support and information is much helpful to manage their stress related to psychosocial problem they encounter in their day to day activities.

One podociniosis patient put his experience of how getting medical treatment eased his stress as follows;

> *When first I learned that my leg is swelling, I don't have any knowledge or information how to handle the situation. Always I cried day and night. My brother told me about Mossy Foot Prevention Association which is found in sodo which gives treatment and advice related to the disease. Some kind of hope light started to shine inside me. The next morning I went there to get treatment. When I reach there all the staffs cooperated and gave me bandage, bleach, ointment, and Whitefield. Even if the society had negative attitude towards the patients the treatment which I am getting from this center showed me bright future. I am now happy and very thankful for the MFTPA organization. I come here each week regularly to get treatment.*

Some podoconiosis patients reported that they will withdraw from social activities in order to feel good about themselves. A boy described how he feels better when he withdraws from a family meeting as follows;

> *At time of holidays or some other special occasion the family members and relatives gather in order to celebrate together. This moment is the ugliest of all moments in my life since I start to compare myself with my age mates. When I see them playing-jumping, running around, and kicking then my tear starts to come down in my face. I feel in my inside that I am a useless and worthless person. When there is a ceremony which gathers people in our house and somewhere else, I will not attend rather I feel better when I stay alone until they finish the program.*

Praying and performing religious rituals also helps the patients to manage their stress. Many patients are devoted to their religion and have a strong belief in God. A girl reported how daily prayer gave her satisfaction as follows;

> *I have a strong belief in God and in his word bible. Always I pray by reading versus from bible which says ... And all things, whatsoever ye shall ask in prayer, believing, ye shall receive. I believe that no problem is out of his reach. Day and night I pray for a miracle to happen in my life. I don't care about people's reaction rather I concentrate on communicating with God for a solution. When I pray I will forget all my sorrows and become happy. The happiest moment in my life is when I pray. When something depressing starts to happen, immediately I start to pray. Prayer is the warehouse for me to get strength, hope, and happiness.*

Some also use a holy water to rid out of their stress. One woman explained her experiences as follows;

> *I have used holy water since I developed the disease at Dalbo Gabriel church and other churches. I believe a holy water helps and heals me but it requires your strong belief and courage.*

Discussion with family, friends, and relatives is also one way of coping with the stress the patients face in their day to day activities. But among interviewed only two of the patients discuss with their friends and parents to get rid of the challenge they face. A man explained his experiences as follows;

> *The disease inflicted me ten years ago when I was a 40 years of age. At that time I do have six children's and five of them are employed in government office. Since I learned my disease, my children are always around me. My children comfort me a lot. So I don't feel bad because in time of crises I discuss with my Childers.*'

And a married woman explained how the support of her husband helps her to cope up with the challenge she faces as follows;

> *At the time of our marriage I was very healthy and no one in my family was affected by this disease. But after 10 years of marriage my leg started burning me in the inside then started to swell up from time to time. I don't have any where to go, when I go to health center and tell them about my problem no one understands well. I haven't been able to get treatment until I come to this clinic (MFTPA) by the help of people. I felt that our marriage broke because of the diseases. Friends of my husband also tell him to marry another girl because am a sick person. In contrary to all this, my husband is the one who gives me advice and helps me a lot. He is always in my side. With out his support and care my life will be void.*

Aggressive way of acting is also a coping mechanism by patients. When patients act agrresively, they feel easiness and comfort. According to the patients, they believe that when they aggressively act towards people they don't regret because they consider their aggressive action as a response to societies cruel way of treatment to them. They feel and think that when they aggressively act towards anyone around them is justified because they are victims of the society's negative reaction. One patients described how and why he aggressively acts as follows;

> *When someone starts to say anything negative or even looks in a different way than others, I start to insult or throw anything in my reach. I believe that any person who looks me differently from others is degrading or insulting me in his inside because of my disease. If I know that person, start to search for the weak side of that individual and insult by referring that weakness.*

Chapter Five

Discussion

The present study examined psychosocial experience of podoconiosis patients with the objective of identifying their level of self-esteem, assess the existence of mental distress due to their disease, integration problems they face, and to identify type of coping strategies they employ to manage the psychosocial challenge they face. The study also investigated differences in social experience, self-esteem, and mental distress with regard to sex, age, educational status, marital status, economic activities and severity level.

