ADDIS ABABA UNIVERSITY

SCHOOL OF GRADUATE STUDIES

THE PSYCHOSOCIAL ADJUSTMENT OF ADOLESCENTS WITH A CHRONIC HEALTH CONDITION

(A STUDY OF EPILEPTIC AND DIABETIC ADOLESCENTS)

BY

MIGNOT BEKELE

JUNE, 2009

ADDIS ABABA

THE PSYCHOSOCIAL ADJUSTMENT OF ADOLESCENTS WITH CHRONIC HEALTH CONDITION (A STUDY OF EPILEPTIC AND DIABETIC ADOLESCENTS)

Mignot Bekele

A Thesis Submitted to the School of Graduate Studies of the Addis Ababa University in Partial Fulfillment of the Requirement for the Degree of Master of Arts in Counseling Psychology

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List of abbreviations and acronyms

AEDs:	Anti-Epileptic Drugs
CATIS:	Child Attitude Towards Illness Scale
DM:	Diabetes Mellitus
HRQOL:	Health Related Quality of Life
IDMM:	Insulin Dependent Diabetes Mellitus
QOL:	Quality of Life
SSA:	Sub-Saharan Africa
WHO:	World Health Organization

Abstract

The study was primarily aimed at examining the psychological and social adjustment of epileptic and diabetic adolescents as compared with 'healthy' group of adolescents. Moreover, the study also aimed at further investigating into the role of some demographic variables (age, gender), clinical variables (illness duration, health attack frequency) as well as attitude towards illness for the psychological and social adjustment of the epileptic, diabetic and 'healthy' group of adolescents who took part in the study. Data were collected by way of questionnaires from a total of 156 conveniently selected adolescents (52 epileptic, 52 diabetic, and 52 'healthy' adolescents that were matched for age and sex) from two local hospitals and three government schools in Addis Ababa. The data were analyzed by making use of an independent t-test, one way ANOVA, Scheffe's procedure, and mean comparisons.

The findings of the study revealed that adolescents with epilepsy had more psychological and social adjustment problems compared with 'healthy' as well as diabetic adolescents. Diabetic adolescents, on other hand, exhibited relatively similar psychological and social adjustment outcomes as the 'healthy' adolescents. Among epileptic adolescents, a relatively higher seizure frequency and unfavorable attitude towards illness were found to be significantly associated with psychological and social adjustment problems. However in diabetic adolescents, except the female gender that was significantly associated with psychological adjustment problems, none of the studied demographic variables, clinical variables as well as attitude towards illness demonstrated association with the adolescents' psychological and social adjustment

Epileptic adolescents seemed to endure more compromised psychological and social adjustment problems. To this end the study primarily recommended the integration of psychosocial support services with medical services. Moreover, making accessible appropriate epilepsy related information to the adolescents was suggested along many other recommendations.

1. INTRODUCTION

1.1. Background of the Study

Human beings usually race through life challenges of various proportions. Though anyone could endure such challenges in life, it becomes grave burden when challenges begin early on in life and persist through out. Viewed with such light, the difficult way of life of adolescents with chronic health conditions and subsequent adjustment problems could be conceptualized as having tremendous sequel on the lives of adolescents.

Chronic health conditions correspond to illnesses that are life long in duration, treatable but rarely cured completely, and requiring persistent self management behaviors (Chronic illness self management in children, 2003). Among few other chronic health problems with debilitating effect on the lives of adolescents, epilepsy and diabetes constitute major adversities with life long suffering. Epilepsy is a chronic neurological disorder which can be defined in physiological terms being "the name for occasional, sudden, excessive, rapid and local discharge of grey matter". It can also be defined clinically as an intermittent, stereotyped disturbance of consciousness, behavior, emotion, motor function, or sensation that on clinical ground is believed to result from cortical neuronal discharge. Epilepsy can then be defined as a condition in which seizures recur, usually spontaneously (Chadwick, 1994).

While there are over forty types of seizures, most are classed within two main categories: partial seizures and generalized seizures. Partial seizures occur when excessive electrical activity in the brain is limited to one area where the two most common types of which are simple partial seizures and complex partial seizures. Generalized seizures on the other hand occur when the excessive electrical activity in the brain encompasses the entire organ. The two most common forms are generalized absence seizure and tonic seizures (Epilepsy Ontario, 2008).

Diabetes with out qualification usually refers to diabetes mellitus which is associated with excessive sweet urine ("glycosuria") but there are other several rare conditions also

named diabetes, the most common of which is diabetes insipidus (Wikipedia, 2009). Diabetes Mellitus is a chronic health condition in which the pancreas produces insufficient amounts of insulin, or in which the body's cells fail to respond appropriately to insulin. Insulin is a hormone that helps the body's cells absorb glucose (sugar) so it can be used as a source of energy.

Epilepsy is the most prevalent non-traumatic neurological disorder in Africa. According to studies on epilepsy in Ethiopia, there are about 400,000 people with epilepsy (in a country of 74 million habitants). Around 85% are children, of whom just 3% are receiving medical treatment due to the stigma attached to this disorder (Epilepsy Support Association of Ethiopia). The incidence of epilepsy in Ethiopia is high. A high incidence in combination with a prevalence of epilepsy are comparable to that in the rest of the world may be explained by a high degree of spontaneous remission of epilepsy and/or a high mortality due to epilepsy (Tekle-Haimanot, Forsgren & Ekstedt,1997).

Diabetes, particularly diabetes mellitus, is a worldwide chronic disease with variable prevalence (Felimban, Hanif & Al-Almaei, 1998). It is a major cause of morbidity and mortality that place huge strain on public health funding. At present, the disease has reached epidemic proportions, affecting more than 170 million people world wide, with an estimated increase of at least 50% by 2010 especially in developing countries. Its prevalence is expected to double to about 300 million by the year 2025 (Papadopoulos et al., 2007).

Epilepsy and diabetes are hence notable chronic health problems that tamper with the developmental period of adolescence. As adolescence is a turbulent period of development marked by identity formation and self definition as well as a crucial time for acquisition of knowledge and social skills that allow the natural integration into society, the psychological as well as social consequences of chronic health conditions (diabetes and epilepsy) on those adolescents with the condition need to be points of a study concern.

1.2. Statement of the Problem

Young people with chronic health condition experience many sources of stress. A chronic illness affects the physical, cognitive, social, and emotional spheres of development for adolescents with repercussions for siblings and parents (Yoe & Sawyer, 2005). The increase in day to day care giving requirement, the complexity of disease management activities, life style, and family dynamics, alone or collectively may influence long term health outcomes. The adolescent is affected personally by the pathology of the disease, side effects of treatment, and by the required life style and health management (Brown et al., 2008) With this respect, some population-based studies have led to the conclusion that children with chronic illness are up to three times more likely to have psychological problems than healthy peers (Grey, 1991 cited in Felimban, Hanif & Al-Almaei, 1998).

Epilepsy is characterized by its episodic and chronic nature, the seizure usually produce brief period of disruption which include phenomena such as lose of consciousness, bodily distortion, injuries, unusual and often frightening psychological experience as well as urinary bowel incontinence. The unpredictability of seizure recurrence is a constant treat to the patient with epilepsy and his /her family. Apart from the episodic seizure there are many other ever present factors, social, psychological, behavioural, educational, cultural and so fourth which affect the lives of children with epilepsy, their families and their close social networks. These factors vary considerably from one person to the next but have significant impact on daily quality of life in every affected individual (Ronen, Streiner, & Rosenbaum, 2003)

A diagnosis of epilepsy has been found to carry with it; concerns about seizures, the burden of having to take medication, and the fears of others reactions. People with epilepsy suffer as much from a social disease as a neurological disorder. Individuals with the disorder report a significant impact of epilepsy in terms of reduced social and leisure opportunities, and poor self esteem compared with individuals without the condition (Jacoby et al., 1996 cited in Panter, 2004). Studies have shown that people with epilepsy are at greater risk of psychopathology and more likely to be socially dysfunctional than people with out epilepsy (Epilepsy Ontario, 2008).

Similar to the impact of epilepsy on adolescents, Sudhir et al., (2001) maintain that diabetes places greater emotional difficulties and stress on adolescents due to the longer duration of the disease, illness being super imposed on the phase of behaviour and physical development, and consequence of the disease itself in terms of life expectancy and complications.

Diabetic care requires many injection of insulin per day, multiple glycamic controls and specific diet in order to obtain satisfactory metabolic control with an impact on daily physical, emotional, and social wellbeing of the individual and parents (Ausli et al., 2007). When diabetes is not managed effectively, there is the potential for serious health consequences in both the short-term (e.g. coma) and long term (e.g. blindness, kidney disease, circulatory problems) (Amiel et al., 1986 cited in Helgeson et al., 2007).

Managing type I diabetes is particularly difficult during adolescence, as many other developmental demands impinge upon the young diabetic making it more stressful. The changes associated with adolescence such as preoccupation with body, striving for autonomy and independence as against the restrictions imposed by the parents, need for peer affiliation and acceptance all clash with diabetes regimen (Sudhir et al., 2001). Not surprisingly, adolescents have worse metabolic control than younger children and adults which is partly due to the decrease in insulin sensitivity associated with puberty and partly due to adolescents engaging in less self care behavior (Helgeson et al., 2007).

The psychosocial adjustment of epileptic and diabetic adolescents is a loosely treated issue in national research undertakings. Yet, a focus on the adjustment of these chronically ill adolescents from a psychological as well as social standpoint is essential to catch the whole picture of their burden. With such conviction, this study tried to deal with the following research questions.

1.2.1. Research Questions

The current study aims at addressing the following research questions:

- Is there any statistically significant difference in the psychosocial adjustment of epileptic, diabetic, and 'healthy' adolescents?
- Is there any statistically significant gender difference in the psychosocial adjustment of epileptic, diabetic and 'healthy' adolescents?
- Is there any statistically significant age difference in the psychosocial adjustment of epileptic, diabetic and 'healthy' adolescents?
- Is there any statistically significant difference in the psychosocial adjustment of epileptic and diabetic adolescents as a function of health attack frequency?
- Is there any statistically significant difference in the psychosocial adjustment of epileptic adolescents and diabetic adolescents as a function of illness duration?
- Is there any statistically significant difference in the psychosocial adjustment of epileptic and diabetic adolescents as a function of attitude towards illness?

1.3. The Significance of the Study

The current study should prove to be significant simply because it deals with issues related to adolescents, who constitute a notable proportion of the population and who have much of their lives forward. The fact that it deals with a specially tormented segment of adolescents (those with chronic health conditions - diabetics and epileptics) further amplify its significance.

The study's focus on the psychosocial adjustment of these segments of adolescents hopefully uncovers useful information regarding their psychological as well as social adjustment problems. Consequently, in addition to providing baseline information on their psychosocial adjustment status, such information probably instigates services aimed at redressing their adjustment problems with a renewed focus on psychosocial issues paralleling the medical concern.

The study may also tempt hospitals or other support centers to reconsider the adequacy and efficacy of the clinical support they extend to adolescents with chronic health condition in meeting psychosocial needs.

The family and the community at large, who very closely interact with the adolescents with the chronic health conditions, may also gain insight regarding the social and psychological adjustment challenges the adolescents face and may use such information to better their challenges.

Obviously the study could prove to be a useful resource material for policy makers and adolescent-focused health care providers in Ethiopia. Moreover it may inspire other research undertakings in the area.

1.4. Objectives

The general objective of the study is to see the psychosocial adjustment of adolescents with chronic health conditions, namely adolescents with epilepsy and diabetes. Moreover the study aims to explore into relationships/associations between certain variables and the psychosocial adjustment of epileptic/diabetic adolescents.

The specific objectives of the study include:

- To examine if the psychological and social adjustment of adolescents with chronic illness (diabetes and epilepsy) is any different as compared to adjustment of 'healthy' adolescents (adolescents without a significant health problem).

- To examine whether some variables (age, gender, illness duration, attack frequency, and attitude towards illness) have roles in the psychological and social adjustment of epileptic and diabetic adolescents.

2. REVIEW OF LITRATURE

2.1. Defining chronic health condition, diabetes and epilepsy

2.1.1. A chronic health condition

The word chronic is given a number of definitions. It is typically used for conditions, illness and disease lasting three months or more (Finseth, 2009). A more explanatory definition to the word maintains that it is illness that is life long in duration, treatable but rarely cured completely, and requiring persistent self management behaviours (Chronic illness self management in children, 2003).

Chronic illness have one or more of the following characteristics: It is long-term or permanent; it leaves a residual disability; its causes, natural course, and treatment are ambiguous; it is degenerative; it requires special training of the patient for rehabilitation; and it requires a long period of supervision. Examples of chronic illness include *asthma, allergies, heart disease, diabetes, hypertension, stroke, epilepsy, cancer, cystic fibrosis, sickle-cell disease, varicose veins, arthritis, cirrhosis of the liver, renal disease,* and *mental illness.* As these examples suggest, chronic illnesses range in severity from those that are relatively mild and can be controlled by medical therapies and changes in health behaviors to those that are severe, degenerative, and terminal, causing disability and creating the need for long-term, extensive medical care (Chronic illness-sickness in historical context).

2.1.2. Diabetes

The term diabetes with out qualification usually refers to diabetes mellitus which is associated with excessive sweet urine ("glycosuria") but there are other several rare conditions also named diabetes, the most common of which is diabetes insipidus (Wikipedia, 2009).

Diabetes Mellitus is a chronic health condition in which the pancreas produces insufficient amounts of insulin, or in which the body's cells fail to respond appropriately to insulin. Insulin is a hormone that helps the body's cells absorb glucose (sugar) so it can

be used as a source of energy. In people with diabetes, glucose levels build up in the blood and urine, causing excessive urination, thirst, hunger, and problems with fat and protein metabolism. Diabetes mellitus differs from the less common diabetes insipidus, which is caused by lack of the hormone vasopressin, which controls the amount of urine secreted (Encarta, 2009).

There are three main types of diabetes: type one, type two, and gestational diabetes. Type one diabetes is an autoimmune disease where the body immune system destroys the insulin producing beta cells in the pancreas. It is also known as child onset, juvenile or insulin dependant diabetes. It can appear at any age, although commonly under 40, and it is triggered by environmental factors such as viruses, diet or chemicals in people genetically predisposed. People with type one diabetes must inject themselves with insulin several times a day and follow a careful diet and exercise plan (Encarta, 2009, wikipedia, 2009, National Institutes of Health, 2008).

In type two diabetes which is also called adult onset, obesity related or non insulin dependant diabetes, the pancreas cell makes some insulin but cells can't use it very well It is strongly genetic in origin but life style factors such as excessive weight, inactivity, high blood pressure and poor diet are major risk for its development. Type two diabetes may be treated by dietary changes exercise and or tablet. Insulin may later be required (Encarta, 2009, wikipedia, 2009, National Institutes of Health, 2008).

Gestational diabetes occurs when women are pregnant. It increases the risk of getting diabetes, mostly type two, for the rest of the pregnant women's lives and it also raises their children's risk of being over weight and getting diabetes type two. Risk factors for gestational diabetes include family history of diabetes, increasing maternal age, obesity and being member of community or ethnic group with a high risk of developing type two diabetes (Encarta, 2009, wikipedia, 2009, National Institutes of Health, 2008).

2.1.3. Epilepsy

Epilepsy is a chronic neurological disorder which can be defined in physiological terms being "the name for occasional, sudden, excessive, rapid and local discharge of grey matter". It can also be defined clinically as an intermittent, stereotyped disturbance of consciousness, behaviour, emotion, motor function, or sensation that on clinical ground is believed to result from cortical neuronal discharge. Epilepsy can then be defined as a condition in which seizures recur, usually spontaneously (Chadwick, 1994).

People have seizure when the electrical signals in the brain misfire. The brain's normal electrical activity is disturbed by those over active electrical discharges causing a temporary communication problem between nerve cells. When epileptic people have seizure, he /she may lose consciousness, make involuntary motions or experience unusual feeling or sensation such as unexpected fear. After a seizure the person may feel tired, weak, or confused (Dowshen, 2007).

Although it is difficult to pinpoint exactly what causes epilepsy in particular individuals, scientists have identified some of the things that make a person more likely to develop epilepsy: brain injury, such as from a car crash or bike accident ; infection or illness that affect the developing brain of a foetus during pregnancy; lack of oxygen to an infants brain during child birth; meningitis or any other type of infection that affect the brain; brain tumours or strokes; poisonings such as lead or alcohol poisoning (Dowshen, 2007).

While there are over forty types of seizures, most are classed within two main categories: partial seizures and generalized seizures. Partial seizures occur when excessive electrical activity in the brain is limited to one area where the two most common types of which are simple partial seizures and complex partial seizures. Generalized seizures on the other hand occur when the excessive electrical activity in the brain encompasses the entire organ. The two most common forms are generalized absence seizure and tonic seizures (Epilepsy Ontario, 2008).

Similar seizures may occur at different ages and have varied implications; conversely, patients may experience different seizures during the course of their illness (Chadwick, 1994).

Antiepileptic drugs (AEDS) successfully control up to 70-80 % of epileptic seizures. However, AEDS do not cure epilepsy, they only provide control. Surgery may be required when seizures are the product of brain problem (brain tumour) where seizures occur hundreds of a day making normal life impossible. A well rounded approach to seizure control includes drug treatment, careful avoidance of personal seizure triggerers and the use of alternative therapies help prevent seizures and reduce stress (Epilepsy Ontario, 2008).

2.2. The prevalence of diabetes and epilepsy

Chronic diseases are increasing in global prevalence becoming part of the health burden in many developing countries. Although survey from countries in all corners of the world reveal significant health and economic consequence from chronic disease, the greatest impact is likely to occur in the poor counties that are least able to respond to the diseases (Nugent, 2008).

2.2.1. The prevalence of diabetes

Diabetes, particularly diabetes mellitus, is a worldwide chronic disease with variable prevalence (Felimban, Hanif, & Al-Almaei, 1998). It is a major cause of morbidity and mortality that place huge strain on public health funding. At present, the disease has reached epidemic proportions, affecting more than 170 million people world wide, with an estimated increase of at least 50% by 2010 especially in developing countries. Its prevalence is expected to double to about 300 million by the year 2025 (Papadopoulos et al., 2007).

As complete census in Africa is rare and migration in and out of the study areas is common, assessing the incidence of diabetes in the population is difficult. However, some population based studies conducted in some Sub-Saharan countries indicated the prevalence of type I diabetes as rarer in Africa than elsewhere. Though communicable diseases make up the greatest burden at the moment, it is estimated that by 2020 non-communicable diseases including hypertension and diabetes will outstrip communicable diseases as cause of death (Kalk,Huddle & Raal, 1993; Laster, 1984 cited in Mbanya & Ramiaya , 2006)

In Ethiopia a population based study conducted near Gonder on 2381 persons indicated the overall prevalence of diabetes to be only 0.5%, however 86% of the population screened were under 20 years of age and the prevalence was 2.4% in those over 40 (Lester, 1991). According to the Diabetes Atlas (2003), however, the prevalence of diabetes in Ethiopia was estimated to be 1.9% for those between 20-79 age limits and 1.7% for those less than 14 years.

2.2.2. The prevalence of epilepsy

Epilepsy or recurrent seizure is the most common serious neurological disorder in childhood (Hauser 1994 & Shorvon1996 cited in Austin, et al., 2006). Epilepsy is the world's most common neurological disorder, affecting roughly 50 million people worldwide (Jacoby, 2001cited in Panter, *2004*). Population based studies reported that the prevalence rates of epilepsy to be from 3.6 to 4.2 per 1000 for children in developed countries and approximately double these rate in developing countries (Ronen, Streiner & Rosenbaum, 2003).

Studies performed on population size up to 1000 indicated the prevalence rates of epilepsy in African ranges from 13 to 58 per 1000. Five case controlled incidence studies conducted in five African countries indicated that the number of new cases of epilepsy detected among 100,000 people during one year were 85 in Burkina Faso, 64 in Ethiopia, 73 in Tanzania, 199 in Togo and 156 in Uganda .These incidence rates are higher than those reported from the developed world which usually range from 40 to 70 per 100,000 (World health organization, 2004).

Studies on epilepsy in Ethiopia indicated that there are around 400,000 people with epilepsy around 85% of which are children (epilepsy association Ethiopia). Neurologists in Africa region when interviewed usually report that epilepsy is the second or third reason for consultation after headaches or peripheral neuropathies and the second or third reason for hospitalization after stroke and spinal cord pathologies. Like most other places in the world, the highest age specific incidence occurs from 0 to 20 years (Ndiaye 2000, Tekelehiamanot et al., 1997, and Hauser 1995 cited in World health organization, 2004).

The incidence of epilepsy in Ethiopia is high. A high incidence in combination with a prevalence of epilepsy are comparable to that in the rest of the world may be explained by a high degree of spontaneous remission of epilepsy and/or a high mortality due to epilepsy. (Tekle-Haimanot, Forsgren & Ekstedt ,1997).

2.3. The impact of chronic health conditions on adolescents

Adolescence is a turbulent period of development marked by identity formation and self definition. Adolescents engaged in social activities begin to prepare for employment and relationships. These are all important aspects in the move towards achieving independence. It is these recognized as a crucial time for acquisition of knowledge and social skills that allows the natural integration into society (Baker et al., 2005).

Young people with chronic health condition experience many sources of stress. A chronic illness affects the physical, cognitive, social, and emotional spheres of development for adolescents with repercussions for siblings and parents (Yeo & Sawyer, 2005). The increase in day to day care giving requirement, the complexity of disease management activities, life style, and family dynamics, alone or collectively may influence long term health outcomes. The adolescent is affected personally by the pathology of the disease, side effects of treatment, and by the required life style and health management (Brown et al., 2008).

2.3.1. The impact of epilepsy on adolescents

Recent studies have demonstrated that for adolescents with epilepsy the particular period may be difficult to negotiate as epilepsy can have impact on many aspects of the adolescent life (Baker et al., 2005).

Epilepsy is characterized by its episodic and chronic nature, the seizure usually produce brief period of disruption which include phenomena such as lose of consciousness, bodily distortion, injuries, unusual and often frightening psychological experience as well as urinary bowel incontinence. The unpredictability of seizure recurrence is a constant treat to the patient with epilepsy and his /her family. Apart from the episodic seizure there are

many other ever present factors, social, psychological, behavioural, educational, cultural and so fourth which affect the lives of children with epilepsy, their families and their close social networks. These factors vary considerably from one person to the next but have significant impact on daily quality of life in every affected individual (Ronen, Streiner & Rosenbaum, 2003).

A diagnosis of epilepsy has been found to carry with it; concerns about seizures, the burden of having to take medication, and the fears of others reactions. People with epilepsy suffer as much from a social disease as a neurological disorder. Individuals with the disorder report a significant impact of epilepsy in terms of reduced social and leisure opportunities, and poor self esteem compared with individuals without the condition (Jacoby et al., 1996 cited in Panter, 2004). Studies have shown that people with epilepsy are at greater risk of psychopathology and more likely to be socially dysfunctional than people with out epilepsy (Epilepsy Ontario, 2008).

2.3.2. The impact of diabetes on adolescents

Similar to the impact of epilepsy on adolescents, Sudhir et al. (2001) maintain that diabetes places greater emotional difficulties and stress on adolescents due to the longer duration of the disease, illness being super imposed on the phase of behaviour and physical development, and consequence of the disease itself in terms of life expectancy and complications.

Diabetic care requires many injection of insulin per day, multiple glycamic controls and specific diet in order to obtain satisfactory metabolic control with an impact on daily physical, emotional, and social wellbeing of the individual and parents (Ausli et al., 2007). When diabetes is not managed effectively, there is a potential for serious health consequences in both the short-term (e.g. coma) and long term (e.g. blindness, kidney disease, circulatory problems) (Amiel et al., 1986 cited in Helgeson et al., 2007).

Managing type I diabetes is particularly difficult during adolescence, as many other developmental demands impinge upon the young diabetic making it more stressful. The changes associated with adolescence such as preoccupation with body, striving for

autonomy and independence against the restrictions imposed by the parents, need for peer affiliation and acceptance all clash with diabetes regimen (Sudhir et al., 2001). Not surprisingly, adolescents have worse metabolic control than younger children and adults which is partly due to the decrease in insulin sensitivity associated with puberty and partly due to adolescents engaging in less self care behaviour (Helgeson et al., 2007).

2.4. The psychosocial adjustment of adolescents with a chronic health condition

The definition of psychosocial is pertaining to or concerning the mental factors or activities which determine the social relation of an individual (Chi-wan, 2007).Young individuals with chronic health condition and their families experience more difficulties with psychosocial adjustment than healthy young people. Secondary emotional problems among children with chronic disorders have been reported to be significantly greater than among healthy children. The range of psychological problem which develop is non specific and includes, depression, anxiety, eating disorder, conduct disorders, oppositional behaviour, suicide treats and sleep disturbance (Swanston, Williams & Nunn, 2000).

2.4.1. Self-esteem in adolescents with a chronic health condition

Rosenberg (1965) made an important contribution to defining self-esteem by introducing the concept of "worthiness". "Worthiness" is whether a person judges him or herself as good or bad and is therefore an evaluative attitude towards oneself. Forming attitudes about oneself is very complicated because it implies some kind of comparison with others, the forming of value judgments and is rooted in a social or cultural base (James, 2002).

Recent studies confirm that self-esteem is lower in chronically ill children than in healthy children. In one study self worth was lower in asthmatic children than children with diabetes or cancer or healthy children. There were 25 subjects per group, and the subjects had been ill for at least 6 months, attended an out patient clinic, and did not have a sibling or parent with chronic illness. Lower self-esteem was correlated with increased depression scores in the asthmatic children (Burke & Elliott, 1999).

In other study self-esteem was correlated with depression scales scores in 80 consecutively referred adolescents with sickle cell disease (n=20), asthma (n=40), or diabetes (n=20). In this study the subjects had been ill for at least 2 years and hospitalized at least twice in preceding year. Self-esteem was lower in chronically ill children than in random sample healthy children drawn from local school matched for age and gender (Burke & Elliott, 1999)

2.4.2. Depression in adolescents with a chronic health condition

Adolescence is a period marked by profound biological, social and psychological development changes. Depression and other disorders are common problems among adolescents, but are under diagnosed. Signs of depression are often dismissed as "normal" reactions in this age group and depressed adolescents may appear irritated, board, and impulsive (Verrotti et al., 2008).

Depression is a frequent and significant complication of chronic illness that increases medical morbidity as well as cost of medical care (Burke & Elliott, 1999). It is much more common in adolescents with chronic disease, especially in epilepsy and diabetes (Verrotti et al., 2008). Depression and anxiety exert a profound negative effect on health related quality of life in chronically ill patients ,for instance, a study by Chio-Kwon et al. (2008) cited in Kimiskidis et al. (2007) reported that depression and anxiety explained more variance in health related quality of life of epileptic patients than did any other seizure related or demographic variables

Depression in children and adolescents is associated with significant impairment in social and family relationship as well as increased risk of suicide. (Burke & Elliott, 1999).

2.4.3. Social isolation and loneliness in adolescents with a chronic health condition

Social isolation is an objective measure of social interaction, while social loneliness is considered to be the subjective expression of dissatisfaction with a low number of social contacts. Social isolation is sometimes referred to as aloneness or solitude. Those who are

often alone, however, are not necessarily lonely, as solitude can be a personal choice. Social loneliness is defined as negative feelings about being alone, and as such is an experience that occurs irrespective of choice. Social loneliness, then, can be thought of as negatively perceived social isolation. As a social concept, then, loneliness emphasizes the importance of social perceptions and evaluations of an individual's personal relationships. It includes those situations where the number of existing relationships is smaller than an individual finds desirable or acceptable. It is possible, then, for two persons with the same number of social contacts to perceive these contacts differently. Therefore, one person may express social loneliness while the other does not. (Hall & Havens, 1999).

Young people with chronic illness often report a sense of alienation from their peers and frustration with the requirements of managing their condition and negotiating the health care system (Yoe & Swayer, 2005). There may be problems at school, including deterioration in school performance or withdrawal from social interaction. There may be problems in understanding the condition, the young person may not understand what is happening to them or may believe the condition is punishment to them (Swanston, Williams & Nunn, 2000).

2.5. The psychosocial adjustment of diabetic adolescents

The importance of the life experience in the onset and course of diabetes has been a constant topic of discussion since Tomas wills 300 years ago remarked up on the sweet test of urine of a few of his patients, and said that the disease was caused by prolonged sorrow (Katz, 1957).There is a great psychological demand on the chronically ill child with diabetes mellitus. These demands often exceed their capacity to understand or cope (Allen et al, 1987cited in Sultana, Oommen & Shanmugham, 2007)

Kathryn (2001) conducted a longitudinal study to determine the clinical and psychological course of diabetes through adolescence and the relationship with glycemic control in young adulthood. A total of 76 individuals (43 male patients, 33 female patients) aged 11–18 years completed baseline assessments, and 65 individuals (86%)

were re-interviewed as young adults (20–28 years of age). Longitudinal assessments were made of glycemic control, weight gain, and development of complications. Adolescents completed self-report questionnaires to assess emotional and behavioural problems as well as self-esteem. The result showed that glycemic control was not good in late adolescence and was worse in female participants. The proportion of individuals who were overweight increased during the 8-year period from 21 to 54% in female patients and from 2 to 28% in male patients. Serious diabetes-related events included death in one patient and cognitive impairment in two patients. Seven female patients (27%) and three male patients (8%) scored as suffering from a psychiatric disorder on the Clinical Interview Schedule. During the study period, psychiatric referrals had been sought for four male patients (10%) and seven female patients (23%); reasons were varied and included assessment for repeated time out of school, treatment for an eating disorder, and depression.

On the contrary (Hanstead, 1989 cited in Sultana, Oommen & Shanmugham, 2007) examined how Type I diabetes experienced their quality of life and whether sex, age, social status, education, disease duration, Hbal regimen and complications had any effect on quality of life. The study included 247 Type I diabetes and results indicated that 80% of them reported adequate quality of life. The author thus concluded that a majority of the patients experienced a satisfactory quality of life despite having to live with a chronic illness such as diabetes.

Helgeson et al. (2007) conducted a study to determine weather diabetes is associated with psychosocial difficulties over the transition to adolescence. They compared 132 adolescents with diabetes with 131 healthy adolescents on indices of psychosocial functioning for three years and they found no group difference in depressive symptom anxiety, anger, or behavioral problems. However, adolescents with diabetes showed a decline of social acceptance compared with healthy adolescents. overtime depressive symptoms and anxiety increased and self-worth decreased for females but not males; however this differences are not qualified by group thus they concluded that diabetes is not associated with indicators of psychological distress from early to middle adolescence but may be associated with the emergence of social difficulties.

2.5.1. Self-esteem in diabetic adolescents

Adolescents with insulin-dependent diabetes mellitus (DM) face increasing responsibilities for managing their own treatment. For some, implementing their treatment regimen enhances diabetes self-efficacy beliefs because they welcome the chance to exert control over their illness. Other adolescent patients, however, feel overwhelmed and helpless (Grossman, Brink & Hauser, 1987).

A growing number of studies have focused on studying the influence of DM, its complications and the handling of the individuals' quality of life (QL). For some authors, QL has been as important a variable as metabolic control. Besides, it is believed that adolescents with DM are less susceptible to develop psychiatric disorders, with low SE among them (Novato, Grossi & Kimura, 2008).

Pompiliet et al. (2009) evaluated the perceived quality of life and its association with suicide risk in 100 patients with diabetes as compared to internal medicine out patients. The authors used Beck hopelessness scale; the suicide score scale, the SF-36 health survey questionnaire, and the general selfe efficacy scale. The results revealed that patients with diabetes showed greater hopelessness and suicide ideation than internal out patients. Poor quality of life was related to low self-efficacy, high hopelessness, and suicidality.

Sultana, Oommen and Shanmugham (2007) after studying 30 Insulin Dependent Diabetes Mellitus (IDDM) children and their mothers to understand psychological adjustment in juvenile diabetes reported that on general self-esteem, IDDM children scored significantly lower than controls. However, on the lie scale, the IDDM children scored significantly higher. This could indicate that the IDDM children are defensive and do not report honestly about self-esteem issues. They also found out that illness has significant impact on both the child and their families' .most parents were worried that their children could injure themselves while playing and found them moody because of their illness.

2.5.2. Depression in diabetic adolescents

Studies suggested that diabetes is a risk for depression compared to those with out the disorder.

wittemore and Tamborlane (2002) cited in Sultana, Oommen and Shanmugham (2007) studied the natural history and correlates of depression in type1 diabetes in children and indicated that, depression tends to be more sever, and takes longer to resolve in youth with diabetes. They also stated that depression may be associated with poor metabolic control which may lead to complications and poor outcomes. Youth with diabetes and depression are likely to have another comorbid conditions such as eating disorders, adjustment disorders or anxiety disorders especially in adolescents. In another study of 74 children with newly diagnosed diabetes evaluated for 3 months after diagnosis, 12%had an adjustment disorder with depressed mood and 4%had major depression (Burke & Elliott, 1999).

Mollem et al. (2001) reported that diabetic patients who suffer from extreme fear of self-injecting or fear of self-testing report significantly higher levels of diabetes related emotional distress and poor general wellbeing (Sultana, Oommen and Shanmugham, 2007).

2.5.3. Loneliness and social isolation in diabetic adolescents

The social discrimination though subtle and veiled can not be escaped in diabetic patients, and often seen in form of stigma like delay in marriage or reduced job opprtiounity (Dwivedi, 2008).

Groose, Wildman and mullet, (1981) indicated diabetic children to be embarrassed, ashamed and uncomfortable about their disease. They suggested that they could benefit from psycho education and social skill training that would help them to cope more effectively in social situation (Sultana, Oommen and Shanmugham, 2007).

Helgeson (2007) conduct a study to determine weather diabetes is associated with psychosocial difficulties over the transition to adolescence. They compared 132 adolescents with diabetes with 131 healthy adolescents on indices of psychosocial

functioning for three years and they found no group difference in depressive symptom anxiety, anger, or behavioural problems. However, adolescents with diabetes showed a decline of social acceptance compared with healthy adolescents which lead them to the conclusion that diabetes may be associated with the emergence of social difficulties from early to middle adolescence

2.6. The psychosocial adjustment of epileptic adolescents

Childhood epilepsy is one of the most important and prevalent neurological condition in the developing years. Persons with childhood onset epilepsy are at greater risk for poor psychosocial outcome (Ronen, Streiner & Rosenbaum, 2003).

Historically, epilepsy has been considered a curse of the gods, 'demonic possession,' and a form of madness, consequently epilepsy is a condition that has been feared and rejected (Masia *et al*, 1999 cited in Panter, 2004).

When one searches the literature for the link between "psychosocial" and "epilepsy" ,it yields articles covering variety of areas including psychiatric problems (mood disorders, anxiety ,attention disorder), feeling of shame, fear, and worry, low self-esteem, and self mastering, education, employment, dating, marriage and child bearing, family, cognitive function, poor quality of life, stigma etc (Chi-wan, 2007).

Epilepsy is also associated with increased morbidity, both as a result of seizure-related accidents and injuries as an outcome of the effects of antiepileptic medication, and as a result of psychological distress (Shorvon, 1998 cited in Panter, 2004*)*.The prevalence of psychological morbidity has been shown to be substantially higher among people with epilepsy than those without. Psychological morbidity includes increased anxiety and depression, social withdrawal and isolation and a reduced sense of mastery and control (Matthews & Barabas, 1981 cited in Panter, 2004).

Baker et al. (2005) investigated psychological and social impact of epilepsy on adolescents in comparison to healthy control subjects and indicated that adolescents with epilepsy showed significantly higher level of depression, social anxiety, and higher number of obsessive symptoms than adolescent with out epilepsy. Moreover among

adolescents with epilepsy high seizure frequency was significantly associated with low self-esteem and low level of epilepsy knowledge was significantly associated with higher levels of depression, lower self-esteem, and higher social anxiety.

A study conducted in finish on people with childhood onset epilepsy without any co morbidity followed for 35 years showed that many patients had problems with social adjustment and competence as adults (Ronen, Streiner & Rosenbaum, 2003).

2.6.1. Self-esteem in epileptic adolescents

Epilepsy has been shown to have a negative effect on self esteem especially in children for it is often difficult to cope with the unpredictability of the seizure disorder. They often have feeling of embracement guilt, and rejection which can make play school and family life awkward and discouraging. (Epilepsy Ontario, 2008).

Hoare & Mann, (1994) investigated the relationship between self-esteem and behavioral adjustment in two groups of children with chronic illness, one with epilepsy and the other diabetes. A total of 62 children with epilepsy and 91 children with diabetes were recruited from the total population of children aged 8-15 attending the epilepsy and diabetic clinics at a children's hospital over a 12 month period. Self-esteem and behavioral adjustment were assessed with the Harter and Achenbach Questionnaires respectively. The results showed the children with epilepsy were consistently more behaviorally disturbed and had lower self-esteem than children with diabetes.

Beker et al. (2005) in their study of the impact of epilepsy on adolescents reported that epileptic adolescents had higher level of depression, social anxiety and lower level of self-esteem compared to a random sampled healthy adolescents matched for age and sex drawn from a local school. The results also demonstrated that low selfe esteem is associated with high seizure frequency and low level of epilepsy knowledge.

In contrast to these findings out lining the negative impact of epilepsy on self-esteem in adolescent population, Reeve and Lincoln (2002) found no significant difference between adolescents with epilepsy and control group on measure of self-esteem, affect, and self efficacy (Beker et al., 2005).

2.6.2. Depression in epileptic adolescents

Depression is the most extensively studied emotional problem among patients with epilepsy where large number of controlled Studies reporting prevalence rates ranging from 3-55% (Kimiskidis et al., 2007).

Depression is the most frequent psychiatric comorbidity in patients with epilepsy .By the same taken, patients with depression are at high risk of developing epilepsy than controls. In population base case control study carried out in patients with newly diagnosed epilepsy, Fosghen and Nystrom (1990) cited in Kanner (2006) reported that a history of depression preceding the onset of epilepsy was seven times more frequent among patient than age and sex matched controls. Similarly, in population based study of the incidence of new onset epilepsy among adults aged 55 and older Hesdorffer et al. (2001) indicated epilepsy patients were 3.7 more likely to have a history of depression preceding their initial seizure than were controls (Kanner, 2006).

Depression and suicide tendencies are common in chronic disease especially in epilepsy and diabetes (Verrotti et al., 2008). Two large meta analysis (Pompili et al., 2003, 2006) of 30 studies comprising 51, 216, people with epilepsy concluded that suicide in patients with epilepsy is more frequent than in general population (Verrotti et al., 2008).

2.6.3. Social isolation and loneliness in epileptic adolescents

The diagnosis of epilepsy is often frightening and for patients with and their family. There remains a considerable misunderstanding of the nature of epilepsy and is one of the few organic neurological diagnoses associated with considerable stigma. The fear evoked by unpredictable nature of the seizure may lead to social withdrawal with loss of exciting friendships and inability to form new relationships (Chadwick, 1994).

Westbrook et al. (1969) compared the social functioning of adolescents with epilepsy, adolescents with other chronic illness and adolescents with out chronic illness. The result shows that adolescents with epilepsy were significantly more likely to report that they rarely discuss their disorder with others. Only 15% of the respondents with epilepsy said

that all of their friends knew about their disorder as compared with 59% of the adolescents with other chronic illness (Baker et al., 2005).

Baker et al. (2005) in their study of the impact of epilepsy on adolescents found that epilepsy does take a significant toll on social aspects of adolescents' life and manifests in elevated social anxiety.

The findings outlined above suggested that adolescents with epilepsy face social isolation as the result of their diagnosis, to avoid the social embarrassment of experiencing seizure in public. The adolescents may increasingly withdraw from social activity. In addition, adolescents appear to deal with their diagnosis on their own because they are afraid of the way in which the society and the family perceive them (Panter, 2004).

2.7. Attitude towards illness and psychosocial adjustment

Adjustment to one's illness during childhood sets the stage for later adjustment in adulthood. Adolescence is particularly significant development period for those with chronic health condition as successful negotiation of the physical, cognitive, social and emotional changes taking place as a result of puberty and maturation may be more challenging against a background of illness (Stark, 1991 cited in Heimlich et al., 2000).

The formation and consolidation of personal identity and sense of self are critical tasks in adolescent. Feeling about ones illness may be intimately related to feelings about one self. There for adolescents attitude towards their illness can influence their adjustment to their condition as well as their ability to meet some of the challenges of adolescence (Austin et al., 1998 cited in Heimlich et al., 2000). For example, children who view their illness negatively (e.g., believe the illness makes them different from others or keeps them from achieving goals) may be more likely to withdraw or feel badly about themselves. Children who adopt a more positive perspective, on the other hand (e.g., focus on positive aspects of the illness experience, emphasize what they can do rather than what they cannot do), may display more resilience (Austin & Huberty, 1993 cited in LeBovidge Lavigne and Miller, 2005).

Child attitude towards illness was conceptualized as an important influence on adjustment. In a study of children with chronic arthritis LeBovidge Lavigne and Miller (2005) children's attitude towards their condition were found to moderate the relation between stress and child adjustment .These authors proposed that a positive attitude buffers the impact of increased stress.

Negative attitude towards having a chronic condition have also been related to increased depression, increased behavioral problems, and decreased academic achievement in children with either epilepsy or asthma (Austin et al., 1991, 1993, 1994 cited in Austin et al., 2006).

3. Methodology

3.1 Research design

The study employs a survey design in examining the psychological and social adjustment of adolescents enduring an epileptic health condition and a diabetic health condition, both of which are chronic health problems in adolescents. The study is solely quantitative in its approach making data obtained from the study participants open to statistical procedures.

3.2 Research setting

The sites selected for the study were two hospitals and three schools located in Addis Ababa. The hospitals were the sites where participants with chronic health conditions (epileptic and diabetic adolescents) were recruited for the study inclusion while the schools were the sites from which healthy adolescents (those with no significant self reported chronic health profile) were taken. These study sites were selected in convenience of the researcher and in congruence with the research resources available.

The Yekatit 12 Hospital and the St. Paulos General Specialized Hospital of Adiss Ababa were the hospital sites for locating adolescents with chronic health condition (epileptic and diabetic adolescents). Both hospitals operated under the auspices of The FDRE Ministry of Health and offered an especially devoted medical treatment for diabetic and epileptic patients on particular weekdays.

The Yekatit 12 Hospital, which is located north of Addis Ababa, treated patients from all over the country coming with referrals of other medical facilities. While the St. Paulos General Specialized Hospital, located North-West of Addis Ababa, also offered a similar service. Both hospitals offered medical services for epileptic and diabetic outpatients at their pediatric and medical departments. Adolescents below the age of 14 were treated at the pediatric units and those above the age 14 at the hospitals' medical unit. Both hospitals have an especially dedicated treatment day for diabetic and epileptic outpatients, one week day for each.