The current study revealed that podoconiosis patients experience stigma and discrimination. The study of Ogden and Nyblade (2005) showed that stigmatized individuals face psychical stigma like separating shard objects like eating utensils and cloths at home and isolating them from public places. The current finding agress with the work of Ogden and Nyblade which revealed that podoconiosis patients can't freely share utensils or materials with unaffected community members and they are also isolated from public places. Moreover, they face verbal stigma that holds the direct practices like pointing fingers, insulting which is also aligns with the findings of Ogden and Nyblade (2005). According to Ross and Sue (2003) stigma manifest itself in several specific forms depending on the various cultures of a given society. like: finger pointing, ridiculing, labeling, rejecting, isolating, shaming, separating, not sharing utensils, staying at a distance which all align with the findings of the present study in which podoconiosis patients feel shame, isolated, unable to share resources with unaffected community members.

According to the current study podoconiosis patients had problems interacting with the community. This resulted in patients' isolation and withdrawal from society, avoiding social gathering and activities, and had problems of interaction even within their own families. Similar results were reported from the Gampaha district of Sir Lanka by Wijesinghe (2007), where elephantiasis patients experienced feelings of being rejected by society.

The current study aligns with the finding of G/Hanna (2005) in which the major difficulties podoconiosis patients encounter are finding a marriage partner for those in marriage age and to get a marriage partner from unaffected family members to children's of families who are victims of podoconiosis.

The findings of the current study agrees with the finding of G/Hanna (2005) in which podoconiosis patients are isolated from various social events and also podoconiosis patients have no equal representation in social events. And the current study also revealed that podoconiosis patients have problem of decision making not only in their community but also at their home, too.

In addition to the above stated ideas, the study showed that males have more negative social experiences than females. This may be a result of patriarchal structure that prevails in the Wolayta community which may be a reason for males to have more negative social experience than females. In patriarchal structure males are expected more in various streams, if they fail to be successful they are easily subjected to stigma by the community referring them weak and incapable. They also easily isolate themselves from various social activities because they feel that they are insufficient to meet the society's criteria by having in mind what the society expects from them. The disease definitely interferes with many spheres in their life; they are unable to work, participate, and involve themselves in decision making process of the community. This in turn facilitates isolation. The finding also showed that the older age group podoconiosis patients face less negative social experience than the younger age groups. This may be a result of narrow social sphere the old ages have. The limited social interaction with the society due to decreased strength and may be long time exposure to stigma led the old ages to face less negative social experience than the younger age groups. In contrary, the younger podoconiois patients have wider social sphere which exposes them to different negative societal reaction which facilitates their life experience to be bitter than the older ones. Among different marital status groups the widowed faced more negative social experience than the other marital status groups. The widowed negative social experience may be because of the multiple psychosocial problems they face and also they lost what they have in the past; which is a different experience from others. The current study also revealed that laborers faced less negative social experience followed by farmers. This may be due to the flexible nature of their work which is dependant on their feeling of wellness and availability of work. It means they work when they feel well at the same time they work while they get job. And sometimes they are a candidate for jobs that others do not want to do. Regarding to severity the current study revealed that stage three patients experience more negative social experience than patients of lower stages. The severe stage group patients faced more negative social experience because they are easily recognized by the wider community members. The current study also showed the relationship that existed between age & sex and social experience. Regarding to whether the background variables have effect on social experience, the current study showed that sex and age have a statistically significant effect on social experience of the patients at p-value of 0.05. And multiple regression analysis revealed that background variables combined together predict the social experience of the podoconiois patients (F (6,119) =3.76, $p<0.05$) among the predictor variables age of the respondents and marital status contributed to the variance.

The finding of the current study showed that podoconiosis patients have low self-esteem which resulted from disfigurement of their leg. They are ashamed of their leg. According to the study, majority fall in the lower range. This finding agrees with the study conducted in Dominican Republic that showed that elephantiasis patients were embarrassed due to the disfigurement of the leg. According to the study elephantiasis patients with less severe stages of disease also described that they are ashamed of their leg. Feelings of shame had internalized in elephantiasis patients' coupled with hopelessness and despair. According to the study elephantiasis patients' situation was so psychologically distressing that they feel hopelessness and described great despair. The mean computation result revealed that when the research participants' educational level of the patients increases the level of self-esteem decreases. This might be a result of dissatisfaction they encounter when they start to compare themselves with others. And the multiple regression analysis revealed that background variables combined together better predicted self-esteem (F (8,111) = 1.403, $p<0.05$). Educational status contributed more to the variance.

It is well established that people who suffer from chronic medical condition have an increased risk of developing mental distress. Podoconiosis is such a disease, resulting in disfigurement and disability as a result of lymphatic system damage. As can be seen from the finding people affected by podoconiosis have additional social problems such as divorce, unemployment and displacement from their areas of residence, compared to the general population which may lead them to mental distress. Regarding to mental distress 88.3 percent of podoconiosis patients in the study were affected by mental distress. The prevalence of mental distress in this population is higher when compared with other hospital- based study on leprosy patients. The high prevalence in the current study might reflect to the particular psycho-social stress experienced by this group of patients. And at least leprosy patients know that the community awareness towards the disease and are getting awareness about the disease from efforts from various organizations and also Ministry of health introduced the treatment of leprosy in the health care system of the country but in the case of podoconiosis patients their problem is not well investigated and level of awareness among unaffected community members is very low plus it is not incorporated to the health care system of the country. In this study males experience higher level of mental distress than females as seen from the mean computation. The study conducted on leprosy patients showed higher prevalence of mental distress in males than female leprosy patients (Alem, 2002). From the mean score we can easily see that the older groups experienced less mental distress compared to the younger ones. This finding agrees to the Ethiopian community study by Tafari et al (1991) and the National comorbidity study in the USA (Kesher, 1991). In the US study, both lifetime and 12-month prevalence showed a declining trend with increasing age groups in mental distress. The current study also showed that the illiterate groups experienced lower mental distress. This finding was contrary to the finding by Tafari (1991) which stated that there is significant association between illiteracy and mental distress and illiterate groups were at a higher risk for mental distress. The current study also revealed that the married ones have lower mean score for mental distress compared to other marital status groups. This result may indicate us the married ones have once achieved their life goal that is; the task of marriage, this feeling may help them not to experience higher mental distress compared to other groups. The married ones lower mental distress may be also the result of the support they get from their husbands, children's, and others in their social life. However, this finding was contrary to those which say single group suffered from mental distress to a lesser extent in all age groups than the married, widowed, and divorced groups (Alem, 1999) because the current study showed that single group experienced higher level of mental distress than the married ones. The mental distress level of podoconiosis patients increased when severity level increased. Moreover, age, sex, and severity level have showed a relationship with mental distress and all background variables combined together predict mental distress ($F(6,119) = 3.84$, $p < 0.05$). Generally, the current finding aggress with the work of Bobbie et al (2008), which says elephantiasis patients experience depression and most of the patients cry more often due to their disease.