Although a well documented information regarding the number and other attributes of epileptic and diabetic adolescents treated at the hospitals is lacking, the researcher's personal communication with physicians at the Yekatit 12 hospital reveal a conservative estimate of from 15-20 diabetic and 20-25 epileptic adolescents' treatment per week. A similar conservative estimate at the St. Paulos hospital also disclosed a per week treatment of from 20-25 diabetic and 10-15 epileptic adolescents. This rough estimate hence entails a monthly treatment of from 60-80 diabetic and from 80-100 epileptic adolescents at the former hospital and from 80-100 diabetic and from 40-60 epileptic adolescents at the later.

Apart from the hospitals, the study's other sites were three government run schools located in Addis Ababa. The first study site, Medhanialem Primary School, enroll students from grade 1-8 while the other site, Mieraf High School, enroll grade 9 and 10 students. The other school site is Medhanialem Preparatory School that enrolls students in grades 11 and 12. These three schools are all located at the Gulele Sub-city of Addis Ababa and that fed students to each other at the completion of their respective uppermost grades.

3.3. Research participants

The population of the study constituted epileptic adolescents and diabetic adolescents who presented themselves for medical treatment at the Yekatit 12 hospital and the St. Paulos specialized hospital of Addis Ababa during the study period from the beginning of February up to mid April 2009. Furthermore, adolescents that were attending the schools, Medhanialem Primary school (in grades 5, 6, 7 and 8), the Mieraf High School (in grades 9 and 10), and the Medhanialem Preparatory School (in grades 11 and 12) of Addis Ababa in the study's data collection period also constituted the population of the study. In a two and half months time frame, data were collected from a total of 64 epileptic adolescents (36 male and 28 female) and 67 diabetic adolescents (40 male and 27 female) who were present at the two hospitals during the data collection period, who gave their consent to participate in the study and who met the inclusion criteria; the inclusion criteria being: diagnosed as diabetic or epileptic at medical facilities and attending

outpatient treatment at the hospitals, being free from other self reported psychiatric or physical co-morbidity, belonging in the age brackets 13-21, being a 5th or above grader, and speaking Amharic as a mother tongue.

Among the collected data 15 questionnaires, those collected from 8 epileptic (5 male and 3 female) adolescents and those collected from 7 diabetic (4 male and 3 female) adolescents were discarded since they were not filled properly (6 in number) and they were filled by adolescents residing other than Addis Ababa (9 in number).

The remaining of the participants (56 epileptic and 60 diabetic adolescents) were then matched by gender (male and female) and age category (13 – 15 years, 16 – 18 years, and 19 – 21 years) that led to the random exclusion of 4 epileptic (1 male and 3 female) and 8 diabetic (6 male and 2 female) adolescents that were unable to be matched. Hence, the matching further reduced the study participants to 52 epileptic and 52 diabetic adolescents. The following table illustrates the above mentioned procedure:

Table 1: Gender and age segregated data on epileptic and diabetic study participants

Chronic condition	Sex	Age category	Data collected	Data discarded	Data not matched	Final study participants
Epilepsy	Male	13 – 15 yrs	8	2	-	6
		16 – 18 yrs	16	2	1	13
		19 – 21 yrs	12	1	-	11
		Total	**36**	**5**	**1**	**30**
	Female	13 – 15 yrs	7	1	1	5
		16 – 18 yrs	11	2	2	7
		19 – 21 yrs	10	-	-	10
		Total	**28**	**3**	**3**	**22**
		Epilepsy total	**64**	**8**	**4**	**52**
Diabetes	Male	13 – 15 yrs	8	1	1	6
		16 – 18 yrs	15	2	-	13
		19 – 21 yrs	17	1	5	11
		Total	**40**	**4**	**6**	**30**
	Female	13 – 15 yrs	7	2	-	5
		16 – 18 yrs	8	1	-	7
		19 – 21 yrs	12	-	2	10
		Total	**27**	**3**	**2**	**22**
		Diabetic total	**67**	**7**	**8**	**52**
Epilepsy and Diabetic Total			**131**	**15**	**12**	**104**

With regard to the selection of the adolescents without any self reported significant health problems, that will be called 'healthy adolescents' henceforward, the sampling procedure followed was again a convenience one. The above mentioned schools (Medhanialem Primary school grades 5, 6, 7 and 8, the Mieraf High School grades 9 and 10, and the Medhanialem Preparatory School grades 11 and 12 of Addis Ababa) were selected in favor of the researcher's convenience to easily collect data and because the researcher assumed that the schools would provide adequate number of adolescents that could be matched with the chronically ill epileptic or diabetic adolescents, 52 each. From each of the schools chosen by the researcher, data were collected from one selected section in each grade level by the lottery method of simple random sampling to constitute the 'healthy' study population. This data collection took place a week after the end of data collection at the hospitals. Table 2 below shows the number of students from which data was collected.

Table 2: School and grade level segregated data of 'healthy' adolescent study population

School	Grade level	No. of students in selected section from whom data collected
Medhanialem Primary school	Grade 5	51
	Grade 6	49
	Grade 7	56
	Grade 8	50
Mieraf High School	Grade 9	55
	Grade 10	52
Medhanialem Preparatory School	Grade 11	43
	Grade 12	41
Total		397

Data collection from the schools finally yielded a total of 397 students (185 male and 212 female). Among these, 96 were discarded due to belonging below age 13 (47 Male and 49 female). Further more, 26 adolescents (17 male and 9 female) were discarded from inclusion due to having incomplete questionnaire filling (8 in number) and having self eported significant health problems (18 in number). This procedure reduced the number f study population of 'healthy' adolescents to 275 (121 male and 154 female).

The rest 275 'healthy' adolescents were then stratified by sex (male and female) and age group (13 – 15 years, 16 – 18 years, and 19 – 21 years). Consequently participants were randomly selected from each stratum by the lottery method of simple random sampling in congruence with the number of participants from the corresponding strata in the study groups (epileptic and diabetic adolescents). Hence, a total of 52 'healthy' adolescents (30 male and 22 female) were selected to constitute the 'healthy' control group that belonged within the age group 13 – 15 years (11 in number), 16 – 18 years (20 in number), and 19 – 21 years (21 in number). Table 3 below illustrates the selection from each stratum.

Table 3: Gender and age segregated data of 'healthy' study participants

Sex	Age category	Number of adolescents from whom useful data collected	Number of adolescents randomly selected for study inclusion
Male	65	65	6
	41	41	13
	15	15	11
	121	**121**	**30**
Female	83	83	5
	58	58	7
	13	13	10
	154	**204**	**22**
Total		275	**52**

All in all, the participants of the study were a total of 156 adolescents where epileptic, diabetic and 'healthy' adolescents constituted 52 participants each. Each of the three groups (epileptic, diabetic and healthy adolescents) had the following sex and age category composition: Male 30 adolescents (6 adolescents of 13–15 years, 13 adolescents of 16–18 years and 11 adolescents of 19–21years) and female 22 adolescents (5 adolescents of 13–15 years, 7 adolescents of 16–18 years and 10 adolescents of 19–21years) summing up to form a total of 52 adolescents in each group (epileptic, diabetic, and 'healthy' adolescents).

3.4. Tools of data collection

The instrument used to collect data from the diabetic and epileptic adolescents had five parts comprising a demographic questionnaire, a clinical questionnaire, a psychological adjustment measure, a social adjustment measure, and a scale to measure attitude towards illness. The instrument used to collect data from 'healthy' adolescents on the other hand was composed of demographic, psychological and social adjustment measures that were presented under three parts.

3.4.1. Demographic and clinical questionnaire

The demographic and clinical questionnaire used to collect data from the study group (epileptic and diabetic adolescents) dealt with demographic details as age, gender, grade level, usual household, dwelling, and clinical details as age of onset of health problem, illness duration, health attack frequency per year, and illness control method.

On the other hand, the demographic questionnaire used to collect data from the 'healthy adolescents' dealt with details as age, gender, grade level, usual household, dwelling and history of any health problem.

3.4.2. Attitude towards illness scale

In order to measure attitude towards illness among epileptic and diabetic adolescents, the study made use of the Child Attitude towards Illness Scale (CATIS) (Austin and Huberty, 1993). The 13- item scale was developed to measure children's unfavorable or favorable feelings about having a chronic illness. Of the 13 items, 4 have a 5-point response format of bipolar adjectives, and 9 items ask the children to rate how often they have feelings that reflect positive or negative evaluations about having their chronic condition, resulting in a scale range of 13-65 where higher scores reflected favorable feelings about chronic condition. Though the CATIS was initially developed for 8-12 year old children who had either epilepsy or asthma (α = .74, Austin and Huberty, 1993), its reliability was also documented to be α = .89 in Austin et al. (2000) on adolescent epileptic population.

3.4.3. Outcome measures

The other part of the instrument contained outcome measures in two broad adjustment areas: psychological and social adjustment. This part of the instrument was used to all adolescents who took part in the study.

The psychological adjustment measure:

The psychological dimension of adjustment was the first outcome to be measured. Hence, psychological adjustment of adolescents was measured by making use of known indices of psychological distress namely self esteem and depression measures.

Self esteem was measured using the 10- item Rosenberg self esteem scale (Rosenberg, 1965) which was used to asses feelings of self acceptance and self worth while depression was measured by making use of the 21-item Beck Depression Inventory which is designed to asses depressive feelings.

Hence, the measures of psychological distress, which the researcher labeled psychological adjustment is a summed scale of two measures that provide a pool of 31 items. The items were statements to which adolescents responded on a five point scale indicating the degree of their agreement to each statement. The response category ranged from 1 (strongly disagree) to 5 (strongly agree).

The social adjustment measure:

The other set of measure that also indicated adolescents' well being was what the researcher labeled 'a social adjustment measure'. Hence, social adjustment was assessed by aggregating various scales that dealt with adolescents' self process regarding their social experiences.

The social adjustment measure dealt with components of adolescents' perception of their social relationships as explained by their sociability, perception of competence, social connectedness, shyness and loneliness. Hence the component measures were:

(a) The Friendship Scale, which is a short, six item, user-friendly scale that was used for measuring social isolation and connectedness. It was developed by Howthorne (2003). (b) The Revised Cheek and Buss Shyness Scale (RSBC), a 13 item scale for measuring social competence, shyness and sociability. It was developed by Cheek and Buss (1981). (c) The Differential Loneliness Scale (DLS) a 14 item scale measuring subjective expression of dissatisfaction with a low number of social contacts that was developed by Schmidt & Sermat (1983).

The aggregate of the three scales yield a pool of 33 items bearing a similarity to the construct social adjustment. The items were statements to which adolescents responded on a five point scale indicating the degree of their agreement to each statement. The response category ranged from 1 (strongly disagree) to 5 (strongly agree).

The instruments used for data collection in the study were primarily prepared in English. Hence, the items were translated into Amharic by the researcher and two TEFL graduate students with good command of Amharic as well as English. Having incorporated comments from other professionally active friends, the instruments were then translated back to English by another TEFL graduate. Based on disparities seen in the backward translation, some items of the Amharic version were restructured and restated to ensure the translation equivalence.

As to the scoring of items, those positively stated items were coded from 5 (strongly agree) to 1 (strongly disagree) for both the psychological as well as social adjustment measures. Similarly, positively stated items of the attitude towards illness scale were coded from 1 (showing unfavorable attitude) to 5 (indicating a favorable attitude). But those negatively stated items were reverse coded for all the psychological adjustment measure, the social adjustment measure, as well as the attitude towards illness scale.

Pilot testing

Before employing the instrument to collect data from respondents, a test try-out was conducted a week before the actual data collection to determine the instruments' validity and reliability. Hence the instruments were administered to 30 adolescents, who did not take part in the actual study, for the purpose of revisiting and determining specificity, relevance and clarity of the items, and determining the reliability of the tests. Therefore. 10 epileptic adolescents (6 male, 4 female), 10 diabetic adolescents (5 male, 5 female), and 10 first encountered healthy adolescents (5 male, 5 female) were given the instrument. No time limit was put for the completion of the instruments.

Subsequently, among the items meant for the adolescents with a chronic health condition, two clinical detail items were discarded due to eliciting redundant information. Moreover, from the items meant for all adolescents (healthy or chronically ill) an item of the Beck Depression Inventory was discarded since it was proved problematic.

The responses of the participants to items were then scored for each scale (the psychological adjustment measure, the social adjustment measure, and the attitude towards illness scale) and their reliability coefficient was determined by computing Chronbach Alpha. The result revealed $\alpha = 0.801$ for the psychological adjustment measure, $\alpha = 0.787$ for the social adjustment measure, and $\alpha = 0.83$ for the Attitude towards Illness Scale. Thus, the instruments were finally used for data collection after slight edition and improvements were made.

As a final point, adolescents' response to the psychological adjustment measuring items were summed to yield a total scale score that could range from 30 (higher psychological adjustment problem) to 150 (lowest psychological adjustment problem). Items of the social adjustment measure on the other hand were summed to give a total scale score that could range from 33 to 165, with a higher score indicating lowest difficulty in social adjustment. The other scale, attitude towards illness scale was also scored to yield scores ranging from 13 to 65, with higher score indicating a favorable attitude towards illness.

3.5. Data collecting procedure

The data collection procedure was different for those study group participants (epileptic and diabetic adolescents) and the 'healthy adolescents'.

Procedure in collecting data from epileptic and diabetic adolescents:

Having secured permission to undertake a research activity from the Yekatit 12 and St Paulos Specialized hospitals from their medical directors, the researcher trained a fellow postgraduate student as an assistant data collector. The assistant was trained regarding the objectives of the study, the contents of the instruments, the response categories, the study's inclusion criteria and on some ethical considerations.

The researcher, together with the assistant, then made acquaintance with the different hospital personnel who were directly involved in the treatment of epileptic and diabetic outpatients. Most of these acquaintances were accompanied by a medical doctor working at each of the hospitals that were close acquaintance to the researcher. This, hence, paved way for smooth introduction with the hospital personnel and their later unreserved cooperation.

The instrument was then administered on individual base by the researcher and the assistant on the particular weekdays dedicated for epileptic or diabetic outpatients treatment in each hospital in a period of two and half months (from the beginning of February to mid April). The administration followed the following procedure:

- On each particular day dedicated for treatment of diabetic and epileptic outpatients, the researcher and/or assistant visited the hospitals.
- The researcher/assistant then approached the identified diabetic/epileptic outpatient adolescents (and their company if there were any) on individual base, explained about the objective of the study and the confidentiality of responses, and sought their consent to participate in the study.
- For those who gave oral consent (themselves or through their guardians), the researcher/assistant forwarded further oral screening questions that checked if the adolescents were above or attending grade five, were free from other self reported

psychiatric or physical co-morbidity, spoke Amharic as a mother tongue, and are to fill the questionnaire for the first time. Those transgressing one of these screening criteria were excluded from participation. The rest were given the instrument.

The data collection from the available participants had no time limit and has taken place in the hospitals' waiting halls or some where near waiting halls the participants preferred. Moreover, the participants were informed to provide their own responses and that there were no correct or wrong answers.

Procedure in collecting data from other adolescents:

Data was collected from school attending adolescents (from whom the control 'healthy' group was selected) in a primary school, a high school, and a preparatory school both located at the Gulele sub-city of Addis Ababa.

Before the data collection, however, the researcher first contacted the principals of each school and secured each school's permit to undertake the research activity. The data was then collected a week after the end of the data collection from the hospitals. One randomly selected section of grades 5, 6, 7 and 8 of Medhanialem Primary school, grades 9 and 10 of the Mieraf High School, and grades 11 and 12 of the Medhanialem Preparatory School were taken to constitute the 'healthy' adolescent population.

The researcher was responsible in administering the instrument in a face to face manner, at class hours, for the group of students that were present at the time of data collection in each of the selected sections of each grade level. Hence, before administering the instrument, the researcher explained the goal of the study to the students and sought their consent. Having secured the verbal consent of the students, the researcher guaranteed confidentiality of responses and explained that there were no right or wrong answers and that the students should give their honest responses to the questions presented. The instrument was then administered with no time limit that the students took their time in responding to the questions.

3.6. Data analysis procedure

The study, employing the aforementioned procedure, collected data from a total of 156 adolescents corresponding to epileptic, diabetic and healthy adolescents (52 from each group).

The collected data was then organized in line with the objectives of the study and were analyzed using SPSS (Version 14:00). Group difference in psychological and social adjustment among epileptic, diabetic and 'healthy' adolescents was assessed by making use of one way ANOVA. Similarly, one way ANOVA was employed to see within group differences in psychological and social adjustment of adolescents as a function of age category, illness duration, and health attack frequency. To see any within group difference in adolescents as a function of gender and attitude towards illness, an independent T-test was computed. Whenever significant mean differences were observed, either the Sheffe test was used or direct mean comparisons were made.

4. RESULTS

4.1. Introduction

This section presents socio-demographic and clinical characteristics of the study participants as well as the results of the study in terms of the basic questions which the study was set out to test.

4.2. Demographic and clinical characteristics of participants

Table 4: Demographic characteristics of participants

Demographic variables	Epileptic adolescent N=52	Diabetic adolescent N=52	Healthy adolescent N=52
Age (Mean, SD)	17.6 (2.4)	17.77 (2.28)	17.23 (2.21)
Sex Male (n, %)	30 (57.7%)	30 (57.7%)	30 (57.7%)
Female (n, %)	22 (42.3%)	22 (42.3%)	22 (42.3%)
Educational level			
5-8 grade (n, %)	15(28.8%)	14(26.9%)	11 (21.2%)
9-10 grade (n, %)	24(46.2%)	24(46.2%)	22 (42.3%)
11-12 grade (n, %)	13(25%)	14(26.9%)	19 (36.5%)
Usual household			
With both parents (n, %)	33 (63.4%)	28 (53.8%)	31 (59.6%)
With mother only (n, %)	8 (15.4%)	15 (28.8%)	10 (19.2%)
With father only (n, %)	5 (9.7%)	4 (7.7%)	5 (9.6%)
With sibling (n, %)	2 (3.8%)	2 (3.8%)	5 (9.6%)
With relative (n, %)	4 (7.7%)	2 (3.8%)	1 (1.9%)
Alone (n,%)		1 (1.9%)	

Table 4 presents the demographic data and principal characteristics of the study participants (N=156). The age of the participants ranged from 13 to 21 years (M = 17.53, SD = 2.296). The mean age for the three groups of participants was 17.6 years for epileptic adolescents, 17.77 years for diabetic adolescents and 17.23 years for healthy adolescents. Regarding gender, the majority 57.7% of the participants were male, where the same proportion applied to all the epileptic, diabetic, and healthy adolescent participants.

The participants' educational level ranged from grade 5 to grade 12 where these adolescents were categorized under three education level groups: 5-8, 9-10 and 11-12 grade levels. 28.8% of adolescents with epilepsy and 26.9% of adolescent with diabetes

were from 5-8 grade levels, 46.2% of adolescents with epilepsy and 46.2% of adolescents with diabetes were from 9-10 grade levels, and 25% of adolescents with epilepsy and 26.9 % of adolescents with diabetes were in 11 to 12 grade levels. Likewise 21.2% of healthy adolescents were in 5 to 8 grade levels while 42.3% were in 9 to10 grade levels and 36.5% were in 11-12 grade levels.

Many of the participants lived with both their parents: 63.4% of epileptic adolescents, 53.8% of diabetic adolescents and 59.6% of healthy adolescents. The rest of the participant lived with their mother, father, sibling, relative or alone with decreasing proportions respectively.

Table 5: Clinical characteristics of participants

Clinical variables	Epileptic adolescents (N=52)	Diabetic adolescents (N=52)
Age of onset for illness		
Mean	11.08	15.35
Std. deviation	3.73	2.61
Illness duration for epileptic adolescents		
< 5 years (n, %)	22 (42.3%)	---
5-9 years (n, %)	20 (38.5%)	---
> 9 years (n, %)	10 (19.2%)	---
Illness duration for diabetic adolescents		
< 1 year (n, %)	---	23 (44.3%)
1-3 years (n, %)	---	14 (26.9%)
> 3 years (n, %)	---	15 (28.8%)
Health attack frequency for epileptic adolescent		
< 3 times / year	18 (34.6%)	---
3-13times / year	18 (34.6%)	---
>13 times / year	16 (30.8%)	---
Health attack frequency for diabetic adolescents		
< 1 time / year	---	24 (46.2%)
1-3 times / year	---	11 (21.2%)
> 3 times / year	---	17 (32.6%)
Illness control method for epileptic adolescents		
Taking medication (n, %)	32 (61.5%)	---
Taking medication and "Tsebel" (n, %)	15 (28.8%)	---
Taking medication and pray (n, %)	5 (9.7%)	---
Illness control method for diabetic adolescents		
Insulin injection (n, %)	---	26 (50%)
Insulin injection, sport and medication (n, %)	---	8 (15.3%)
Insulin injection, diet and medication (n, %)	---	7 (13.4%)
Insulin injection and sport (n, %)	---	5 (9.7%)
Diet and medication (n, %)	---	3 (5.8%)
Taking medication (n, %)	---	3 (5.8%)

Table 5 above presented the clinical characteristics of epileptic and diabetic adolescents. As can be inferred from the table, the mean age at onset of epilepsy was 11.08 years and diabetes 15.35 years. 42.3% of epileptic adolescents have endured epilepsy for less than 5 years, 38.5% for 5-9 years and 19.2% for more than 9 years. On the other hand 44.3% of diabetic adolescents have endured diabetes for less than 1 year, 26.9% for 1-3 years and 28.8% for more than 3 years.

During the foregoing 12 months from data collection, 34.6% of epileptic adolescents disclosed that they have experienced less than 3 seizures, 34.6% from 3-13 seizures and 30.8% more than 13 seizures. In contrast, about half diabetic adolescents (46.2%) have not experienced any significant health attack due to diabetes during the past 12 months while 21.2% of them have experienced 1 to 3, and 32.6% have experienced more than 3 significant health attacks due to diabetes.

As related to the illness control method adopted by the adolescents, 61.5% of the epileptic adolescents reported to control their illness by taking medicine, 28.8% by taking medicine as well as "Tsebel", and 9.7% by taking medicine and praying. On the other hand half of the diabetic adolescents controlled their illness by insulin injection, 15.3% by insulin injection, engaging in sport activities and taking medicine, 13.4% by insulin injection, diet and taking medicine, 9.7% insulin injection and sport activities, 5.8% by diet and taking medicine, and 5.8% by taking medicine only.

4.3. Group Difference on Psychosocial Adjustment

The research questions treated in this section are relevant to group level psychological and social adjustment differences of epileptic, diabetic and 'healthy' adolescents.

Thus, an analysis was carried out primarily to find out the psychological and social adjustment of epileptic, diabetic and 'healthy' adolescents and comparisons were conducted to see if there existed any statistically significant difference in psychological and social adjustment among the three groups of adolescents. The next table presents the mean and standard deviation for psychological and social adjustment of epileptic, diabetic and 'healthy' adolescents.

Table 6: Mean and standard deviations for psychosocial adjustment scores of epileptic, diabetic and 'healthy' adolescents

		Psychological adjustment	Social Adjustment
Epileptic adolescents	Mean	83.67	105.12
	Std. deviation	21.82	25.57
	N	52	52
Diabetic adolescents	Mean	124.19	128.87
	Std. deviation	10.25	9.11
	N	52	52
'Healthy' adolescents	Mean	124.65	129.85
	Std. deviation	10.55	14.83
	N	(52)	(52)
Total	Mean	110.84	121.28
	Std. deviation	24.48	21.13
	N	156	156

As indicated in table 6 above, the mean score of epileptic adolescents on psychological and social adjustment was M=83.67 and M=105.12, diabetic adolescents M=124.19 and M=128.87 and 'healthy' adolescents M=124.65 and M=129.85 respectively. 'Healthy' adolescents had the highest mean score on both psychological and social adjustment measures followed by diabetic adolescents. On the contrary, epileptic adolescents had the lowest mean score on both psychological and social adjustment measures.

Table 7: Analysis of variance on psychosocial adjustment of epileptic, diabetic, and 'healthy' adolescents.

		Sum of squares	df	Mean squares	F	Sig.
Psychological adjustment	between groups	57571.705	2	28785.853	124.620	.000
	within groups	35341.288	153	230.989		
	Total	92912.994	155			
Social Adjustment	between group	20395.013	2	10197.506	31.966	.000
	within group	48808.135	153	319.007		
	Total	69203.147	155			

As indicated in table 7, analysis of variance revealed that there existed a significant difference in psychological adjustment $f(2,153) = 124.620$, $p < 0.05$, and social adjustment, $f(2,153)=31.966$, $p < 0.05$, among epileptic, diabetic and 'healthy' adolescents. Given the significant mean differences among these three groups of adolescents on psychological and social adjustment, Scheffe's post hoc tests were computed examine the group responsible for the observed difference. Table 8 below presents the result of the Sheffe test.

Table 8: Mean comparisons of epileptic, diabetic, and 'healthy' adolescents on measures of psychosocial adjustment (Scheffe's procedure)

	Group mean	Group	'Healthy' adolescents	Diabetic adolescents	Epileptic adolescents
Psychological Adjustment	124.65	'Healthy' adolescents	_	_	_
	124.19	Diabetic adolescent	.988	_	_
	83.67	Epileptic adolescents	.000*	.000*	_
Social Adjustment	129.85	'Healthy' adolescents	_	_	_
	128.87	Diabetic adolescent	.962	_	_
	105.12	Epileptic adolescents	.000*	.000*	_

*Pair of groups are significantly different at alpha 0.05 level

Related to group level psychological adjustment difference, the Scheffe results showed that epileptic adolescents differed significantly from both diabetic and 'healthy' adolescents on measures of psychological adjustment, while diabetic adolescents and 'healthy' adolescent's exhibited no statistically significant difference in psychological adjustment. Given that 'healthy' adolescents formed the highest psychological adjustment mean score followed by diabetic adolescents, while epileptic adolescents formed the least psychological adjustment score, it seemed that epileptic adolescents have higher psychological adjustment problems compared to both diabetic as well as 'healthy' adolescents. On the contrary, the Sheffe test revealed that, diabetic and 'healthy' adolescents have a relatively similar psychological adjustment.

Parallel to psychological adjustment, the Scheffe test revealed that mean score on social adjustment measure for epileptic adolescents to be significantly different from the mean score of both diabetic and 'healthy' adolescents on the same measure. Given that

'healthy' and diabetic adolescents had the higher mean score on social adjustment measure which is relatively similar (M=129.85 and M=128.87 respectively) than epileptic adolescents (M= 105.12), it seemed that epileptic adolescents experience increased social adjustment difficulties compared to both healthy and diabetic adolescents.

4.4. Gender difference in psychosocial adjustment

Gender was one of the demographic variables studied in connection with adolescents' psychological and social adjustment. Therefore, an independent t- test was employed to determine gender difference in psychological and social adjustment in each of the epileptic, diabetic and healthy adolescents.

4.4.1. Gender difference in psychosocial adjustment of epileptic adolescents

Table 9: Gender difference in psychosocial adjustment of epileptic adolescents

	Gender	N	Mean	St. deviation	T	df	Sig. (2tailed)
Psychological Adjustment	M	30	88.20	22.129	1.783	50	.081
	F	22	77.50	20.285			
Social Adjustment	M	30	108.17	24.468	1.005	50	.320
	F	22	100.95	27.018			

T value is significant at 0.05 level (2 tailed)

As indicated in table 9 above, there was no significant difference between male and female epileptic adolescents in psychological adjustment $t(50) = 1.783$, $P < 0.05$, both male and female epileptic adolescents had relatively similar psychological adjustment scores.

Similar to the result pertinent to psychological adjustment, results related to social adjustment revealed no statistically significant gender related difference. Male adolescents, in relation to female ones exhibited a relatively similar social adjustment $t(50) = 1.005$, $P < 0.05$. Therefore it could be said that an epileptic health condition affected both genders in a similar fashion.

4.4.2. Gender difference in psychosocial adjustment of diabetic adolescents

Table 10: Gender difference in psychosocial adjustment of diabetic adolescents

	Gender	N	Mean	Std. deviation	T	df	Sig.(2 tailed)
Psychological Adjustment	M	30	130.13	6.334	6.616	50	.000
	F	22	116.09	8.986			
Social Adjustment	M	30	127.13	5.244	1.626	50	.110
	F	22	131.23	12:394			

T value is significant at 0.05 levels (2- tailed)

The t-test statistic computed to see if there existed any gender related difference in psychological and social adjustment revealed a statistically significant psychological adjustment difference between male and female diabetic adolescents, t (50) = 6.616, P < 0.05 , while it revealed no statistically significant difference for social adjustment, t (50) = 1.626, P< 0.05. That is, male diabetic adolescents seemed to be better adjusted psychologically than female ones. For social adjustment however both male and female diabetic adolescents exhibited a relatively similar adjustment irrespective of their gender.

4.4.3. Gender difference in psychosocial adjustment of 'healthy' adolescents

Table 11: Gender difference in psychosocial adjustment of 'healthy' adolescents

	Gender	N	Mean	St. deviations	T	df	Sig.(2 tailed)
Psychological Adjustment	M	30	125.47	11.664	.645	50	.522
	F	22	123.55	8.975			
Social Adjustment	M	30	129.60	15.943	.138	50	.890
	F	22	130.18	13.532			

T value is significant at 0.05 level (2 tailed)

The t-statistic presented in the above table showed that there existed no statistically significant difference between 'healthy' male and female adolescents in psychological and social adjustment scores, t (50) = .645, P < 0.05 and t (50) = .138, P < 0.05 respectively. Both 'healthy' male and female adolescents reported a relatively similar psychological and social adjustment irrespective of their gender.

4.5. Age difference in psychosocial adjustment

Age was the other demographic variable studied in connection with psychological and social adjustment. Thus, one way analysis of variance was used to see age difference in psychological and social adjustment of epileptic, diabetic and 'healthy' adolescents.

4.5.1. Age difference in the psychosocial adjustment of epileptic adolescents

Table 12: Mean and standard deviation on psychosocial adjustment scores for epileptic adolescents within different age groups

		Psychological adjustment	Social adjustment
13-15 years	Mean	79	98.18
	std. deviation	22.8	30.24
	(n)	11	11
16-18 years	Mean	91.47	111.42
	std. deviation	19.05	21.81
	(n)	20	20
19-21 years	Mean	79.27	103.14
	std. deviation	22.60	26.06
	(n)	21	21
Total	Mean	83.67	105.12
	std. deviation	21.82	25.57
	(n)	52	52

As indicated in the above table, the mean score of epileptic adolescents on psychological adjustment within the three age categories was M=79 for adolescents within the age group 13-15, M= 91.47 for adolescents within the age group 16-18, and M=79.27 for adolescents within the age group 19-21.

Epileptic adolescents within the age group 16-18 had the highest mean score on psychological adjustment measure followed by adolescents within the age group 19-21 and 13-15 respectively. Similarly in social adjustment epileptic adolescents within the group16-18 had the highest mean score which was M=111.42 followed by adolescents within the age group 19-21 which was M=103.42 and adolescents within the age group13-15 (M =98.18).

Table 13: Analysis of variance on the psychosocial adjustment of epileptic adolescents of different age groups

		Sum of squares	df	Mean squares	F	Sig.
Psychological adjustment	between groups	1822.342	2	911.171		
	within groups	22473.100	49	458.635	1.987	.148
	Total	24295.442	51			
Social Adjustment	between group	1370.449	2	685.224	1.050	.358
	within group	31980.859	49	652.671		
	Total	33351.308	51			

The analysis of variance on the table 13 above reveal no statistically significant difference in psychological adjustment among the three age categories of epileptic adolescents, F (2.49)=1.987, P < 0.05. It seemed that an epileptic health condition affected the psychological adjustment of epileptic adolescents in a relatively similar manner over the different age level categories. Similar to results obtained for age related psychological adjustment difference, table 13 above provides that the analysis of variance also revealed no statistically significant difference on social adjustment of epileptic adolescents within the three age categories (13-15, 16-17 and 18-21 year olds), F(2.49)=1.050, P < 0.05. This implicated that all epileptic adolescents had relatively similar social adjustment mean scores irrespective of their age level category.

4.5.2. Age difference in the psychosocial adjustment of diabetic adolescents

Table 14: Mean and standard deviation for psychosocial adjustment scores of diabetic adolescents of different age groups.

		Psychological adjustment	Social adjustment
13-15	Mean	127.64	124.09
	std. deviation	5.98	4.76
	(n)	11	11
16-18	Mean	125.25	129.65
	std. deviation	10.06	7.74
	(n)	20	20
19-21	Mean	121.38	130.62
	std. deviation	11.74	11.27
	(n)	21	21
Total	Mean	124.19	128.87
	std. deviation	10.25	9.11
	(n)	52	52

Table 14 show that the mean scores of diabetic adolescents on psychological and social adjustment to be M= 127.64, and M= 124.09 for the age groups 13-15, M=125.25 and M= 129.65 for the age group 16-18, and M=121.38 and M=130.62 for the age group 19-21 respectively.

Table 15: Analysis of variance on the psychosocial adjustment of diabetic adolescents of different age groups.

		sum of squares	df	Mean squares	F	Sig.
Psychological adjustment	between groups	318.829	2	159.415	1.549	.223
	within groups	5043.248	49	102.923		
	Total	5362.077	51			
Social Adjustment	between group	327.646	2	163.823	2.054	.139
	within group	3908.411	49	79.763		
	Total	4236.058	51			

The analysis of variance on table 15 above indicate that there is no statistically significant psychological adjustment difference among the three age categories of diabetic adolescents (13-15, 16-18 and 19-21), $F(2.49)= 1.549$, $P < 0.05$. All diabetic adolescents reported a relatively similar psychological adjustment experience irrespective of their age category they belonged. Parallel to psychological adjustment, the analysis of variance on social adjustment of diabetic adolescents within the three age groups also revealed no statistically significant difference on social adjustment, $F(2,49)= 2.054$, $P< 0.05$.

4.5.3. Age difference in the psychosocial adjustment of 'healthy' adolescents

Table 16: Mean and standard deviation for psychosocial adjustment scores of 'healthy' adolescents across different age groups

		Psychological adjustment	Social adjustment
13-15	Mean	131.55	128.64
	std. deviation	5.98	13.10
	(n)	11	11
16-18	Mean	125.25	129.90
	std. deviation	12.84	14.95
	(n)	20	20
19-21	Mean	120.48	130.43
	std. deviation	8.04	16.17
	(n)	21	21
Total	Mean	124.65	129.85
	std. deviation	10.55	14.83
	(n)	52	52

As can be referred from the above table, the mean score of 'healthy' adolescents on psychological adjustment was M= 131.55 for the 13-15 age category, M= 125.25 for the 16-18 age category, and M= 120.48 for the 19-21 age category. Adolescents within the age group 13-15 had the highest psychological adjustment mean score followed by 16-18 and 19-21 age category adolescents. In social adjustment, adolescents within the age group 19-21 had the highest mean score (M=130, 43) followed by adolescents within the age group16-18 (M= 129.90), and adolescents within the age group 13-15 (M=128.64).

Table 17: Analysis of variance on psychosocial adjustment of 'healthy' adolescents of different age groups

		Sum of squares	df	Mean squares	F	Sig.
Psychological adjustment	between groups	896.054	2	448.027	4.585	.015
	within groups	4787.715	49	97.708		
	Total	5683.769	51			
Social Adjustment	between group	23.281	2	11.640	.051	.950
	within group	11197.488	49	228.520		
	Total	11220.769	51			

*Pair of groups are significantly different at alpha 0.05 level

Table 17 above sows that no statistically significant difference was found, $F(2.49) = 0.051$, $P < 0.05$ on social adjustment among the three age groups of healthy adolescents. All 'healthy' adolescents had a relatively similar social competence irrespective of their age level. However on psychological adjustment, a statistically significant difference, $F(2.49) = 4.585$, $P < 0.05$, was observed among the three age group (13-15, 16-18 and 19-21) of healthy adolescents. Therefore comparison of group mean was taken on psychological adjustment to identify the group that caused the over all difference. Scheffe's procedure was employed. Table 18 present the result of the test.

Table 18: Mean comparisons of 'healthy' adolescents of different age groups on psychological adjustment (Scheffe's procedure)

Group mean	Group	13-15 years age group	16-18 years age group	19-21age group
131.55	13-15yrs age group	-		
125.25	16-18 yrs age group	.247	-	
120.48	19-21 yrs age group	.016*	.311	-

*Pair of groups are significantly different at alpha 0.05 level

As indicated in table 18 above, the Scheffe test revealed that the mean score of adolescents within the age group 19-21 were significantly different from adolescent within the age category 13-15 years. However there was no statistically significant difference in the psychological adjustment of adolescents within the age category 13-15 and 16-18 years as well as within the age category 16-18 and 19-21 years at 0.05 alpha level. This means that adolescents within age group 16-18 years had a relatively similar psychological adjustment with both group of adolescents (those within the age group 13-15 and 19-21 years) while adolescents within the age group 13-15 had significantly different psychological adjustment score with adolescents within the age group 19-21 years. Adolescents with in the age group 13-15 had a higher mean (M=131.55) while adolescents within in the age group 19-21 had a lower mean score (M=120.48). Adolescents within the age group 16-17 had the second higher mean score on psychological adjustment which is not significantly different from both groups of adolescents (those within the age group 13-15 and 19-21). Thus adolescents within age group 13-15 had better psychological adjustment than adolescents within the age group 19-21 years.

4.6. Psychosocial adjustment of epileptic and diabetic adolescents as a function of health attack frequency

In line with the objective of the study, the psychological and social adjustment of epileptic and diabetic adolescents as a function of health attack frequency is examined in this section. A one way analysis of variance is employed for this purpose. Epileptic adolescents were categorized into three groups: those who experienced a health attack (seizure) less than 3 times per year, those who experienced from 3-9 seizures per year and those who experienced more than 13 seizures per year. On the other hand diabetic adolescents were categorized into three groups as those who experienced no significant health attack due to diabetes in the previous 12 months (less than 1 health attack per year), those who experienced 1-3 health attacks per year, and those who experienced more than 3 health attacks per year. In both cases percentiles were used to trisect the participants into the above mentioned three categories.

4.6.1. Psychosocial adjustment of epileptic adolescents as a function of seizure frequency

Table 19: Mean and standard deviation on psychosocial adjustment scores of epileptic adolescents as a function of seizure frequency

		Psychological adjustment	Social adjustment
< 3/year	Mean	100.44	121.78
	Std. deviation	23.74	27.17
	(n)	18	18
3-13 / year	Mean	79.56	98.78
	std. deviation	15.59	20.27
	(n)	18	18
> 13/ Year	Mean	69.44	93.5
	std. deviation	11.44	19.89
	(n)	16	16
Total	Mean	83.67	105.12
	std. deviation	21.82	25.57
	(n)	52	52

As table 19 above provides, the mean score of epileptic adolescents on psychological and social adjustment is relatively different among the three groups, (M= 100.44, M= 121.78) for adolescents who experienced epileptic seizure less than 3 times/year, (M= 79.56, M= 98.78) for those who experienced epileptic seizure 1-3 times/year, and (M=69.44, M= 93.5) for those who experienced seizure more than 13 times/year. Those epileptic adolescents who experience more than 13 epileptic seizures/year scored the lowest mean on psychological and social adjustment which indicates higher psychological and social adjustment problems than the two groups. The analysis of variance carried out in the next table shows whether the mean difference observed on psychological and social adjustment among these three groups are significant or not.

Table 20: Analysis of variance on psychosocial adjustment of adolescents with epilepsy as a function of seizure frequency.

		Sum of squares	df	Mean squares	F	Sig.
Psychological adjustment	between groups	8610.616	2	4305.308	13.450	.000
	within groups	15684.826	49	320.098		
	Total	24295.442	51			
Social Adjustment	Between group	7879.085	2	3939.543	7.578	.0001
	within group	25472.222	49	519.841		
	Total	33351.308	51			

The analysis of variance on table 20 revealed that there is a significant psychological and social adjustment difference among epileptic adolescent within the three categories, F (2.49)= 13.450, P< 0.05 and F (2.49)= 7.578, P < 0.05 respectively. To determine exactly which mean difference among the groups are significant Scheffe's post hoc test are done.

Table 21: Mean comparison of epileptic adolescents on psychosocial adjustment as a function of seizure frequency (Scheffe's procedure)

	Group mean	Group	< 3 times per year	3-13 times per year	> 13 times per year
Psychological adjustment	100.44	< 3 times per year	-	-	-
	79.56	3-13 times per year	0.004*	-	-
	69.44	> 13 times per year	0.000*	0.268	-
Social adjustment	121.75	< 3 times per year	-	-	-
	98.78	3-13 times per year	0.011*	-	-
	93.5	> 13 times per year	0.002*	0.78	-

*Pair of groups are significantly different at alpha 0.05 level

As table 21 above presents, the Scheffe test reveal the existence of a statistically significant mean difference on the psychological adjustment of epileptic adolescents between those who experienced less than 3 epileptic seizures per year and those who experienced more than 13 epileptic seizures per year. However, there was no statistically significant mean difference on psychological adjustment between those epileptic adolescents who experienced from 3-13 epileptic seizures per year and those who experienced more than 13 epileptic seizures per year. Those epileptic adolescents who experienced more than 13 seizures per year had the lowest mean (M=69.44) on psychological adjustment followed by those adolescents who experienced from 3-13 epileptic seizure per year. This indicated that those adolescents with more than 13 epileptic seizures per year had poor psychological adjustment in comparison to those adolescents who experienced less number of epileptic seizures per year (less than 3 epileptic seizures per year).

The scheffe test in table 21 also indicated that there existed a statistically significant mean difference in social adjustment among those epileptic adolescents who experienced less than 3 epileptic seizures per year and those who experienced from 3-13 epileptic

seizures per year as well as those who experienced more than 13 epileptic seizures per year. However no statistically significant mean difference was found between those who experienced less than 3 epileptic seizures per year, 3 to 13 seizures per year, and those who experienced more than 13 epileptic seizures per year.

Like psychological adjustment, those adolescents who experienced more than 13 epileptic seizures per year scored the lowest mean score on social adjustment followed by those who experience from 3-13.epileptic seizures per year which indicate that those two groups of adolescents endure higher social adjustment problems compared to adolescents who experience less frequent number of epileptic seizure (less than 3 seizures per year).

4.6.2. Psychosocial adjustment of diabetic adolescents as a function of significant health attack frequency due to diabetes

Table 22: Mean and standard deviation for psychosocial adjustment scores of diabetic adolescents as a function of significant health attack frequency

		Psychological adjustment	Social adjustment
< 1/ year	Mean	122.63	127.17
	Std. deviation	11.40	9.67
	(n)	24	24
1-3/ year	Mean	123.55	130.82
	Std. deviation	5.57	9.48
	(n)	11	11
> 3/ Year	Mean	126.82	130
	Std. deviation	10.84	8.10
	(n)	17	17
Total	Mean	124.19	128.87
	Std. deviation	10.25	9.11
	(n)	52	52

Table 22 above indicate that mean scores of diabetic adolescents for psychological and social adjustment to be M= 122.63 and M=127.17 for those adolescents who experienced no significant health attack, M= 123.55 and M= 130.82 for those who experienced a significant health attack from 1-3 times per year, and M = 126.82 and M= 130 for those who experienced a significant health attack for more than 3 times per year respectively.

Table 23: Analysis of variance on psychosocial adjustment of diabetic adolescents as a function of significant health attack frequency.