The finding of this study revealed that podoconiosis patients face integration problem with the community. As can be seen from the respondents report, problem of integration arise from physical disability, economic challenge, and absence of counseling service in the area, negative and low societal awareness towards the disease. There has been no attempt to integrate the podoconiosis care service into the health care system. A camping was made by Mossy Foot Treatment and Prevention association to force government to incorporate the treatment of podoconiosis in the national health system, but was successful. There were no successful public educations or awareness campaigns to decrease the society's negative reaction towards the victims of podoconiosis, patients' education programs or counseling, or in creating a sprit of cooperation among people affected by the disease and the public. Therefore, the patients faced stigma and discrimination in their day to day activities which led them not to integrate effectively with the wider community. According to Kuar and Van Brakel cited in Waganesh (2005) the first step which can be taken to integrating the stigmatized and segregated people into the general community is by reducing stigma. To make integration effective, it is important to work not only on preventing physical impairments of the patients but also to eliminate the social stigma which can cause restriction in social participation of stigmatized individual. So health education on podoconiosis can reduce the prevalence of stigma and would also help in the acceptance of the affected persons and their family members in the society. There should be mutual understanding between the segregated group and the general communities. To do so counseling service for the segregated ones and health education for the general community was essential. However, the finding of the current studies showed the activities are not effectively materialized. The finding showed that the major problem podoconiosis patients' face was physical challenge followed by absence of counseling service. The patients from wolayta in the study reported that their inability to walk long distance, stand for a relatively long time and inability to carry out their day to day chores due to the chronic nature of the disease and the pain associated with it. Podoconiosis causes disability due to its acute manifestations as well as its chronic forms as easily observed from a high school student research participant. This finding agrees with the finding of Sri Lanka which showed elephantiasis patients reported difficulty in walking, in doing housework due to the swollen limbs, and the severe types of the disease associated with difficulty in standing and using toilet. And also they have difficulty in climbing stairs, walking uphill, drawing water from well, getting into bus, holding railing in a bus, sitting and lifting heavy objects (wijesinghe et al, 2007). And societal negative reaction towards podoconiosis patients was another challenge they face in integrating within the community. According to the finding in the study society isolates the patients from different social activities. They don't have decision making power at their community and home. All in all they face stigma and discrimination. This finding was consistent with the literature which showed that podoconiosis patients face stigma and discrimination due to their disease. Goffman (1963) describes three general causes of stigma: physical deformities, moral transgression, and membership of a despised social group. People with podoconiosis are associated with the first and third because of physical manifestations of podoconiosis and many people with podoconiois are members of groups that are already socially marginalized; for example they are poor and stigmatized. Furthermore, stigma is also more evident when the condition is unalterable, incurable, severe, degenerative, and leads to readily apparent physical disfigurement or to an undesirable and unaesthetic death (Gilmore and Somerville, 1994). And the study showed that podoconiois patients face economic challenge due to their affected limbs which aligns with the finding of Tekola. According to research conducted by Tekola (2006), podoconiosis patients were involved in economic and domestic activities, but worked less than those not affected by the disease. The time lost from economic activities, 2.96 h per day per patients is higher than the time lost from chronic lymphatic filariasis patients in rural Tamil Nadu (0.89 h/day). At a loss of 2.96 h of economic work per day, each patient loses a total of 166 working days per year, which is equivalent to 45 percent of the total productive work-days. According to Tekola (2006), even potentially productive people are forced to be partially or totally house-bound due to podoconiois. Podoconiosis patients are less likely to be employed because of the unwillingness of employers to take them as employee due to the social values and beliefs that are attached to the disease and the physical condition of patients, which have an impact on their physical activities. Studies have shown that most available job for disabled people is begging, which is a social tragedy of developing countries in which 80% of the total disabled people live (Khoury,200). According to literature people with disability are most disadvantaged poor citizens anywhere in the world and especially in developing countries where facilities are limited. They are denied adequate health care, education, employment, and social equity, which is true in podoconiosis patients and world wide only 3% of disabled individuals are literate (Groce, 1999). The finding also showed absence of counseling service in the area is the major challenge podoconiosis patients face not to integrate with the community. According to Kathrun (2000), people who live satisfying and fulfilling lives and are not confronted by any particular crisis do not seek counseling. However, even people who live satisfying and fulfilling lives will at certain times be troubled emotionally and may seek help. Many people, if not all, will at some time encounter physical and/or emotional crises. It is at times like these that people may seek counseling. Most common reasons why people come to see counselors relate to relationships, developmental life changes, being troubled by illness, having experiences of physical or emotional trauma. Research has indicated that counseling has a positive effect for physically and emotionally traumatized individuals. Counseling is useful to provide patients with emotional support in times of crisis and to help them live a satisfying life despite the challenge they have. Podoconiosis patients have no access to counseling services and no one provides such kinds of service, therefore it is easy to predict the challenge they face due to lack of counseling service. And the current study also showed that bad smell of the leg is a major challenge why podoconiosis patients isolate themselves from public activities. They feel discomfort in the presence of others due the bad smell of their leg as they reported. This finding aligns with the finding of G/Hanna (2005) that podoconiosis patients face challenge within their community because of the bad smell of their legs.

As research shows members of stigmatized groups may be devalued, ignored, and excluded as shown from the research findings. But they will not sit mutely in the face of challenge they do indeed actively cope with the negative effects of the challenge they face (Shana, 2004). The finding of the study also showed podoconiosis patients face different psychological and social challenges and at the same time they will employ different methods to mange the challenge they encounter in their day to day life. The current finding revealed that podoconiosis patients don't use only single method to mange the challenge they face. Rather they use more than one method to cope up with the challenge they face. According to the finding, the majority use accessing medical care and treatment for coping with the challenge they face. According to literatures getting treatment and new information leads patients to feel better and cope easily the challenge they face. Secondly used method by podoconiosis patients as their coping strategy is restricting themselves from social participation and withdrawing from various social activities of the community. According to Savnderson (2003), patients whose disease was exposed to other community members adopt a strategy of wearing long wears and all other possible steps to reduce the saliencies of their stigma from others. To do so, they may displace their home place and try to avoid social confrontation and they may withdraw socially. This avoidance often goes hand in hand with selective affiliation with other persons affected by the same disease. Praying and performing religious rituals is another method used. A research finding in Dominican Republic showed that women affected by elephantiasis gained strength to cope from religious faith (Bobbie, 2008). Many women reported across all stages of the disease gained strength through prayer and communication with God. Concealing the disease is also common way of managing the stress they face. According to Heijnder (2002), the initial response of patients in the case of stigmatizing disease is to hide about their disease from their family and other community members. The research of Berket (2007) and G/Hanna (2005) revealed that podoconiosis patients use concealment as their coping mechanism especially those in early stage of the disease. Discussing with family members, friends, and relatives is another method revealed from the finding. The study in Dominican Republic revealed that elephantiasis patients cope up the problem they encounter with close relationship to friends, neighbors, and family members in preventing social isolation (Bobbie, 2008). Aggressive way of acting or violent way of interaction was also a way to manage the psychosocial challenge podoconiosis patients' encounter as reported by some respondents. The study showed that some patients act violently for the society's negative reaction.