		Sum of squares	Df	Mean squares	F	Sig.
Psychological adjustment	between groups within groups Total	181.254 5180.823 5362.077	2 49 51	90.627 105.731	.857	.431
Social Adjustment	between group within group Total	133.088 4102.970 4236.058	2 49 51	66.544 83.734	795	.457

The analysis of variance indicate that there exist no statistically significant psychological adjustment difference among the three groups of diabetic adolescents, those who experienced no significant health attack due to diabetes, those who experienced from 1-3 health attacks per year, and more than 3 health attacks per year, F (2.49)=. 857, P < 0.05. All diabetic adolescents had relatively the same psychological adjustment irrespective of the number of significant health attacks they experienced during the past year.

Similar to the psychological adjustment, no statistically significant difference was found on social adjustment of diabetic adolescent as a function of a significant health attack due to diabetics at α = 0.05, F (2.49)= 795, P < 0.05. Hence it seems that the number of significant health attack frequency due to diabetes did not have influence on the psychological and social adjustment of diabetic adolescents. All the three groups of diabetic adolescents reported a relatively similar psychological and social adjustment irrespective of the number of significant health attacks they experienced due to diabetes.

4.7. The psychosocial adjustment of epileptic and diabetic adolescents as a function of illness duration

In this section, the psychological and social adjustment of epileptic and diabetic adolescents is examined as related to the duration of illness the adolescents endured. Hence, to make comparisons possible, epileptic adolescents were categorized under three groups: those who endured the illness for less those 5 years, those who endured the illness from 5 to 9 years, and those who endured the illness for more than 9 years. On the

other hand, diabetic adolescents were categorized under three groups as those who endured the illness for less than a year, those who endured the illness from 1 to 3 years, and those who endured the illness for more than 3 years. In both cases percentiles were used to trisect the participants into three categories.

4.7.1. The psychosocial adjustment of epileptic and diabetic adolescents as a function of illness duration

Table 24: Mean and standard deviation for psychosocial adjustment scores of epileptic adolescents as a function of illness duration

		Psychological adjustment	Social adjustment
< 5 years	Mean	83.23	101.18
	std. deviation	20.51	24.99
	(n)	22	22
5-9 years	mean	88.7	112.9
	std. deviation	23.36	25.71
	(n)	20	20
> 9 Years	mean	74.6	98.2
	std. deviation	20.40	25.02
	(n)	10	10
Total	mean	83.67	105.12
	std. deviation	21.82	25.57
	(n)	52	52

Table 24 above illustrate mean scores of epileptic adolescents on psychological and social adjustment to be M= 83.23 and M=101.18 for those who endured the illness less that five years, M= 88.7 and M=112.9 for those who endured the illness from 5-9 years, and M= 74.6 and M=98.2 for those who endured the illness for more than 9 years respectively.

Table 25: Analysis of variance on psychosocial adjustment of epileptic adolescents as a function of illness duration

		Sum of squares	df	Mean squares	F	Sig.
Psychological adjustment	between groups within groups Total	1332.979 22962.464 24295.442	2 49 51	666.489 468.622	1.422	.251
Social Adjustment	between group within group Total	2030.635 31320.673 33351.308	2 49 51	1015.315 639.197	1.588	.215

The analysis of variance on table 25 show the existence of no statistically significant difference on psychological adjustment among the three group of epileptic adolescents (those who endured the illness for less than 5 years, 5 to 9 years, and more than 9 years), $F(2,49) = 1.422$, $P < 0.05$. All the three categories of epileptic adolescents reported a relatively similar psychological adjustment irrespective of the length of time they endured epilepsy.

Parallel to results obtained regarding the psychological adjustment of epileptic adolescents, no statistically significant social adjustment difference was found among the three group of epileptic adolescents, $F(2, 49) = 1.588$, $P < 0.05$. All the three group of epileptic adolescents who endured the illness for relatively different period reported a relatively similar social adjustment.

4.7.2. Psychosocial adjustment of diabetic adolescents as a function of illness duration

Table 26: Mean and standard deviation for psychosocial adjustment scores of diabetic adolescents as a function of illness duration

		Psychological adjustment	Social adjustment
< 1 year	Mean	126.83	128.04
	std. deviation	11.34	8.80
	(n)	23	23
1-3 years	Mean	119.71	127.79
	std. deviation	8.87	11.65
	(n)	14	14
> 3 Years	Mean	124.33	131.13
	std. deviation	8.73	6.85
	(n)	15	15
Total	Mean	124.19	128.87
	std. deviation	10.25	9.11
	(n)	52	52

The above table demonstrates mean psychological and social adjustment scores of diabetic adolescents as a function of illness duration. The results conveyed in the table maintain mean score in psychological and social adjustment to be $M = 126.83$ and $M=128.04$ for those adolescents who endured diabetes for less than one year, $M = 119.71$ and $M=127.79$ for those who endured the illness from 1 to 3 years, and $M = 124.33$ and $M= 131.13$ for those who endured the illness for more than 3 years respectively.

Table 27: Analysis of variance on the psychosocial adjustment of diabetic adolescents as a function of illness duration

		Sum of squares	df	Mean squares	F	Sig.
Psychological adjustment	between groups	440.582	2	220.291	2.193	.122
	within groups	4921.495	49	100.439		
	Total	5362.077	51			
Social Adjustment	between group	109.011	2	54.505	. 647	. 528
	within group	4127.047	49	84.225		
	Total	4236.058	51			

Table 27 above make known the existence of no statistically significant mean psychological adjustment difference among the three group of diabetic adolescents, $F(2.49) = 2.193$, $P < 0.05$. All the three groups, those who endured diabetes for less than one year, from 1-3 years and for more than five years, reported relatively similar psychological adjustment.

The analysis of variance demonstrated on the above table also illustrated the existence of no statistically significant social adjustment mean difference among the three groups of diabetic adolescents as a function of the length of time they endured diabetes, $F(2.49) = 647$, $P < 0.05$. This implied that all diabetic adolescents had relatively similar social adjustment irrespective of having differences in illness endured.

6.8. The psychosocial adjustment of epileptic and diabetic adolescents as a function of attitude towards illness

Attitude towards illness was the other variable studied as associated with the psychological and social adjustment of epileptic and diabetic adolescents. To explore into the influence of attitude towards illness on psychological and social adjustment, both epileptic and diabetic adolescents were divided into two sub-groups based on their responses to the attitude towards illness scale, where half the scale's possible score (32.5) was used as a cut point.

Consequently, those adolescents who scored below half the score (32.5) were categorized under adolescents with unfavorable attitude towards their illness while those adolescents

who scored above half the possible score (32.5) were categorized under adolescents with favorable attitude towards their illness. In order to determine any attitude specific difference that might exist in the psychological and social adjustment of epileptic as well as diabetic adolescents an independent t–test statistic was used. The tables that follow present the psychological and social adjustment difference of epileptic as well as diabetic adolescents attributable to attitude towards health condition.

Table 28: Psychosocial adjustment difference in epileptic adolescents as a function of attitude towards illness

	Attitude	N	Mean	St. deviations	T	df	Sig. (2 tailed)
Psychological adjustment	Favorable	8	122.63	14.11	8.49	50	.000
	Unfavorable	44	76.59	14.10			
Social adjustment	Favorable	8	142.25	11.58	5.66	50	.000
	Unfavorable	44	98.36	21.22			

t- value is significant at 0.05 level (2 tailed)

As indicated in the above table, a statistically significant psychological adjustment difference was found between epileptic adolescents with favorable attitude towards their illness and those with unfavorable one, t (50) = 8.49, p< 0.05. Mean psychological adjustment score of epileptic adolescents with favorable attitude (M=122.63) was significantly greater than those epileptic adolescents with unfavorable attitude (M= 76.59). This implied that those adolescents with unfavorable attitude towards epilepsy go through greater psychological adjustment problems in comparison to adolescents with favorable attitude towards epilepsy.

Similar to psychological adjustment, a statistically significant social adjustment mean score difference was observed between epileptic adolescents who favorably viewed their health problem and those who unfavorably perceived their health problem, t (50) = 5.66, P < 0.05. Those adolescents with unfavorable attitude towards their illness had a mean score of M= 98.36 on social adjustment which was significantly lower than the mean scores of adolescents with favorable attitude (M= 142.23). This implied that epileptic adolescents with unfavorable illness related attitude had poor social adjustment when compared with those with favorable attitude.

Table 29: Psychosocial adjustment difference in diabetic adolescents as a function of attitude towards illness

	Attitude	N	Mean	St. deviations	T	df	Sig. (2 tailed)
Psychological adjustment	Favorable	16	125.88	9.35	.786	50	0.436
	Unfavorable	36	123.44	10.67			
Social adjustment	Favorable	16	130.19	2.74	1.601	50	.116
	Unfavorable	36	125.88	10.57			

t-value is significant at 0.05 level (2 – tailed)

The t-test on table 29 above demonstrate the existence of no statistically significant psychological adjustment difference between those diabetic adolescents with favorable attitude towards their illness and those who have unfavorable attitude towards their illness, $t(50) = .786$, $P < 0.05$. Thus, it can be inferred that attitude towards illness had no influence on the psychological adjustment of diabetic adolescents.

The t-test statistic also illustrated the existence of no statistically significant mean difference in the social adjustment of diabetic adolescents where both adolescents, those having either favorable or unfavorable attitude towards their health condition, reported relatively similar social adjustment mean scores irrespective of their attitude towards their health condition, $t(50) = 1.601$, $P < 0.05$.

5. Discussion

5.1. Group difference among epileptic, diabetic and 'healthy' adolescents

The aim of this study were tow fold; one was to investigate into the psychological and social adjustment of adolescents with epilepsy and diabetes in comparison to adolescents without any significant health problem (matched for age and sex); the other was to see whether clinical and/or demographic variables as well as attitude towards illness had influence on the psychological and social functioning of adolescents with epilepsy and diabetes.

As presented in the previous chapter, adolescents with an epileptic health condition scored significantly lower mean scores on psychological and social adjustment measures compared with those diabetic as well as 'healthy' adolescents, further implicating the relatively compromised psychological as well as social adjustment of epileptic adolescents in comparison to diabetic and 'healthy' adolescents. Such finding of the study was found to be consistent with findings of earlier studies (Baker et al., 2005 & Ronen, Streiner & Rosenbaum, 2003) that maintained that adolescents with epilepsy had a relatively compromised psychosocial adjustment compared to healthy adolescents and adolescents with other chronic health condition like asthma, suggesting that these problems are specific to epilepsy and not imply to the result of having to live with chronic condition alone.

The poor psychosocial adjustment of epileptic adolescents that was seen in both the current as well as early studies can be attributed to the unpredictability of the seizure recurrence (Ronen, Streiner & Rosenbaum, 2003), the severity of seizures (Chadwick, 1994 & Panter, 2004), the burden of having to take medication (Baker et al, 2005), and the rejection of others as people who often have misconception about the cause and treatment of epilepsy (Epilepsy Ontario, 2008).

Amplifying the role of others on the psychosocial adjustment of epileptic adolescents Baker et al. (2005) assert that the stereotypes and attitudes of having epilepsy can cause

more pain to adolescents than the seizure it self. Once negative labels have been applied to people who experience seizures, the persons will be faced with negative societal reaction which in turn can have deleterious effects on self esteem. The stigmatizing nature of this chronic condition can generate poor psychosocial outcome (worry, negative feelings about life, depression and increased risk of failure to achieve social, educational and vocational goals. In supplement, Chadwick (1994) and Panter (2004) contend that, to avoid the social embarrassment of experiencing seizure in public, epileptic adolescents may increasingly withdraw from social activity and these factors often result in anxiety, depression, low self esteem, and feelings of helplessness.

In line with the contention of the aforementioned authors, studies in regions of the world testify that stigma contribute substantially to the psychological and social burden of epilepsy. Nowhere in the world is however epilepsy associated stigma more disabling than in sub-Saharan Africa (SSA), where epilepsy rates far exceed those in developed countries (Baskind & Birbeck, 2005).

The lower score of epileptic adolescents on psychological adjustment as it is measured in degree of depression and self esteem is similar to the findings of Hoare and Mann (1994) who compared the self esteem of epileptic and diabetic adolescents and reported that epileptic adolescents scored significantly lower than diabetic adolescents. Similarly, Baker et al. (2005) reported that epileptic adolescents had lower self-esteem and higher level of depression compared with 'healthy' adolescents.

Similar to the psychological adjustment indices of depression and self esteem, the findings of this study showed that the social adjustment of epileptic adolescents was poor compared with both diabetic and healthy adolescents. In relation to this Baker et al. (2005) stated that epileptic adolescents reported significantly higher level of social anxiety as measured by the social avoidance and distress scale than healthy adolescents. Likewise, after comparing the social functioning of adolescents with epilepsy, adolescents with other chronic illness, and adolescents without a chronic illness, Westbrook et al. (1969) reported that epileptic adolescents were very secretive about their

illness and they faced more social isolation as a result of their diagnosis (cited in Baker et al., 2005).

Unlike results obtained for epileptic adolescents though, the current study showed that diabetic adolescents had relatively similar psychological as well as social adjustment mean scores compared with adolescents without any significant health problem ('healthy' adolescents). This finding of the current study is similar with the results of Helgeson et al.(2007) who reported that no significant difference was found in indices of psychological functioning (depressive symptom, anger, behavior problem and self esteem) between diabetic and healthy adolescents. Likewise, Hanstead (1989) reported that the majority of diabetic patients in their study experienced a satisfactory quality of life despite having to live with chronic illness like diabetes (cited in Sultana, Oommen & Shanmugham, 2007). In supplement these similar findings, Ausli et al. (2007) also observed that diabetic children had similar self esteem scores with healthy adolescents.

Contrary to findings of most studies reviewed, a somehow conflicting claim is held by Sudhir et al. (2001). These authors maintain contrasting assertions that diabetes can influence the physiological growth of an individual (such as arrested development, delay of pubertal change) which can have further impact on psychological development. However, they contend, the illness could also have positive impacts as studies report a trend towards healthy habits and patterns of living in young diabetics as compared to their normal peers (Smoking, use of alcohol, exercise etc). Diverging from the findings of the current study however, Kathryn et al. (2001) demonstrated that diabetic adolescents exhibited poor psychological outcomes as anxiety, depression and low self esteem in their longitudinal study.

With regard to the social adjustment of diabetic adolescents though, studies tend to come up with similar results with the current study. Emmanouilidou et al., (2008) reported that diabetic adolescents demonstrated similar quality of life with non diabetic youth of same age and socio-economic status. They also reported that surprisingly diabetic adolescents reported even higher scores than their healthy peers in the "social functioning" sub scale.

But they also stated that the significance is only 0.04 and that the standard deviation of controls was greater than that of diabetic patients, which may be overruled by a larger sample of individuals. In contrast to this study, however, Helgeson et al. (2007) reported that diabetic adolescents have difficulties in social competence.

Having observed such contrasting outcomes of studies regarding the psychological and social adjustment of diabetic adolescents, the researcher would like to remain tentative concerning the observed results of the current study. It can be assumed that such discrepancies have resulted from differing methodologies employed by the studies conducted so far. Hence a thorough and focused study might be needed to unravel the current dilemma of discrepant psychosocial outcomes, and with this respect, the researcher recommend further study particularly focusing on the health problem as occurring in Ethiopia.

5.2. Gender difference in the psychosocial adjustment of epileptic, diabetic, and 'healthy' adolescents

As to the independent t-test statistic of the present study with regard to sex, there exists no statistically significant psychological or social adjustment mean score difference in both the epileptic and 'healthy' adolescents. Male and female adolescents in the two study groups were found to exhibit relatively similar psychological and social adjustment mean scores, which indicated the absence of any gender related effect on the psychological and social adjustment of epileptic and healthy adolescents. However, gender was found to have association with psychological adjustment of diabetic adolescents where the female gender related with low psychological adjustment score.

While studying the influence of variables such as age, gender, epilepsy diagnosis, duration of illness, age at onset, seizure severity, number of Anti-Epileptic Drugs (AEDs), adverse medication effects, treatment type, and presence of co-morbid neurological impairments on Health Related Quality of Life (HRQOL), Miller et al. (2003) came up with a congruent result as the current study regarding gender related psychosocial adjustment difference in epileptic adolescents. They reported that apart

from the presence of co-morbid neurological impairments, seizure severity, and the number of AEDs which were significant predictors of HRQOL, the rest of the variables (as gender) revealed no statistically significant HRQOL difference. Victor et al. (1990) also found no significant difference between male and female epileptic patients in a measure of depression (cited in Djibuti & Shakarishvili, 2003). In contrast to these findings, a study reported that gender was a significant predictor of health related quality of life, the female gender associated with poor health related quality of life (Djibuti & Shakarishvili, 2003).

Kimiskidis et al., (2007) maintain that the effect of gender on the development of psychological adjustment difficulties in epilepsy have been highly controversial in pervious studies some reporting that the male gender associated with more psychological difficulties and others reporting the opposite result with gender having either no effect or with a predominance that female patients with epilepsy have more psychological difficulties. However the study of Kimiskidis et al. (2007) indicated that the female gender was a risk factor for the development of anxiety and/or depression in epileptic adolescents.

Similar to the results relating to epileptic adolescents, the findings of the present study demonstrate the existence of no significant difference on the psychological and social adjustment of male and female diabetic adolescents, where both male and female adolescents exhibited relatively the same psychological and social adjustment competence.

Similar to epilepsy, previous research reported a contrasting result of gender having an effect or no effect on psychological outcomes of diabetic adolescents. Emmanouilidou, et al. (2008) reported that they have found no difference in the quality of life of male and female diabetic adolescents which was also true to the findings of Laffel et al. (2003). Unlike these findings, Helgeson et al. (2007) reported that female adolescents exhibiting greater depressive symptoms, decline in self esteem and adaptive skills than male adolescent participants in their longitudinal study. Papadopoulos, et al., (2007) also

reported that gender effect was quite pronounced in their study with the female gender associated with worse quality of life.

The deviation of the current study from most of the findings mentioned in this discussion might be the result of the diverse methodological approaches and differences in the investigated population. Hence further population based research need to be conducted to confirm the current study's allegation of no gender based difference in psychological as well as social adjustment of epileptic adolescents.

5.3. Age difference in the psychosocial adjustment of epileptic, diabetic and 'healthy' adolescents

As presented in chapter four, an analysis of variance revealed that there existed no age related psychological and social adjustment difference among epileptic as well as diabetic adolescents within the age brackets 13-15 years, 16-18 years and 19-21 years. However, in 'healthy' adolescents, there was a significant psychological adjustment difference between those adolescents within the age brackets 13-15 years and 19-21 years implying that adolescents within the age group 13-15 years had better psychological adjustment in comparison to those adolescents within the age group 19-21 years. For social adjustment though, there existed no such age related statistically significant difference among the age groups of healthy adolescents. In contrast, in the current study epileptic and diabetic adolescents demonstrated no significant age related difference in both psychological and social adjustment measures.

Related to the findings of the current study, Burke and Elliott (1998) state the fact that most studies come up with no relationship between age and psychological distress among children with chronic health condition. A study by Emmanouilidou et al. (2008) confirm this statement reporting no statistically significant age related difference in the quality of life of diabetic adolescents. Different age group of diabetic adolescents reported similar quality of life in physical and psychological domains.

Helgeson et al. (2007), in their longitudinal study of psychosocial functioning of adolescents with and without diabetes, concluded that diabetes was not associated with

indicators of psychological distress over time but may be associated with the emergence of social difficulties. However they also stated that they did not want to overstate this finding since the effect size of the difference was quite small. Besides, Szaflarski et al. (2006) in their study of effects of age, age at seizure onset, and duration of epilepsy on health-related quality of life found no significant effect of patient's age on quality of life. Miller, Palermo and Grewe (2003) also reported the same result with Szaflarski et al. (2006) regarding the effect of age on quality of life on patients with epilepsy.

Differing to the finding of this study however, Djibuti and Shakarishvili (2003) indicated that an advance in age was significantly associated with low level overall quality of life in patients with epilepsy. Similarly, Heimlich et al. (2000) stated that older adolescents had more negative attitudes towards their epilepsy than young group of adolescents implying that these adolescents are more vulnerable to the psychosocial consequence of having a stigmatized disorder. The authors explained this age difference in psychosocial experience of epileptic adolescents as a result of the developmental task of late adolescence stage which require more sophisticated cognitive processes involved in adult decision making. Moreover actions taken during this time may have more immediate and long-lasting implications for adulthood.

The findings of this study however swing in the no difference extreme of psychological and social adjustment controversies as a result of age. This might be explained in the continual effects of epilepsy on psychosocial functioning where recurrent seizures are experienced by adolescents of any age, hindering any age related difference to prevail.

5.4. Psychosocial adjustment difference in epileptic and diabetic adolescents as a function of health attack frequency

In this study analysis of variance revealed that there was a significant psychological and social adjustment difference among epileptic adolescents, those adolescents with higher seizure frequency having higher psychological and social adjustment problems. Hence, this was found to be in line with the results of other studies that accounted seizure frequency to be a significant inverse predictor of psychological adjustment.

Ronen, Streiner and Rosenbaum (2003) stated that a number of research concluded that patients with frequent seizures had poor psychological profiles than those with infrequent or no seizures. Similarly, Djibuti and Shakarishvili (2003) reported that high seizure frequency was found to be a risk factor for the development of poor quality of life across different domains. Baker et al. (2005) also found that among adolescents with epilepsy, high seizure frequency to be significantly associated with low self esteem. Kimiskidis et al. (2007) supplement the above findings maintaining that high seizure frequency to be an independent risk factor for the development of anxiety and/or depression.

Heimlich et al. (2000), in their study of adolescents' attitude towards epilepsy, stated that more negative attitude towards illness was observed in adolescents who experienced frequent seizures which lead to poor psychological outcomes. They further stated that seizures occurring frequently in school setting during adolescence, when peer acceptance is more important to the developing identity, may contribute to great feeling of stigmatization and marginalization.

As to the analysis of variance conducted to see the psychological and social adjustment scores of diabetic adolescents as related with health attack frequency, there was no psychological and social adjustment difference among those adolescents who experienced relatively frequent significant health attacks (more than 3 times per year), moderately frequent health attacks (1-3 times per year) and those who experienced no significant health attack during the preceding year to data collection.

Studies conducted with these regard however tend to report contrasting outcomes with the finding of the study. According to Sudhir et al. (2001) diabetic 'glycomic' control (which refers to taking medication, following diet and exercise or executing life style changes that coincide with medication or health advice) is very important in diabetes as a failure to follow these could lead to serious consequences in the form of hypoglycemia ketoacidosis or micro and macro-vascular complications. With this regard, Anderson et al. (1981), after comparing family environment of diabetic adolescents with varying

degrees of metabolic control, reported that compared to adolescents with poor 'glycomic' control those with good control reported less diabetic related symptoms, less anxiety and more positive self concept. On the other hand Kathryn et al. (2001), in their longitudinal study and psychological course of diabetes from adolescence to young adulthood, reported that there was a trend for emotional problems such as anxiety, depression to be associated with lower 'glycemic' control. They also stated that a referral for psychiatric assessment was common and was most often observed in those patients who also had recurrent hospital admission for diabetic ketoacidosis further suggesting that when diabetes is significantly out of control, it raises the risk of psychological morbidity. The finding of the current study is however similar to the findings of Emmanouilidou et al. (2008) who reported the existence of no difference in the quality of life of youth having good, moderate and bad 'glycemic' control.

As stated before in this study, no significant difference was found on psychological as well as social adjustment of diabetic adolescents as a function of number of significant health attacks incurred due to diabetes. This is indicative of the fact that all the diabetic adolescents had relatively similar psychological and social adjustment outcomes despite having to endure varying number of diabetes related health attacks. However further examination of additional variables like 'glycemic' control might unveil additional health attack frequency related differences among the diabetic adolescents.

5.5. Psychosocial adjustment difference in epileptic and diabetic adolescents as a function of illness duration

Illness duration being a quasi-independent variable, the finding of this study reveal the existence of no statistically significant psychological as well as social adjustment difference among epileptic or diabetic adolescents who endured epilepsy or diabetes for relatively shorter and longer time.

The current study's finding regarding illness duration and psychological and social adjustment seem lack agreement with some research in the area of epilepsy as well as diabetes. As to a study by Szaflarski et al. (2006), a longer duration of epilepsy has

significant positive impact on quality of life across different domains. This implied that patients with longer experience of epilepsy were better adjusted to the psychosocial consequence of their illness. What ever the direction of effect, Ronen, Streiner and Rosenbaum (2003) contend; illness duration seemed to have effects on epileptics. Population based studies of childhood onset epilepsy do not show uniform results, some indicating increase in psychological difficulties overtime while others indicating the opposite.

A study by Mrabet et al. (2004) in Tunisia, that compared patients with epilepsy with that of the general population, however reported a similar finding with the current study. They reported that duration of epilepsy had no effect on quality of life of patients (cited in Szaflarski et al., 2006).

As it was outlined above, the present study found no statistically significant psychological and social adjustment difference among epileptic adolescents who endured the illness for relatively short period time (less than five years), who endured it from 5-9 years, and those who endured it for a relatively longer period (more than 9 years). This implied that all the epileptic adolescents had experienced a similar poor psychological and social adjustment irrespective of the length of time they endured the illness.

Papadopoulos et al. (2007) identified duration of diabetics as significant predictor of health related quality of the longer duration of diabetic generating poor quality of life. However, in this study, similar to epileptic adolescents no significant psychological and social adjustment difference was found among diabetic adolescents, those who endured the illness for a relatively shorter time (less than a year), those who endured it from 1-3 years, and those who endured it for a relatively longer time (more than 3 years). All epileptic adolescents had a relatively similar psychological and social adjustment competence.

5.6. Psychosocial adjustment difference a among epileptic and diabetic adolescents as a function of attitude towards illness

The t-test employed to see if there existed a psychological and social adjustment difference in epileptic adolescents, between those having favorable attitude towards their illness and those who have not, revealed a statically significant difference. Those adolescents with unfavorable attitude having higher psychological and social adjustment problems. Similar to this finding Heimlich et al. (2000) reported that adolescents with negative attitude towards epilepsy exhibited more psychosocial difficulties. They also contended that in epileptic adolescents, experiencing seizure in public may lead to stigmatization and marginalization which in turn may lead to having more negative attitude towards one's epilepsy.

In contrast to the current finding regarding epileptic adolescents, no statistically significant psychological and social adjustment difference was found among diabetic adolescents who have favorable attitude and those having unfavorable attitude towards their diabetes.

LeBovidge, Lavigne, and Miller (2005) contend that responses to the Child Attitude Towards Illness Scale (CATIS), reflect personality characteristics or cognitive styles that are not specific to feelings about illness. For example, youth who respond that they feel just as good as their peers even though they have epilepsy/diabetes or do not feel that epilepsy/diabetes keeps them from doing things they like may be individuals who have a high sense of self-esteem or self-efficacy. It is also possible that a positive attitude toward illness may reflect a generally optimistic attribution style (i.e. viewing causes of negative events as external, specific, and unstable), while a negative attitude toward illness may reflect a pessimistic attribution style (viewing causes of negative events as internal, global, and stable). Pessimistic attribution style has been found to interact with negative events to predict increases in depressive symptoms among youth (Abela, 2001, Abramson, Seligman, & Teasdale, 1978 cited in LeBovidge, Lavigne, and Miller, 2005). Hence, the psychosocial adjustment difference seen between epileptic adolescents, those having favorable attitude and those having unfavorable attitude towards epilepsy, in this study could be attributed to personality characteristics and cognitive styles.

6. CONCLUSIONS AND RECOMMENDATIONS

This study has tried to explore into some of the psychological and social adjustment aspects for epileptic and diabetic adolescents. Data were collected from 52 epileptic and 52 diabetic adolescents who were attending medical treatment at Yekatit 12 and St. Paulos hospitals of Addis Ababa and 52 adolescents taken from three government schools matched for age and sex with the epileptic and diabetic adolescent participants. In this section conclusions and recommendations are forwarded based on the findings of the study.

6.1. Conclusions

The findings of this study with regard to the profile of epileptic, diabetic and healthy adolescents who participated in the study could lead to the following conclusions:

- Epileptic adolescents seem to have higher psychological and social adjustment problems compared to healthy adolescents where as diabetic adolescents have relatively comparable psychological as well as social adjustment with healthy adolescents.
- There was no statically significant gender related difference in the psychological and social adjustment of both epileptic and 'healthy' adolescents. While gender was associated with psychological adjustment of diabetic adolescents.
    - Both male and female epileptic and 'healthy' adolescents reported relatively similar psychological and social adjustment. Thus gender was not found to be an intervening factor in the psychological and social adjustment of epileptic and 'healthy' adolescents. However gender was found to be an intervening factor in the psychological adjustment of diabetic adolescents, the female gender associated with low psychological adjustment scores.
- There was no statistically significant age related difference in the psychological and social adjustment of both epileptic and diabetic adolescents.
    - This indicated that the psychological and social adjustment of epileptic adolescents was not mediated by their respective age category.

- Similarly, the psychological and social adjustment of diabetic adolescents was not influenced by their respective age category.

- However, in 'healthy' adolescents, age was found to have an intervening effect on psychological adjustment where an advance in age was associated with having poor psychological adjustment.
- Among epileptic adolescents, a significant difference was observed in psychological and social adjustment measures as a function of seizure frequency. High seizure frequency was found to be associated with poor psychological and social adjustment.
- In adolescents with a diabetes health condition however, the number of significant health attacks due to diabetes were not found to be associated with the psychological and social adjustment of diabetic adolescents.
- No statically significant psychological and social adjustment differences were seen in both epileptic adolescents and diabetic adolescents as a function of illness duration. Hence illness duration was found to have no influence in the psychological and social adjustment of both epileptic and diabetic adolescents.
  - Epileptic adolescents reported relatively similar psychological and social adjustment irrespective of the length of time they endured with illness.
  - Similarly, diabetic adolescents reported a relatively similar psychological and social adjustment irrespective of the length of time they endured illness.
- Attitude towards illness was found to be associated with psychological and social adjustment in epileptic adolescents.
  - Here, unfavorable attitude towards epilepsy was associated with poor psychological and social adjustment.
- However, in diabetic adolescents attitude towards illness was found to have no statistically significant influence on the psychological and social adjustment of diabetic adolescents.

6.2. Recommendations

In this section recommendations are forwarded based on the findings of the study and the reviewed literature.

This study has tried to shed light into the psychological and social adjustment level of epileptic and diabetic adolescents as compared to healthy adolescents. The results of the study indicated that adolescents with epileptic health condition have a more compromised psychological and social adjustment compared to both diabetic and healthy adolescents. However, the study did not try to dig into the reasons for the compromised psychological and social adjustment of epileptic adolescents'. Therefore it is hopped that future research will add to knowledge with this respect.

As indicated earlier, the diagnosis of epilepsy appears to impact negatively the psychological and social adjustment of the adolescent. Hence, these negative effects of epilepsy must be approached by providing support to individuals to enable them get hold of /control/ their epilepsy, the associated seizure as well as life.

Currently adolescents are being provided with a medical treatment, caught between pediatric and adult services, and with neither service being able to give them psychosocial support. The researcher hence assumes that these adolescents need to be provided with a specially tailored psychosocial support service at hospitals or other health care facilities.

To this end, a careful explanation of the bases of epilepsy might prove helpful '*since the diagnosis of epilepsy is often frightening for patients and their remains a considerable misunderstanding about the nature of epilepsy and its consequence*' (Chadwick, 1994). Moreover, a clinical time is often limited and patients may feel unable to ask a question that they want answered. Therefore intervention by knowledgeable counselor or specialist nurse probably present a better way of answering this issue. Supplementary written information can also be extremely valuable.

Adolescents with an epileptic health condition could benefit a lot from sufficient social support provided by health care professionals, family and friends. Moreover, the establishment of and professional assistance to illness focused support groups might also prove one remedial measure for the compromised psychosocial adjustment of epileptic adolescents.

As it was stated in the literature review and discussion part, studies have indicated that the poor psychosocial outcome in epileptic adolescents might be due to the prejudices and misconceptions associated with epilepsy (Baker et al, 2005; Chadwick, 1994; and Panter, 2004). Therefore community awareness raising programs aimed at reducing the prejudices and misconception regarding the nature epilepsy and the negative attitude associated with epilepsy and the epileptic can serve to alleviate the strains on adolescents with epilepsy.

In this study diabetic adolescents did not manifest any significant difference in psychological and social adjustment measures from healthy adolescents. As it is indicated in the discussion part, this result is found to be consistent with some of the research reviewed by the researcher and contradicts with some others. Hence, further research need to be conducted to dig deeply into this disparity.

The demographic variables studied (sex and age) were also found to have no effect on the psychological and social adjustment of epileptic adolescents and only gender having an effect on the psychological adjustment of diabetic adolescents which was also consistent with some of the studies and contradicts with some other research findings reviewed by the researcher. Therefore it is hopped that future population based studies will specifically address the effect of age and gender on psychosocial adjustment of epileptic and diabetic adolescents.

Attitude towards illness was found to have a significant association with psychological and social adjustment of epileptic adolescents, unfavorable attitude being a factor for poor psychosocial adjustment. In work with youth epilepsy it may be helpful to both

acknowledge negative aspects of the illness, as well as guide them in reframing their experience. Efforts in coping with epilepsy, for example, can also be seen as signs of strength in handling difficult situations. Indeed, such an intervention strategy may follow a cognitive-behavioral perspective, in which interventions are aimed at helping children develop new ways of interpreting their experiences and conceptualizing problems, as well as building new coping templates (Kendall, 1993 cited in LeBovidge, Lavigne & Miller, (2005).

As it was indicated in the discussion part, findings have indicated that the negative attitude of epileptic adolescents towards their illness might be the result of the prejudices, misconception and stigma people have regarding epilepsy. Hence as recommended earlier, community awareness rising programs could help reduce the prejudice and sigma associated with epilepsy.

Areas for future research include investigation of potential factors contributing to attitude toward illness (e.g., disease status, personality characteristics, parental attitude and cultural influences) and interventions aimed at promoting positive attitudes.

Adolescents may also benefit from group situations (e.g. support groups within health care facilities) to talk with one another about their illness experience and how to handle difficult situations, so that overwhelming situations may be appraised as more manageable.

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APPENDICES

Appendix A

School of Graduate Studies

Department of Psychology

Questionnaire to be filled by epileptic adolescents

The following questionnaire is part of a thesis work undertaken by a graduate student of Counseling Psychology. Its primary aim is exploring into the psychosocial adjustment of adolescents with epilepsy. It has five parts dealing with general information, health related information, psychological adjustment, social adjustment, and adolescents' attitude to their health condition. I would like to ask your kind collaboration to take part in the study and also like to assure you the confidentiality of your responses. Thank you in advance for your genuine responses.

PART ONE: BACKGROUND INFORMATION

DIRECTION: For the following questions, please respond either by a word/phrase of your opinion or by putting a check mark '✓' on the option of your choice.

1. Age _____
2. Gender: Male ☐ Female ☐
3. Grade level _____
4. Usual Household: With both parents ☐ with father only ☐
   With mother only ☐ With sibling ☐ Other (please specify) _____
5. Where do you live ? Addis Ababa ☐ Other than Addis Ababa ☐

PART TWO: CLINICAL AND HEALTH RELATED DETAILS:

DIRECTION: For the following questions, please respond either by a word/phrase of your opinion or by putting a check mark '✓' on the option of your choice.

1. How old were you at the onset of your current health problem? _____
2. How long have you stayed with your health problem? _____
3. Have you experienced seizure during the past 12 months?
   Yes ☐ No ☐
4. If your answer to the above question is 'yes', how many times have you experienced seizure during the past 12 months? _____
5. How do you control your epilepsy?
   By taking ant-epileptic drugs ☐ other (please specify) _____

PART THREE: PSYCHOLOGICAL ADJUSTMENT MEASURE

Direction: The following statements refer to the experiences that people have in their daily life. Please read each statement carefully and indicate the option that best describes your feeling (on a five point scale- Strongly Agree, Agree, Undecided, Disagree, and Strongly Disagree) by putting a check mark (✓) on the option of your choice.

No	Items	Response categories				
		Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
1.	On the whole, I am satisfied with myself.					
2.	At times, I think I am no good at all.					
3.	I feel that I have a number of good qualities.					
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 certainly feel useless at times.					
7.	I feel that I'm a person of worth, at least on an equal plane with others.					
8.	I wish I could have more respect for myself.					
9.	All in all, I am inclined to feel that I am a failure.					
10	I take a positive attitude toward myself.					
11	I feel sad all of the time.					
12	I am not discouraged about my future.					
13	I feel I am a total failure as a person.					
14	I can't get any pleasure from things I used to enjoy.					
15	I don't feel particularly guilty.					
16	I feel I am being punished.					
17	I dislike myself.					
18	I don't criticize or blame myself more than usual.					
19	I would like to kill my self.					
20	I cry over every little thing.					
21	I am no more restless or wound up than usual.					
22	I have not lost interest in other people or activities.					
23	I trouble making any decision.					
24	I feel utterly worthless.					
25	I have as much energy as ever.					
26	I sleep some what less than usual.					
27	I am irritable all the time.					
28	My appetite is much less than before.					
29	I find that I can't concentrate on any thing.					
30	I get much more tired or fatigued more easily than usual					

PART FOUR: SOCIAL ADJUSTMENT MEASURE

Direction: The following statements refer to the experiences, perceptions, feelings and reactions that people have in their daily interactions with others. Please read each statement carefully and indicate the option that best describes your feelings and experiences (on a five point scale- Strongly Agree, Agree, Undecided, Disagree, and Strongly Disagree) by putting a check mark (✓) on the option of your choice.

No	Items	Response categories				
		Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
1	I feel close to members of my family.					
2	I feel I really do not have much in common with the larger community in which I live.					
3	I have little contact with members of my family.					
4	I do not get along very well with my family.					
5	I have a good relationship with most members of my immediate family.					
6	I do not feel that I can turn to my friends living around me for help when I need it.					
7	No one in the community where I live seems to care much about me.					
8	I feel that I have a sense of belonging in the larger community or neighbourhood I live in.					
9	I do not have many friends in the city where I live.					
10	I do not have any neighbours who would help me out in a time of need.					
11	I get plenty of help and support from my friends.					
12	My family seldom really listens to what I say.					
13	Few of my friends understand me the way I want to be understood.					
14	I know people in my community who understand and share my views and beliefs.					
15	I feel tense when with people I don't know well.					
16	I am socially some what awkward.					

No	Items	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
17	I don't find it difficult to ask other people for information.					
18	I am often uncomfortable at parties and other social functions.					
19	When in group of people, I have trouble thinking of the right thing to talk about.					
20	It doesn't take me long to overcome my shyness in new situations.					
21	It is hard for me to act neutral when I am meeting new people.					
22	I feel nervous when speaking to someone in the authority.					
23	I have no doubts about my social competence.					
24	I have trouble looking someone right in the eye.					
25	I feel inhibited in social situations.					
26	I don't find it hard to talk to strangers.					
27	I am more shy with members of the opposite sex.					
28	It has been easy to relate to others.					
29	I felt isolated from other people.					
30	I had someone to share my feelings with.					
31	I found it easy to get in touch with others when I needed to.					
32	When with other people, I felt separate from them.					
33	I felt alone and friendless.					

PART FIVE: THE CHILD ATTITUDE TOWARDS ILLNESS SCALE (AUSTIN & HUBERTY, 1993)

Direction: This scale is intended to measure your favorable or unfavorable feelings towards having epilepsy making use of the below presented list of statements. Consider each item carefully and circle the option that best represent your feeling.

No	Items	Options				
1	How good or bad do you feel it is that you have the health problem?	Very good	A little good	Not sure	A little bad	Very bad
2	How fair is it that you have the health problem?	Very fair	A little fair	Not sure	A little unfair	Very unfair
3	How happy or sad is it for you to have the health problem?	Very sad	A little sad	Not sure	A little happy	Very happy
4	How good or bad do you feel it is to have your sort of health problem?	Very good	A little good	Not sure	A little bad	Very bad
5	How often do you feel that your health problem is your fault?	Never	Not often	Some Times	often	Very often
6	How often do you feel that your health problem keeps you from doing things you like?	Never	Not often	Some Times	often	Very often
7	How often do you feel that you will always be sick?	Never	Not often	Some Times	often	Very often
8	How often do you feel that your health problem keeps you from starting new things?	Never	Not often	Some Times	often	Very often
9	How often do you feel different from others because of your health problem?	Never	Not often	Some Times	often	Very often
10	How often do you feel bad because of your health problem?	Never	Not often	Some Times	often	Very often
11	How often do you feel sad about being sick?	Never	Not often	Some Times	often	Very often
12	How often do you feel happy even though you have the health problem?	Never	Not often	Some Times	often	Very often
13	How often do you feel just as good as others of your age though you have the health problem?	Never	Not often	Some Times	often	Very often

Appendix B

School of Graduate Studies

Department of Psychology

Questionnaire to be filled by diabetic adolescents

The following questionnaire is part of a thesis work undertaken by a graduate student of Counseling Psychology. Its primary aim is exploring into the psychosocial adjustment of adolescents with diabetes. It has five parts dealing with general information, health related information, psychological adjustment, social adjustment, and adolescents' attitude to their health condition. I would like to ask your kind collaboration to take part in the study and also like to assure you the confidentiality of your responses. Thank you in advance for your genuine responses.

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3. Grade level _____
4. Usual Household: With both parents ☐ With father only ☐ With mother only ☐
   With sibling ☐ Other (please specify) _____
5. Where do you live? Addis Ababa ☐ Other than Addis Ababa ☐

PART TWO: CLINICAL AND HEALTH RELATED DETAILS:

DIRECTION: For the following questions, please respond either by a word/phrase of your opinion or by putting a check mark (✓) on the option of your choice.

1. How old were you at the onset of your current health problem? _____
3. How long have you stayed with your health problem? _____
4. Have you experienced any major health attack due to diabetes during the past 12 months? Yes ☐ No ☐
5. If your answer to the above question is 'yes', how many times have you experienced such a major health attack during the past 12 months? _____
6. How do you control your diabetes?

   Diet ☐ Medication ☐ Insulin ☐ sport ☐ other (please specify) _____

PART THREE: PSYCHOLOGICAL ADJUSTMENT MEASURE

Direction: The following statements refer to the experiences that people have in their daily life. Please read each statement carefully and indicate the option that best describes your feeling (on a five point scale- Strongly Agree, Agree, Undecided, Disagree, and Strongly Disagree) by putting a check mark (✓) on the option of your choice.