Chapter Six

Summary, conclusion, and Recommendation

In this section of the paper summary, conclusion and recommendation of the study are presented.

6.1 Summary and conclusion

This study was conducted to investigate the psychosocial experiences of podoconiosis patients. It also attempted to explore the different strategies they adopted to mange the psychosocial challenge and the problems that they had encountered in integrating themselves with the wider community. With regard to coming up with findings in relation to the grand objective stated above, the following research questions were formulated:

- Do people with podoconiosis experience psychological problems of mental distress and does the disease have any impact on their self-esteem?
- What are the major social problems podoconiosis patients faces?
- How do they cope up with psychological and social challenges they face?
- What problems do podoconiosis patients have in relation to integrating themselves into the general community?

The review of literature has highlighted that podoconoisis patient's encounter various forms of challenge like physical, social, psychological, and economic. It also highlighted that Ethiopia is one of the country which is the worst affected with the disease compared to other countries in the region.

Podoconiosis patients who were accessing treatment in the outreach clinic at the time of data collection were selected by using simple random technique from patients register and four outreach clinics in Wolayta Zone. Accordingly, 120 podoconiosis patients participated in the survey and 12 purposively selected podoconiosis patients participated in the in-depth interview. The data were then analyzed quantitatively and qualitatively.

The data collection instruments employed in the study were interviewer administrated questionnaire and semi structured interview. Before the final administration, the reliability coefficient of instruments was calculated using cronbach's Alpha. Instruments' were administrated to selected podoconiosis patients and reliability coefficients were determined. Moreover, interview sessions were conducted with selected patients.

To analyze data different statistical techniques were employed in the analysis of variables included in the study. Descriptive statistics (percentages, means, standard deviations and frequencies) were used to analyze the extent and variations of the scores of the measures considered in the study. Intercorrelations among predictor and outcome variables were computed to show the interrelationship among variables. Analysis of Variance (ANOVA) and Multiple Regression Analysis were also employed to examine significant effects and independent effects of each predictor variables on the criterion variable, respectively. Finally, the interview result with selected podoconiosis patients was triangulated with the result obtained from the questionnaire.

In general, the findings were analyzed and discussions were made on the basis of existing literature.

The analysis of data has thrown lights on the following findings and conclusion;

- Podoconiosis patients have negative social experience. They had difficulty in these social sphere; decision making in the community and home, displacement problem, marriage, interpersonal relationship, and social participation.
- The majority of podoconiosis patients have psychological problems of low self-esteem and high mental distress.
- The mean computation revealed that males experience more negative social experience and mental distress than females, similarly the older age groups experience less negative social experience and mental distress than younger podoconiosis patients, the self-esteem of the respondents decreases when their educational status increases whereas mental distress decreases, the widowed experience more negative social experience than other marital status groups in the

study whereas the married podoconiosis patients have lower mean score for metal distress, and the mean score of negative social experience increases from stage one to stage three.

- A bivarate correlation among the predictor and outcome variables revealed that age, sex, and severity have a correlation with social experience and mental distress. Sex and severity have positive correlation with social experience and mental distress whereas age has negative correlation with social experience and mental distress.
- Sex of podoconiosis patients have effect on social experiences and mental distress similarly podoconiosis patients age have effect on the social experience and mental distress, and educational status had significant effect on mental distress of podoconiosis patients, lastly marital status had a significant effect on mental distress of podoconiosis patients.
- Educational status of the patients is strong predictor of their self-esteem, age of the respondents and marital status strong power predictor of social experience, and age and educational status of the patients are strong predictors on podoconiosis patients' mental distress.
- The study also revealed that physical disability, economic challenge, absence of counseling service to enhance their well-being, bad smell of the leg, and societal negative reaction are the major problems which hinder podoconiosis patients to integrate into the wider community.
- On the strategies what podconiosis patients adopt in managing psychosocial challenge they face, podoconiosis patients used the following strategies: concealing the diseases, restricting one's self from social participation, accessing medical care and treatment, withdrawing from social activities, praying and performing religious rituals, discussing with family, friends, and relatives, and lastly some proportion of the patients use aggressive act as a way to mange the psychosocial challenge they face.