No	Items	Response categories				
		Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
1.	On the whole, I am satisfied with myself.					
2.	At times, I think I am no good at all.					
3.	I feel that I have a number of good qualities.					
4.	I am able to do things as well as most other people.					
5.	! feel I do not have much to be proud of.					
6.	I certainly feel useless at times.					
7.	I feel that I'm a person of worth, at least on an equal plane with others.					
8.	I wish I could have more respect for myself.					
9.	All in all, I am inclined to feel that I am a failure.					
10	I take a positive attitude toward myself.					
11	I feel sad all of the time.					
12	I am not discouraged about my future.					
13	I feel I am a total failure as a person.					
14	I can't get any pleasure from things I used to enjoy.					
15	i don't feel particularly guilty.					
16	I feel I am being punished.					
17	I dislike myself.					
18	I don't criticize or blame myself more than usual.					
19	I would like to kill my self.					
20	I cry over every little thing.					
21	I am no more restless or wound up than usual.					
22	I have not lost interest in other people or activities.					
23	I trouble making any decision.					
24	I feel utterly worthless.					
25	I have as much energy as ever.					
26	! sleep some what less than usual.					
27	I am irritable all the time.					
28	My appetite is much less than before.					
29	I find that I can't concentrate on any thing.					
30	I get much more tired or fatigued more easily than usual					

PART FOUR: SOCIAL ADJUSTMENT MEASURE

Direction: The following statements refer to the experiences, perceptions, feelings and reactions that people have in their daily interactions with others. Please read each statement carefully and indicate the option that best describes your feelings and experiences (on a five point scale- Strongly Agree, Agree, Undecided, Disagree, and Strongly Disagree) by putting a check mark (✓) on the option of your choice.

No	Items	Response categories				
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4	I do not get along very well with my family.					
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6	I do not feel that I can turn to my friends living around me for help when I need it.					
7	No one in the community where I live seems to care much about me.					
8	I feel that I have a sense of belonging in the larger community or neighbourhood I live in.					
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11	I get plenty of help and support from my friends.					
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13	Few of my friends understand me the way I want to be understood.					
14	I know people in my community who understand and share my views and beliefs.					
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16	I am socially some what awkward.					

No	Items	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
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18	I am often uncomfortable at parties and other social functions.					
19	When in group of people, I have trouble thinking of the right thing to talk about.					
20	It doesn't take me long to overcome my shyness in new situations.					
21	It is hard for me to act neutral when I am meeting new people.					
22	I feel nervous when speaking to someone in the authority.					
23	I have no doubts about my social competence.					
24	I have trouble looking someone right in the eye.					
25	I feel inhibited in social situations.					
26	I don't find it hard to talk to strangers.					
27	I am more shy with members of the opposite sex.					
28	It has been easy to relate to others.					
29	I felt isolated from other people.					
30	I had someone to share my feelings with.					
31	I found it easy to get in touch with others when I needed to.					
32	When with other people, I felt separate from them.					
33	I felt alone and friendless.					

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Direction: This scale is intended to measure your favorable or unfavorable feelings towards having diabetes making use of the below presented list of statements. Consider each item carefully and circle the option that best represent your feeling.

No	Items	Options				
1	How good or bad do you feel it is that you have the health problem?	Very good	A little good	Not sure	A little bad	Very bad
2	How fair is it that you have the health problem?	Very fair	A little fair	Not sure	A little unfair	Very unfair
3	How happy or sad is it for you to have the health problem?	Very sad	A little sad	Not sure	A little happy	Very happy
4	How good or bad do you feel it is to have your sort of health problem?	Very good	A little good	Not sure	A little bad	Very bad
5	How often do you feel that your health problem is your fault?	Never	Not often	Some Times	often	Very often
6	How often do you feel that your health problem keeps you from doing things you like?	Never	Not often	Some Times	often	Very often
7	How often do you feel that you will always be sick?	Never	Not often	Some Times	often	Very often
8	How often do you feel that your health problem keeps you from starting new things?	Never	Not often	Some Times	often	Very often
9	How often do you feel different from others because of your health problem?	Never	Not often	Some Times	often	Very often
10	How often do you feel bad because of your health problem?	Never	Not often	Some Times	often	Very often
11	How often do you feel sad about being sick?	Never	Not often	Some Times	often	Very often
12	How often do you feel happy even though you have the health problem?	Never	Not often	Some Times	often	Very often
13	How often do you feel just as good as others of your age though you have the health problem?	Never	Not often	Some Times	often	Very often

Appendix C

Addis Ababa University

School of Graduate Studies

Department of Psychology

Questionnaire to be filled by adolescents

The following questionnaire is part of a thesis work undertaken by a graduate student of Counseling Psychology. It has three parts dealing with general information, psychological adjustment and social adjustment of adolescents. I would like to ask your kind collaboration to take part in the study and also like to assure you the confidentiality of your responses. Thank you in advance for your genuine responses.

PART ONE: BACKGROUND AND CLINICAL INFORMATION

DIRECTION: For the following questions, respond either by a word/phrase of your opinion or by putting a check mark (✓) on the option of your choice.

1. Age _____
2. Gender Male ☐ Female ☐
3. Grade level _____
4. Usual Household: With both parents ☐ with father only ☐
   With mother only ☐ With sibling ☐ Other (please specify) _____
5. Have you ever got ill? Yes ☐ No ☐
6. If your answer for the above question is 'yes',
   A. list the name(s) of illnesses you have experienced?

   _____

   _____

   B. From which illness(s) did you suffer most?

   _____

   C. From which illness did you suffer for a relatively longer period?

   _____

   D. How long did you suffer from the illness you have mentioned above (in response for item 'C')? _____

PART TWO: PSYCHOLOGICAL ADJUSTMENT MEASURE

Direction: The following statements refer to the experiences that people have in their daily life. Please read each statement carefully and indicate the option that best describes your feeling (on a five point scale- Strongly Agree, Agree, Undecided, Disagree, and Strongly Disagree) by putting a check mark (✓) on the option of your choice.

No	Items	Response categories				
		Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
1.	On the whole, I am satisfied with myself.					
2.	At times, I think I am no good at all.					
3.	I feel that I have a number of good qualities.					
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 certainly feel useless at times.					
7.	I feel that I'm a person of worth, at least on an equal plane with others.					
8.	I wish I could have more respect for myself.					
9.	All in all, I am inclined to feel that I am a failure.					
10	i take a positive attitude toward myself.					
11	I feel sad all of the time.					
12	I am not discouraged about my future.					
13	I feel I am a total failure as a person.					
14	I can't get any pleasure from things I used to enjoy.					
15	I don't feel particularly guilty.					
16	I feel I am being punished.					
17	I dislike myself.					
18	I don't criticize or blame myself more than usual.					
19	I would like to kill my self.					
20	I cry over every little thing.					
21	I am no more restless or wound up than usual.					
22	I have not lost interest in other people or activities.					
23	I trouble making any decision.					
24	I feel utterly worthless.					
25	I have as much energy as ever.					
26	I sleep some what less than usual.					
27	I am irritable all the time.					
28	My appetite is much less than before.					
29	I find that I can't concentrate on any thing.					
30	I get much more tired or fatigued more easily than usual					

PART THREE: SOCIAL ADJUSTMENT MEASURE

Direction: The following statements refer to the experiences, perceptions, feelings and reactions that people have in their daily interactions with others. Please read each statement carefully and indicate the option that best describes your feelings and experiences (on a five point scale- Strongly Agree, Agree, Undecided, Disagree, and Strongly Disagree) by putting a check mark (✓) on the option of your choice.

No	Items	Response categories				
		Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
1	I feel close to members of my family.					
2	I feel I really do not have much in common with the larger community in which I live.					
3	I have little contact with members of my family.					
4	I do not get along very well with my family.					
5	I have a good relationship with most members of my immediate family.					
6	I do not feel that I can turn to my friends living around me for help when I need it.					
7	No one in the community where I live seems to care much about me.					
8	I feel that I have a sense of belonging in the larger community or neighbourhood I live in.					
9	I do not have many friends in the city where I live.					
10	I do not have any neighbours who would help me out in a time of need.					
11	I get plenty of help and support from my friends.					
12	My family seldom really listens to what I say.					
13	Few of my friends understand me the way I want to be understood.					
14	I know people in my community who understand and share my views and beliefs.					
15	I feel tense when with people I don't know well.					
16	I am socially some what awkward.					

No	Items	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
17	I don't find it difficult to ask other people for information.					
18	I am often uncomfortable at parties and other social functions.					
19	When in group of people, I have trouble thinking of the right thing to talk about.					
20	It doesn't take me long to overcome my shyness in new situations.					
21	It is hard for me to act neutral when I am meeting new people.					
22	I feel nervous when speaking to someone in the authority.					
23	I have no doubts about my social competence.					
24	I have trouble looking someone right in the eye.					
25	I feel inhibited in social situations.					
26	I don't find it hard to talk to strangers.					
27	I am more shy with members of the opposite sex.					
28	It has been easy to relate to others.					
29	I felt isolated from other people.					
30	I had someone to share my feelings with.					
31	I found it easy to get in touch with others when I needed to.					
32	When with other people, I felt separate from them.					
33	I felt alone and friendless.					

Appendix D

አዲስ አበባ ዩኒቨርሲቲ

የድህረ ምረቃ ፕሮግራም

የሳይኮሎጂ ትምህርት ክፍል

የኤፕሌፕሲ በሽታ ባለባቸው ወጣቶች የሚሞላ መጠይቅ

መግቢያ፡- ይህ መጠይቅ በአዲስ አበባ ዩኒቨርሲቲ በካውንስሊንግ ሳይኮሎጂ ትምህርት ዘርፍ የሚደረግ የማስትሬት ዲግሪ ማሟያ ጥናት አካል ሲሆን፣ ዋና አላማው የኤፕሌፕሲ በሽታ ያለባቸው ወጣቶች የሚያጋጥማቸውን ማህበራዊና ስነ ልቦናዊ ችግሮች በተመለከተ የዳሰሳ ጥናት ማድረግ ነው፡፡ በመሆኑም ይህንን መጠየቅ በመሙላት ለምታደርጉልኝ ድጋፍ በቅድሚያ እያመሰገንኩ የምትሰጡኝ መረጃ ሚስጥራዊነቱ የጠበቀ መሆኑን አረጋግጥላችኋለሁ፡፡

ክፍል አንድ፡- አጠቃላይ መረጃ

*መመሪያ፡-*የሚከተሉትን ጥያቄዎች በሚገባ በማንበብ እንደአስፈላጊነቱ የ‹‹✓›› ምልክት በማድረግ ወይም በባዶ ቦታዎች ላይ በመሙላት ምላሽሽን/ህን ስጪ/ጥ፡፡

1. *ዕድሜ፡-* _____
2. *ፆታ ፡-* ወንድ □ ሴት □
3. የክፍል ደረጃ፡- _____
4. *የመኖሪያ ሁኔታ፡-*

   ከእናትና ከአባት ጋር □ ከአባት ጋር ብቻ □ ከዘመድ ጋር□

   ከእናት ጋር ብቻ □ ከእህት ከወንድም ጋር □ ሌላ_____
5. *የመኖሪያ አድራሻ ፡-* አዲስ አበባ □ ከአዲስ አበባ ሌላ □

ክፍል ሁለት፡- ከጤና ጋር የተያያዘ መረጃ

1. የበሽታውን ምልክቶች ማየት ስትጀምሪ/ር እድሜሽ/ህ ስንት ነበር? _____
2. ይህ በሽታ ከጀመረሽ/ህ ምን ያህል ጊዜ ይሆናል?_____
3. ከበሽታው ጋር በተያያዘ ባለፉት 12 ወራት መውደቅ ገጥሞሻል/ሃል? አዎ□ አይደለም□
4. ለጥያቄ ቁጥር '3' መልስሽ/ህ አዎ ከሆነ ባለፉት 12 ወራት ምን ያህል ጊዜ ወድቀሻል/ሃል? _____
5. በሽታውን በምን ዘዴ ለመቆጣጠር ትሞክሪያለሽ/ህ?

   መድሃኒት በመዋጥ □ ሌላ _____

ክፍል ሶስት፡- የሥነ ልቦና ሁኔታ መለኪያ

መመሪያ፡- የሚከተሉትን ዓ.ነገሮች ሰዎች በእለት ተእለት ህይወታቸው ሊገጥሟቸው የሚችሉ ስሜቶችን ይወክላሉ፡፡ እባክሽን/ህን እያንዳንዱን ዓ.ነገር በጥሞና ካነበብክ/ሽ በኋላ ከተሰጡት አምስት አማራጮች ውስጥ (በጣም እስማማለሁ፣ እስማማለሁ፣አልወሰንኩም፣ አልስማማም እና በጣም አልስማማም) ስሜትሽን የሚወክለውን በመምረጥ‹‹✓› ምልክት አስቀምጪ/ጥ፡፡

ተ.ቁ	ዝርዝር ዓ. ነገሮች	አማራጮች				
		በጣም አስማማለሁ	አስማማለሁ	አልወሰንኩም	አልስማማም	በጣም አልስማማም
1	በአጠቃላይ ሲታይ በራሴ ሁኔታ እርካታ ይሰማኛል፡፡					
2	አንዳንድ ጊዜ ምንም ጥሩ ጎን እንደሌለኝ አስባለሁ፡፡					
3	በርካታ ጥሩ ጎኖች እንዳሉኝ ይሰማኛል፡፡					
4	ማንኛውንም ነገር ከሌሎች ባላነሰ የማከናወን ችሎታ አለኝ፡፡					
5	ብዙም የምመካበትና የምኮራበት ነገር እንደሌለኝ ይሰማኛል፡፡					
6	አንዳንዴ ምንም ዋጋ የሌለኝና የማልጠቅም መሆኔ ይሰማኛል፡፡					
7	ከሌሎች ያላነሰ ዋጋ ያለኝ ሰው እንደሆንኩ ይሰማኛል፡፡					
8	ለራሴ ጥሩ ክብርና ዋጋ የምሰጥ ሰው ብሆን ብዬ እመኛለሁ፡፡					
9	በአጠቃላይ እራሴን ስገመግመው በህይወት ዘመኔ ብዙም ያለተሳካልኝ ሰው መሆኔ ያመዝናል፡፡					
10	ለራሴ ጥሩ አመለካከት አለኝ፡፡					
11	ሁል ጊዜም አዝናለሁ፡፡					
12	ለወደፊት ነገሮች ይስተካከሉልኛል፡፡					
13	ህይወቴ በውድቀት እንደተሞላ ይሰማኛል፡፡					
14	በፊት ያስደስቱኝ ከነበሩ ነገሮች ምንም አይነት ደስታ ማግኘት አልቻልኩም፡፡					
15	የጥፋተኝነት ስሜት አይሰማኝም፡፡					
16	በሌሎች የመቀጣት አይነት ስሜት ይሰማኛል፡፡					
17	እራሴን እጠላለሁ፡፡					
18	ከቀድሞው ለየት ባለ ሁኔታ እራሴን አልወቅስም/ አልተችም፡፡					
19	እራሴን ማጥፋት እፈልጋለሁ፡፡					
20	በትንሽ ነገር በቀላሉ አለቅሳለሁ፡፡					
21	ከበፊቱ ለየት ባለ ሁኔታ እረፍት የማጣት/ የመቁነጥነጥ ስሜት አይሰማኝም፡፡					
22	ለነገሮች ወይም ለሰዎች ያለኝ ፍላጎት አልጠፋም፡፡					
23	ውሳኔዎች መወሰን ያስቸግረኛል፡፡					
24	ፊጽሞ የማልረባ ሰው እንደሆንኩ ይሰማኛል፡፡					

ተ.ቁ	ዝርዝር ዓ. ነገሮች	አማራጮች				
		በጣም እስማማለሁ	እስማማለሁ	አልወሰንኩም	አልስማማም	በጣም አልስማማም
25	እንደ በፊቱ በቂ አቅም እንዳለኝ ይሰማኛል፡፡					
26	ከሁልጊዜ በተለየ ያነሰ እንቅልፍ እተኛለሁ፡፡					
27	ዘወትር እነጫነጫለሁ፡፡					
28	የምግብ ፍላጎቴ ከበፊቱ በመጠኑ ቀንሷል፡፡					
29	በምንም ነገር ላይ ትኩረት ማድረግ አልችልም፡፡					
30	ከሁልጊዜ በተለየ ሁኔታ በቀላሉ ይደክመኛል /ይሰለቸኛል፡፡					

ክፍል አራት፡- የማህበራዊ ኑሮ ሁኔታ መለኪያ

መመሪያ፡- የሚከተሉት ዓ.ነገሮች ሰዎች ከሰዎች ጋር ያላቸውን የእለት ተእለት ማህበራዊ ግንኙነቶች በተመለከተ የሚያስቧቸውን፣ የሚሰሟቸውንና የሚያደርጓቸውን ነገሮች ይወክላሉ፡፡ እባክሽን/ህን እያንዳንዱን ዓ.ነገር በጥሞና ካነበብክ/ሽ በኋላ ከተሰጡት አምስት አማራጮች ውስጥ (በጣም እስማማለሁ፣ እስማማለሁ፣ አልወሰንኩም፣ አልስማማም እና በጣም አልስማማም) ስሜትሽን የሚወክለውን በመምረጥ የ‹‹✓› ምልክት አስቀምጪ/ጥ፡፡

ተ.ቁ	ዝርዝር ዓ.ነገሮች	አማራጮች				
		በጣም እስማማለሁ	እስማማለሁ	አልወሰንኩም	አልስማማም	በጣም አልስማማም
1	ከቤተሰቦቼ ጋር የቅርብ ግንኙነት እንዳለኝ ይሰማኛል፡፡					
2	ከምኖርበት ማህበረሰብ ጋር የሚያመሳስለኝ ብዙም የጋራ ነገር እንደሌለኝ ይሰማኛል፡፡					
3	ከቤተሰቦቼ ጋር ያለኝ ግንኙነት ውስን ነው፡፡					
4	ከቤተሰቦቼ ጋር ብዙም አልግባባም፡፡					
5.	ችግር በገጠመኝ ጊዜ በቅርብ ካሉ ጓደኞቼ እርዳታ የምጠይቅ አይመስለኝም፡፡					
6.	የምኖርበት ማህበረሰብ ለእኔ ብዙም የሚጨነቅ አይመስለኝም ፡፡					
7	ከጓደኞቼ ጋር መቀራረብ/ቅርብ /መሆን ፈቃዴ ነው /እፈልጋለሁ፡፡					
8	የምኖርበት ማህበረሰብ አካል የሆንኩ መስሎ ይሰማኛል፡፡					

		በጣም አስማማለሁ	አስማማለሁ	አልወሰንኩም	አልስማማም	በጣም አልስማማም
9	በምኖርበት አካባቢ ብዙ ጓደኞች የሉኝም ።					
10	ባተቸገርኩ ጊዜ ሊረዳኝ የሚችል ምንም ጎረቤት የለኝም።					
11	ጓደኞቼ በርካታ ድጋፍና እገዛ ያደርጉልኛል።					
12	ቤተሰቦቼ ለምናገረው ነገር ብዙም ትኩረት/ቦታ/ ሰጥተው አያዳምጡኝም።					
13	እኔ በምፈልገው መንገድ የሚረዱኝ በጣም ጥቂት ጓደኞቼ ብቻ ናቸው።					
14	በምኖርበት ማህበረሰብ አመለካከቴንና እምነቴን የሚረዱኝና የሚጋሩኝ ሰዎች አውቃለሁ።					
15	በደንብ ከማላውቃቸው ሰዎች ጋር ስሆን ይጨንቀኛል።					
16	በማህበራዊ ሕይወቴ ደካማ ነኝ።					
17	ከሌሎች ሰዎች መረጃ መጠየቅ አይከብደኝም።					
18	ማህበራዊ ስብስቦች/ ሰርግ ልደት ወዘተ/ አይመቹኝም።					
19	ብዙ ሰዎች በተሰበሰቡበት እራሴን/ሀሳቤን መግለጽ ይከብደኛል።					
20	ብአዳዲስ ሁኔታዎች፣ ሀፍረቴን ለማስወገድ/ለመላመድ ብዙ ግዜ አይወስድብኝም።					
21	ለኔ አዲስ ከሆኑ ሰዎች ጋር ስተዋወቅ እንደወትሮው መሆን ይከብደኛል።					
22	ትልቅ ቦታ ካላቸው/ከተከበሩ ሰዎች ጋር ሳወራ አፍራለሁ/ይጨንቀኛል።					
23	በማህበራዊ ኑሮ ችሎታዬ ምንም ጥርጥር የለኝም።					
24	ከሰው ጋር ዓይን ለዓይነን መተያየት አልችልም።					
25	ከሰዎች ጋር ስሆን ነጻነት አይሰማኝም።					
26	ከእንግዳ ሰዎች ጋር ማውራት አይከብደኝም።					
27	ከተቃራኒ ጾታ ጋር ስሆን የበለጠ አይናፋርነት ይሰማኛል።					
28	ከሌሎች ጋር በቀላሉ መተዋወቅ/መዛመድ እችላለሁ።					
29	ከሌሎች ሰዎች የመገለል/የመነጠል ስሜት ይሰማኛል።					
30	ስሜቴን ላጋራው የምችለው ሰው አለ።					
31	በፈለግኩኝ ጊዜ ከሌሎች ጋር በቀላሉ መገናኘት እችላለሁ።					
32	ከሌሎች ጋር ሆኜ ብቸኝነት ይሰማኛል።					
33	ጓደኛ የሌለኝ ብቸኛ እንደሆንኩ ይሰማኛል።					

ክፍል አምስት፡- ልጆች ስለ ጤና ችግር ያላቸው አመለካከት

መመሪያ፡- ይህ መጠይቅ ልጆች በሚጥል በሽታ መያዝን በተመለከተ የሚሰማቸውን ጥሩም ሆነ መጥፎ ስሜት(አመለካከት) የሚከተሉትን ዓ. ነገሮች በመጠቀም የሚለካ ነው፡፡ እያንዳንዱ ዓ.ነገር በጥሞና ካነበብሽ በኋላ ከተሰጡት 5 አማራጮች ውስጥ ስሜትሽን/ህን በትክክል ይገልጸዋል ያልሽውን/ከውን አማራጭ አክብቢ/ብ፡፡