6.2 Recommendation

In light of the aforementioned conclusion the following recommendations are put forth:

- Counseling service by professional counselors should be provided to podoconiosis patients in order to equip them with the skill to handle the challenge they face in their day to day activity. The service should focus on building self-esteem and individual social capital, Promotion of "I am good", motivating them and helping to acquire the skill to Interact and communicate with others rather than hiding them from different social activities.
- Podoconiosis prevention and control programe in Ethiopia is not integrated to the general health care service; therefore The Ministry of Health (MOH) should integrate it into health care service and also should develop and integrate a psychosocial rehabilitation program to the general health care service.
- They should be given special kind of skill training so as to broaden their job opportunity and knowledge and subsequently increase their income.
- Civil societies, including professional groups, NGOs, private societies, the media, the academic and research organizations are expected to play key roles in addressing the psychosocial problems of podocoiosis patients.
- Podoconiosis patients should be empowered. To foster their capacities as an effective response to stigma and discrimination. It might include strengthening skills and knowledge, building self-acceptance and social capital, improving the socio-political environment for healthy change, and enhancing elements of organizational skills development. Empowering patients includes helping them acquire advocacy and communication skills. It is a process that helps ensure that those directly affected by podoconiosis are integrally involved in decision making processes, as well as in planning and implementing diverse strategies.
- In order to decrease the negative reaction of the wider community towards podoconiosis Ministry of Health or the regional health bureau need planning health education to change the behavior and attitude related to the disease. Any successful response to stigma and discrimination needs to be based on a clear understanding of these phenomena and should be in line with available evidence. This includes being sure that people clearly understand what podoconiosis is, how

it is (and is not) transmitted, how it is prevented, and how it is treated. It also means that people undertaking stigma reduction strategies or those targeted by them need to have a clear idea of what stigma and discrimination are, how they affect podoconiosis patients, and what can be done to counter them. Successful stigma reduction strategies need to be based on a clear and insightful appreciation of the specific local contexts and conditions and must build on lessons learned from past experience and from others.

- Holding different awareness creating program through both print and mass media about the disease.

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Appendix

Addis Ababa University
School of Gradate Studies
Institute of Psychology

(Questionnaire for podoconiosis patients)

Date ____________

Place ___________

How are you doing? My name is _________________________. I am here to gather information. The principal purpose of this questionnaire is to obtain data for a study intended to investigate the psychosocial experience and coping strategies used by podoconiosis patients. Therefore, your unreserved cooperation in providing the most genuine information will have a greater significance to the solution of the problem.

I am interested in all your ideas, comments and suggestions. Dear respondents, please not that:

- Any information that you give is confidential

Thank you in advance!

Direction:

Listen to the questions carefully and give your response accordingly.

PART ONE: Socio-demographic section

1. Sex ______
2. Age________
3. Educational status
   3.1. Illiterate
   3.2. Read and Write
   3.3. Elementary
   3.4. Secondary
   3.5. Tertiary
4 Marital status
   4.1 Never Married
   4.2 Married
   4.3 Widowed
   4.4 Divorced
5 Economic activity
   5.1 Farmer
   5.2 Daily laborer
   5.3 Hand craft
   5.4 Other's specify ------

6. Severity of podoconiosis manifestation

6.1 With small swollen limbs around fingers (not severe), stage one.

6.2 With moderately swollen water baggy or hard nodules with mossy (moderate), stage two.

6.3 With highly swollen hard nodules or water baggy limbs covered by mossy (Severe), stage three.

Part two: question that assess Social life of the patients

The following questions are about some of your experiences, feelings, and opinions for the society's reaction towards the disease. There is no right or wrong answers. If you agree with the statement say agree. If not say disagree. Please give the answer for all questions. Scores are calculated as follows: Agree = 3, Neutral= 2 and Disagree = 1.

	Statements	**Agree**	**Neutral**	**Disagree**
1	I was forced to displace my home town /zone/ worda after I become podoconiosis patient.			
2	I was forced to depart from my family due to the disease.			
3	I lost my friends due to the disease.			
4	I have no power of decision making either in my home or in my local community for I have podoconiosis.			
5	I have equal access to attend wedding and funeral ceremony as persons who aren't victims of podoconiosis.			
6	It is difficult for me to use public service such as recreation center, clinic, market etc. due to the disease.			
7	I don't participate in religious holy days' (Meskel, epiphany, Christmas, Id Al Adhad, etc) celebration with the general community due to the disease.			
8	I face interpersonal relationship problems with my spouse/children/ family/ neighbors after I become a podoconiosis patient.			
9	I don't like to bring myself into public meetings, social gathering, cultural practices, etc after I become a podoconiosis patient.			
10	It is difficult to get an appropriate partner for marriage (if the respondent is single) and or to my children to get married to non patients' individuals or families (if they have family).			
11	Unaffected community members' laugh/insult/ rumor when they see me.			
12	People point at me when they see me at different social confrontation.			
13	I can freely share cloth or other materials with people who don't have the disease.			
14	Even if my marriage still continues the love between my spouse and me is not good as it was before I contracted the disease.			
15	I have been proposed for marriage (for those boys and girls in appropriate age for marriage).			
	Score			

Part three: State of Psychological life

A. Self Esteem.

Instruction: below is a list of statements dealing with your general feelings about yourself. If you strongly agree, put a tick mark under SA. If you agree with statement, put a tick mark under A. If you disagree, put a tick mark under D. If you strongly disagree, put a tick mark under SD. For items 1,2,4,6, and 7: strongly agree=3, Agree=2, Disagree=1, Strongly disagree=0.

For items 3,5,8,9, and 10 (which are reversed in valence): Strongly agree=0, Agree=1, Disagree=2, strongly disagree=3

	Statements	**SA**	**A**	**D**	**SD**
1*	I feel that I am a person of worth, at least on an equal plane with others.				
2*	I feel that I have a number of good qualities.				
3	All in all, I am inclined to feel that I am a failure.				
4*	I am able to do things as well as most other people.				
5	I feel I do not have much to be proud of.				
6*	I take a positive attitude toward myself.				
7*	On the whole, I am satisfied with myself.				
8	I wish I could have more respect for myself.				
9	I certainly feel useless at times.				
10	At times I think I am not good at all.				
Total Score					

B. Measuring Mental Distress (SRQ20)

Instruction: the following questions are related to certain pains and problems that may have bothered you. If you think the question applies to you and you had the described problem answer (YES). On the other hand, if the question does not apply to you and you did not have the problem answer (NO). Each of the 20 items is scored 0 or 1. A score of 1 indicates that the symptom was present (Yes), a score of 0 indicates that the symptom was absent (No). The maximum score is therefore 20.

	Statements	**Yes**	**No**
1	Do you often have headaches?		
2	Is your appetite poor		
3	Do you sleep badly?		
4	Are you easily frightened?		
5	Do your hand shakes?		
6	Do you feel nervous, tense or worried?		
7	Is your digestion poor?		
8	Do you have trouble thinking clearly?		
9	Do you feel unhappy?		
10	Do you cry more than usual?		
11	Do you find it difficult to enjoy your daily activities?		
12	Do you find it difficult to make decisions?		
13	Is your daily work suffering?		
14	Are you unable to play a useful part in life?		
15	Have you lost interest in things?		
16	Do you feel that you are a worthless person?		
17	Has the thought of ending your life been on your mind?		
18	Do you feel tired all the time?		
19	Do you have uncomfortable feelings in your stomach?		
20	Are you easily tired?		
	Total Score		

Part four: Coping and Integration problems of podoconiosis patients

1. What kind of major problem personally did you face not to involve yourself in various kinds of activities in the community? (Only choose one problem among the options that affects you the most than others).

Physical disability ☐
Absence of counseling service to enhance well-being ☐
Bad smell of the leg ☐
Societal negative reaction ☐
Economic challenge ☐

2. What kinds of strategies do you use to manage the challenge you face? (you can choose more than one)
   I concealed the disease from every body ☐
   I restrict myself from social participation ☐
   Withdrawing from social activities ☐
   Accessing medical care, treatment, advice, and support ☐
   Praying and performing religious rituals ☐
   Discussing with family, friends, and relatives ☐
   Aggressively act ☐

Interview Guide

These questions are prepared for the purpose of gathering information through interview. The information will be used only for the research purpose.

1. Sex, age, educational status, marital status, economic activity, and severity level.
2. What are the major social problems you face/ how would you explain your social experience? Explain me by relating your experience regarding to participation in social activities, in decision making at your community and home, to your marriage prospect / if you have a child -your child marriage prospect, interpersonal relationship problem.
3. What are the major problems in integrating yourself with the community?
4. What method do you employ to mange the challenge you face?

አዲስ አበባ ዩንቨርሲቲ

ድህረ ምረቃ ፕሮግራም

የሥነ ልቦና ጥናት ተቋም

ለዝሆኔ በሽታ ሕመማን የተዘጋጀ መጠይቅ

የዚህ መጠይቅ ዋና ዓላማ የዝሆኔ በሽታ ሕሙማን በሽታውን ለመቋቋምና ለማግታት የሚያደርጉትን ጥረትና ከበሽታው የተነሳ የሚከሰተውን የሥነ- ልቦና ማህበራዊ ተጽዕኖ ለማጥናት ችግሩን ለመቅረፍ አዎንታው መፍትሔ ለማበርከት ይረዳ ዘንድ መረጃ ለማሰባሰብ ነው፡፡ በመሆኑም ይህን ችግር ለመቅረፍ ለሚደረገው ርብርብ የእርሶ ትክክለኛና እውነተኛ መረጃ የላቀ ድርሻ ይኖረዋል፡፡

ማንኛውም ሐሳቦች ሆነ አስተያየት ለጥናቱ ስኬት ከፍተኛ አስተዋፅኦ ያለው ከመሆኑ በላይ የሚሰጡት ማንኛውንም መረጃ ለዚህ ጥናት ዓላማ ብቻ የሚውልና ሚስጥራዊነቱ የተጠበቀ መሆኑን አረጋግጥሎታለሁ፡፡

ለሚደረገው ትብብር ሁሉ ከልብ አመሰግኖታለሁ፡፡

ክፍል አንድ

የሕሙማኑ ማህበራዊና ኢኮኖሚያዊ ሁኔታ

1. ፆታ
2. ዕድሜ
3. የትምህርት ደረጃ
    - 3.1 ያልተማሩ
    - 3.2 መጻፍና ማንበብ
    - 3.3 የመጀመሪያ ደረጃ
    - 3.4 ሁለተኛ ደረጃ
    - 3.5 ከፍተኛ ደረጃ

4. የትዳር ሁኔታ
    4.1 ያላገባ/ች
    4.2 ያገባ/ች
    4.3 ሚስቱን/ባሉዋን በሞት ያጣ/ች
    4.4 የፈታ/ች
5. የሥራ መስክ
    5.1 ገበሬ
    5.2 የቀን ሠራተኛ
    5.3 የእጅ ባለሙያ
    5.4 ሌላ ከሆነ ይጥቀሱ
6. በሽታው የሚገኝበት ሁኔታ
    6.1 አነስተኛ የሆነ እብጠት በእግር ጣት አካባቢ ይገኛል(እየጀመረ ያለ/የመጀመሪያ ደረጃ) ☐
    6.2 መጠነኛ የሆነ እብጠት ይገኛል/ሁለተኛ ደረጃ ☐
    6.3 ከፍተኛ ደረጃ የደረሰ ነው። ትልቅ እብጠት ይገኛል ሶስተኛ ደረጃ ☐

ክፍል ሁለት

የሕመማኑ ማህበራዊ ኑሮ

ቁ	ሐሳብ/ዓረፍተ ነገር	እስማማለሁ	አይመለከተኝም	አልስማማም
1	ከበሽታው የተነሳ መኖሪያ ቤቴንና ቀየን እንድለቅ ተገድጃለሁ።			
2	ከቤተሰቤ ተለይቼ ብቻዬን እንድኖር ተገድጀለሁ።			
3	ከበሽታውየተነሳጓደኞቼ ርቀውኛል/አጥቼቻለሁ			
4	የማነሳቸው ሐሳቦች በማህበረሰቡ ሆነ በቤተሰቤ ቦታ የላቸውም።			
5	እንደማንኛውም ጤነኛ ሰው ማህራዊ ክንዋኔዎች ላይ እንድገኝ እጋብዛለሁ ።			
6	ማህበራዊ አገልግሎት የሚሰጥበት ሥፍራዎች አንድ ገበያ፣ክልኒክ፣መዝናኛ ወዘተ ቦታዎች ለመገኘት የሚያስቸግር ሆኖ አግንችያለሁ።			

Description of Interview Participants

The table below identified each participant by the following demographic information sex, age, educational status, marital status, economic activity and severity. In order to preserve confidentiality and protect anonymity, each participant was assigned in numerical number 1-12.

Description of participants who participated in the face-to-face.

No	Sex	Age	Educational status	Marital status	Economic activity	Severity
1	M	36	Primary	Married	Farmer	Stage 3
2	M	18	High school	Unmarried	Student	Stage2
3	M	29	Read and w	Unmarried	Hand draft	Stage 1
4	M	22	Highs cool	Unmarried	Student	Stage 2
5	F	36	Elementary	Divorce	Trading	Stage 2
6	F	27	Illiterate	Widowed	Trading	Stage 1
7	F	30	illiterate	Married	Trading	Stage 3
8	M	43	Illiterate	Married	Farmer	Stage 2
9	F	20	Illiterate	Unmarried	Other	Stage 3
10	F	27	Illiterate	Unmarried	Trading	Stage 3
11	F	38	Illiterate	Divorces	Trading	Stage 3
12	M	40	Read and write	Married	Farmer	Stage 3

Photo by: Tesfatsion after getting permission from the research participants.

Declaration

I the undersigned, declare that this thesis is my original work and that all sources of the material in this thesis have been duly acknowledged.

Name: Tesfatsion Dominiko

Signature: ____________

Date: June 14 2010

This thesis has been submitted for examination with my approval as a university advisor.

Name: Girma Lemma

Signature: ____________

Date: June 14, 2010