ተ.ቁ	ዝርዝር ዓ.ነገሮች	አማራጮች				
1	ይህ የጤና ችግር አንተ/አንቺ ላይ መኖሩ ምን ያህል ጥሩ ወይም መጥፎ ስሜት እንዲሰማህ/ሽ አድርጎአል?	በጣም ጥሩ	በጥቂቱ ጥሩ	እርግጠኛ አይደለሁም	በጥቂቱ መጥፎ	በጣም መጥፎ
2	ይህ የጤና ችግር አንተ/አንቺ ላይ መከሰቱ (መኖሩ) ምን ያህል አግባብ ነው?	በጣም አግባብ ነው	በጥቂቱ አግባብ ነው	እርግጠኛ አይደለሁም	በጥቂቱ አግባብ አይደለም	በጣም አግባብ አይደለም
3	ይህ የጤና ችግር አንተ/አንቺ ላይ መኖሩ ምን ያህል ደስታ ወይም ሀዘን ነው?	በጣም ሀዘን ነው	በጥቂቱ ሀዘን ነው	እርግጠኛ አይደለሁም	በጥቂቱ ደስታ ነው	በጣም ደስታ ነ
4	በአንተ/በአንቺ ዓይነት የጤና ችግር መያዝ ምን ያህል ጥሩ ወይም መጥፎ ነው?	በጣም መጥፎ ነው	በጥቂቱ መጥፎ ነው	እርግጠኛ አይደለሁም	በጥቂቱ ጥሩ ነው	በጣም ጥሩ ነው
5	ምን ያህል ጊዜ በሽታው በአንተ/በአንቺ ጥፋት የተከሰተ መስሎ ይሰማሃል/ሻል?	ምንም ጊዜ	በጣም ጥቂት ጊዜ	አንዳንድ ጊዜ	ብዙ ጊዜ	በጣም ብዙ ጊዜ
6	ምን ያህል ጊዜ የጤና ችግርህ/ሽ የምትፈልገውን/ጊውን ከማድረግ ያገደህ/ሽ መስሎ ይሰማሃል/ሻል?	ምንም ጊዜ	በጣም ጥቂት ጊዜ	አንዳንድ ጊዜ	ብዙ ጊዜ	በጣም ብዙ ጊዜ
7	ምን ያህል ጊዜ ሁል ጊዜ የምትታመም/ሚ ይመስልሃል/ሻል?	ምንም ጊዜ	በጣም ጥቂት ጊዜ	አንዳንድ ጊዜ	ብዙ ጊዜ	በጣም ብዙ ጊዜ
8	ምን ያህል ጊዜ ያለብህ/ሽ የጤና ችግር አዳዲስ ነገሮችን ከመጀመር ያገደህ/ሽ መስሎ ይሰማሃል/ሻል?	ምንም ጊዜ	በጣም ጥቂት ጊዜ	አንዳንድ ጊዜ	ብዙ ጊዜ	በጣም ብዙ ጊዜ
9	ምን ያህል ጊዜ ባለብህ/ሽ የጤና ችግር የተነሳ ከሌሎች የተለየህ/ሽ መስሎ ይሰማሃል/ሻል?	ምንም ጊዜ	በጣም ጥቂት ጊዜ	አንዳንድ ጊዜ	ብዙ ጊዜ	በጣም ብዙ ጊዜ
10	በመታመምህ/ሽ የተነሳ ምን ያህል ጊዜ መጥፎ ሰሜት ይሰማሃል/ሻል?	ምንም ጊዜ	በጣም ጥቂት ጊዜ	አንዳንድ ጊዜ	ብዙ ጊዜ	በጣም ብዙ ጊዜ
11	በመታመምህ/ሽ የተነሳ ምን ያህል ጊዜ ሀዘን ይሰማሃል/ሻል?	ምንም ጊዜ	በጣም ጥቂት ጊዜ	አንዳንድ ጊዜ	ብዙ ጊዜ	በጣም ብዙ ጊዜ
12	ምንም እንኳን የጤና ችግር ቢኖርብህም/ሽም ምን ያህል ጊዜ የደስተኝነት ስሜት ይሰማሃል/ሻል?	ምንም ጊዜ	በጣም ጥቂት ጊዜ	አንዳንድ ጊዜ	ብዙ ጊዜ	በጣም ብዙ ጊዜ
13	ምንም እንኳን የጤና ችግር ቢኖርብህም/ሽም ምን ያህል ጊዜ ከሌሎች የእድሜ እኩዮችህ/ሽ ያልተናነሰ መልካም ስሜት ይሰማሃል/ሻል?	ምንም ጊዜ	በጣም ጥቂት ጊዜ	አንዳንድ ጊዜ	ብዙ ጊዜ	በጣም ብዙ ጊዜ

Appendix E

አዲስ አበባ ዩኒቨርሲቲ

የድህረ ምርቃ ፕሮግራም

የሳይኮሎጂ ትምህርት ክፍል

የስኳር በሽታ ባለባቸው ወጣቶች የሚሞላ መጠይቅ

መግቢያ፡- ይህ መጠይቅ በአዲስ አበባ ዩንቨርሲቲ በካውንስሊንግ ሳይኮሎጂ ትምህርት ዘርፍ የሚደረግ የማስትሬት ዲግሪ ማሟያ ጥናት አካል ሲሆን ዋና አላማው የስኳር በሽታ ያለባቸው ወጣቶች የሚያጋጥማቸውን ማህበራዊና ስነ ልቦናዊ ችግሮች በተመለከተ የዳሰሳ ጥናት ማድረግ ነው፡፡ በመሆኑም ይህንን መጠየቅ በመሙላት ለምታደርጉልኝ ድጋፍ በቅድሚያ እያመሰገንኩ የምትሰጡኝ መረጃ ሚስጥራዊነቱ የጠበቀ መሆኑን አረጋግጥላችኋለሁ፡፡

ክፍል አንድ፡- አጠቃላይ መረጃ

መመሪያ፡- የሚከተሉትን ጥያቄዎች በሚገባ በማንበብ እንደአስፈላጊነቱ የ‹‹✓›› ምልክት በማድረግ ወይም በባዶ ቦታዎች ላይ በመሙላት ምላሽሽን/ህን ስጪ/ጥ ፡፡

5. ዕድሜ፡- _____
6. ፆታ፡- ወንድ □ ሴት □
7. የክፍል ደረጃ፡- _____
8. የመኖሪያ ሁኔታ፡- ከእናትና ከአባት ጋር □ ከአባት ጋር ብቻ □ ከዘመድ ጋር□
   ከእናት ጋር ብቻ □ ከእህት ከወንድም ጋር □ ሌላ_____
5. የመኖሪያ አድራሻ ፡- አዲስ አበባ □ ከአዲስ አበባ ሌላ □

ክፍል ሁለት፡- ከጤና ጋር የተያያዘ መረጃ

መመሪያ፡- የሚከተሉትን ጥያቄዎች በሚገባ በማንበብ እንደ አስፈላጊነቱ የ‹‹✓›› ምልክት በማድረግ ወይም በባዶ ቦታዎች ላይ በመሙላት ምላሽሽን/ህን ስጪ/ስጥ፡፡

1. የበሽታው ምልክቶች ማየት ስትጀምሪ/ር እድሜሽ/ህ ስንት ነበረ? _____
2. ይህ በሽታ ከጀመረሽ/ህ ምን ያህል ጊዜ ሆነው ? _____
3. በበሽታው የተነሳ ባለፉት 12 ወራት ከባድ የጤና መታወክ ገጥሞሻል/ህል?
   አዎ □ አይደለም □
4. ለጥያቄ ቁጥር '3' መልስሽ/ህ አዎ ከሆነ ባለፉት 12 ወራት ከባድ የጤና መታወክ የገጠመሽ/ህ ለምን ያህል ጊዜ ነው? _____
5. በሽታውን በምን ዘዴ ለመቆጣጠር ትሞክሪያለሽ/ህ?
   በምግብ □ ኢንሱሊን በመወጋት □
   መድሃኒት በመዋጥ □ ስፖርት በመስራት □ ሌላ _____

ክፍል ሶስት፡- የሥነ ልቦና ሁኔታ መለኪያ

መመሪያ፡- የሚከተሉትን ዓ.ነገሮች ሰዎች በእለት ተእለት ህይወታቸው ሊገጥሟቸው የሚችሉ ስሜቶችን ይወክላሉ፡፡ እባክሽን/ህን እያንዳንዱን ዓ.ነገር በጥሞና ካነበብክ/ሽ በኋላ ከተሰጡት አምስት አማራጮች ውስጥ (በጣም እስማማለሁ፣ እስማማለሁ፣አልወሰንኩም፣ አልስማማም እና በጣም አልስማማም) ስሜትሽን የሚወክለውን በመምረጥ‹‹✓› ምልክት አስቀምጪ/ጥ፡፡

ተ.ቁ	ዝርዝር ዓ. ነገሮች	አማራጮች				
		በጣም እስማማለሁ	እስማማለሁ	አልወሰንኩም	አልስማማም	በጣም አልስማማም
1	በአጠቃላይ ሲታይ በራሴ ሁኔታ እርካታ ይሰማኛል፡፡					
2	አንዳንድ ጊዜ ምንም ጥሩ ጎን እንደሌለኝ አስባለሁ፡፡					
3	በርካታ ጥሩ ጎኖች እንዳሉኝ ይሰማኛል፡፡					
4	ማንኛውንም ነገር ከሌሎች ባላነሰ የማከናወን ችሎታ አለኝ፡፡					
5	ብዙም የምመካበትና የምኮራበት ነገር እንደሌለኝ ይሰማኛል፡፡					
6	አንዳንዴ ምንም ዋጋ የሌለኝና የማልጠቅም መሆኔ ይሰማኛል፡፡					
7	ከሌሎች ያላነሰ ዋጋ ያለኝ ሰው እንደሆንኩ ይሰማኛል፡፡					
8	ለራሴ ጥሩ ክብርና ዋጋ የምሰጥ ሰው ብሆን ብዬ እመኛለሁ፡፡					
9	በአጠቃላይ እራሴን ስገመግመው በህይወት ዘመኔ ብዙም ያለተሳካልኝ ሰው መሆኔ ያመዝናል፡፡					
10	ለራሴ ጥሩ አመለካከት አለኝ፡፡					
11	ሁል ጊዜም አዝናለሁ፡፡					
12	ለወደፊት ነገሮች ይስተካከሉልኛል፡፡					
13	ህይወቴ በውድቀት እንደተሞላ ይሰማኛል፡፡					
14	በፊት ያስደስቱኝ ከነበሩ ነገሮች ምንም አይነት ደስታ ማግኘት አልቻልኩም፡፡					
15	የጥፋተኝነት ስሜት አይሰማኝም፡፡					
16	በሌሎች የመቀጣት አይነት ስሜት ይሰማኛል፡፡					
17	እራሴን እጠላለሁ፡፡					
18	ከቀድሞው ለየት ባለ ሁኔታ እራሴን አልወቅስም/ አልተችም፡፡					
19	እራሴን ማጥፋት እፈልጋለሁ፡፡					
20	በትንሽ ነገር በቀላሉ አለቅሳለሁ፡፡					
21	ከበፊቱ ለየት ባለ ሁኔታ እረፍት የማጣት/ የመቁነጥነጥ ስሜት አይሰማኝም፡፡					
22	ለነገሮች ወይም ለሰዎች ያለኝ ፍላጎት አልጠፋም፡፡					
23	ውሳኔዎች መወሰን ያስቸግረኛል፡፡					
24	ፊጽሞ የማልረባ ሰው እንደሆንኩ ይሰማኛል፡፡					

.ቁ	ዝርዝር ዓ. ነገሮች	አማራጮች				
		በጣም እስማማለሁ	እስማማለሁ	አልወሰንኩም	አልስማማም	በጣም አልስማማም
5	እንደ በፊቱ በቂ አቅም እንዳለኝ ይሰማኛል፡፡					
6	ከሁልጊዜ በተለየ ያነሰ እንቅልፍ እተኛለሁ፡፡					
7	ዘወትር እነጫነጫለሁ፡፡					
8	የምግብ ፍላጎቴ ከበፊቱ በመጠኑ ቀንሷል፡፡					
9	በምንም ነገር ላይ ትኩረት ማድረግ አልችልም፡፡					
0	ከሁልጊዜ በተለየ ሁኔታ በቀላሉ ይደክመኛል /ይሰለቸኛል፡፡					

ክፍል አራት፡- የማህበራዊ ኑሮ ሁኔታ መለኪያ

መመሪያ፡- የሚከተሉት ዓ.ነገሮች ሰዎች ከሰዎች ጋር ያላቸውን የእለት ተእለት ማህበራዊ ግንኙነቶች በተመለከተ የሚያስቧቸውን፣ የሚሰሟቸውንና የሚያደርጓቸውን ነገሮች ይወክላሉ፡፡ እባክሽን/ህን እያንዳንዱን ዓ.ነገር በጥሞና ካነበብክ/ሽ በኋላ ከተሰጡት አምስት አማራጮች ውስጥ (በጣም እስማማለሁ፣ እስማማለሁ፣ አልወሰንኩም፣ አልስማማም እና በጣም አልስማማም) ስሜትሽን የሚወክለውን በመምረጥ የ‹‹✓›› ምልክት አስቀምጪ/ጥ፡፡

.	ዝርዝር ዓ.ነገሮች	አማራጮች				
		በጣም እስማማለሁ	እስማማለሁ	አልወሰንኩም	አልስማማም	በጣም አልስማማም
	ከቤተሰቦቼ ጋር የቅርብ ግንኙነት እንዳለኝ ይሰማኛል፡፡					
	ከምኖርበት ማህበረሰብ ጋር የሚያመሳስለኝ ብዙም የጋራ ነገር እንደሌለኝ ይሰማኛል፡፡					
	ከቤተሰቦቼ ጋር ያለኝ ግንኙነት ውሱን ነው፡፡					
	ከቤተሰቦቼ ጋር ብዙም አልግባባም፡፡					
	ችግር በገጠመኝ ጊዜ በቅርብ ካሉ ጓደኞቼ እርዳታ የምጠይቅ አይመስለኝም፡፡					
	የምኖርበት ማህበረሰብ ለእኔ ብዙም የሚጨነቅ አይመስለኝም ፡፡					
	ከጓደኞቼ ጋር መቀራረብ/ቅርብ /መሆን ፈቃዴ ነው /እፈልጋለሁ፡፡					
	የምኖርበት ማህበረሰብ አካል የሆንኩ መስሎ ይሰማኛል፡፡					

		በጣም አስማማለሁ	አስማማለሁ	አልወሰንኩም	አልስማማም	በጣም አልስማማም
	በምኖርበት አካባቢ ብዙ ጓደኞች የሉኝም ።					
0	በተቸገርኩ ጊዜ ሊረዳኝ የሚችል ምንም ጎረቤት የለኝም።					
1	ጓደኞቼ በርካታ ድጋፍና እገዛ ያደርጉልኛል።					
2	ቤተሰቦቼ ለምናገረው ነገር ብዙም ትኩረት/ቦታ/ ሰጥተው አያዳምጡኝም።					
3	እኔ በምፈልገው መንገድ የሚረዱኝ በጣም ጥቂት ጓደኞቼ ብቻ ናቸው።					
4	በምኖርበት ማህበረሰብ አመለካከቴንና እምነቴን የሚረዱኝና የሚጋሩኝ ሰዎች አውቃለሁ።					
5	በደንብ ከማላውቃቸው ሰዎች ጋር ስሆን ይጨንቀኛል።					
6	በማህበራዊ ሕይወቴ ደካማ ነኝ።					
7	ከሌሎች ሰዎች መረጃ መጠየቅ አይከብደኝም።					
8	ማህበራዊ ስብሰቦች/ ሰርግ ልደት ወዘተ/ አይመቹኝም።					
9	ብዙ ሰዎች በተሰበሰቡበት እራሴን/ሀሳቤን መግለጽ ይከብደኛል።					
10	በአዳዲስ ሁኔታዎች፣ ሀፍረቴን ለማስወገድ/ለመላመድ ብዙ ግዜ አይወስድብኝም።					
11	ለኔ አዲስ ከሆኑ ሰዎች ጋር ስተዋወቅ እንደወትሮው መሆን ይከብደኛል።					
12	ትልቅ ቦታ ካላቸው/ከተከበሩ ሰዎች ጋር ሳወራ አፍራለሁ/ይጨንቀኛል።					
13	በማህበራዊ ኑሮ ችሎታዬ ምንም ጥርጥር የለኝም።					
14	ከሰው ጋር ዓይን ለዓይነን መተያየት አልችልም።					
15	ከሰዎች ጋር ስሆን ነጻነት አይሰማኝም።					
16	ከእንግዳ ሰዎች ጋር ማውራት አይከብደኝም።					
17	ከተቃራኒ ጾታ ጋር ስሆን የበለጠ አይናፋርነት ይሰማኛል።					
18	ከሌሎች ጋር በቀላሉ መተዋወቅ/መዛመድ እችላለሁ።					
19	ከሌሎች ሰዎች የመገለል/የመነጠል ስሜት ይሰማኛል።					
20	ስሜቴን ላጋራው የምችለው ሰው አለ።					
21	በፈለግኩኝ ጊዜ ከሌሎች ጋር በቀላሉ መገናኘት እችላለሁ።					
22	ከሌሎች ጋር ሆኜ ብቸኝነት ይሰማኛል።					
23	ጓደኛ የሌለኝ ብቸኛ እንደሆንኩ ይሰማኛል።					

ክፍል አምስት፡- ልጆች ስለ ጤና ችግር ያላቸው አመለካከት

መመሪያ፡- ይህ መጠይቅ ልጆች በስኳር በሽታ መያዝን በተመለከተ የሚሰማቸውን ጥሩም ሆነ መጥፎ ስሜት(አመለካከት) የሚከተሉትን ዓ. ነገሮች በመጠቀም የሚለካ ነው፡፡ እያንዳንዱ ዓ.ነገር በጥሞና ካነበብሽ በኋላ ከተሰጡት 5 አማራጮች ውስጥ ስሜትሽን/ህን በትክክል ይገልጸዋል ያልሽውን/ከውን አማራጭ አክብቢ/ብ፡፡

.	ዝርዝር ዓ.ነገሮች	አማራጮች				
	ይህ የጤና ችግር አንተ/አንቺ ላይ መኖሩ ምን ያህል ጥሩ ወይም መጥፎ ስሜት እንዲሰማህ/ሽ አድርጎአል?	በጣም ጥሩ	በጥቂቱ ጥሩ	እርግጠኛ አይደለሁም	በጥቂቱ መጥፎ	በጣም መጥፎ
	ይህ የጤና ችግር አንተ/አንቺ ላይ መከሰቱ (መኖሩ) ምን ያህል አግባብ ነው?	በጣም አግባብ ነው	በጥቂቱ አግባብ ነው	እርግጠኛ አይደለሁም	በጥቂቱ አግባብ አይደለም	በጣም አግባብ አይደለም
	ይህ የጤና ችግር አንተ/አንቺ ላይ መኖሩ ምን ያህል ደስታ ወይም ሀዘን ነው?	በጣም ሀዘን ነው	በጥቂቱ ሀዘን ነው	እርግጠኛ አይደለሁም	በጥቂቱ ደስታ ነው	በጣም ደስታ ነው
	በአንተ/በአንቺ ዓይነት የጤና ችግር መያዝ ምን ያህል ጥሩ ወይም መጥፎ ነው?	በጣም መጥፎ ...	በጥቂቱ መጥፎ ነው	እርግጠኛ አይደለሁም	በጥቂቱ ጥሩ ነው	በጣም ጥሩ ነው
	ምን ያህል ጊዜ በሽታው በአንተ/በአንቺ ጥፋት የተከሰተ መስሎ ይሰማሃል/ሻል?	ምንም ጊዜ	በጣም ጥቂት ጊዜ	አንዳንድ ጊዜ	ብዙ ጊዜ	በጣም ብዙ ጊዜ
	ምን ያህል ጊዜ የጤና ችግርህ/ሽ የምትፈልገውን/ጊውን ከማድረግ ያገደህ/ሽ መስሎ ይሰማሃል/ሻል?	ምንም ጊዜ	በጣም ጥቂት ጊዜ	አንዳንድ ጊዜ	ብዙ ጊዜ	በጣም ብዙ ጊዜ
	ምን ያህል ጊዜ ሁል ጊዜ የምትታመም/ሚ ይመስልሃል/ሻል?	ምንም ጊዜ	በጣም ጥቂት ጊዜ	አንዳንድ ጊዜ	ብዙ ጊዜ	በጣም ብዙ ጊዜ
	ምን ያህል ጊዜ ያለብህ/ሽ የጤና ችግር አዳዲስ ነገሮችን ከመጀመር ያገደህ/ሽ መስሎ ይሰማሃል/ሻል?	ምንም ጊዜ	በጣም ጥቂት ጊዜ	አንዳንድ ጊዜ	ብዙ ጊዜ	በጣም ብዙ ጊዜ
	ምን ያህል ጊዜ ባለብህ/ሽ የጤና ችግር የተነሳ ከሌሎች የተለየህ/ሽ መስሎ ይሰማሃል/ሻል?	ምንም ጊዜ	በጣም ጥቂት ጊዜ	አንዳንድ ጊዜ	ብዙ ጊዜ	በጣም ብዙ ጊዜ
0	በመታመምህ/ሽ የተነሳ ምን ያህል ጊዜ መጥፎ ሰሜት ይሰማሃል/ሻል?	ምንም ጊዜ	በጣም ጥቂት ጊዜ	አንዳንድ ጊዜ	ብዙ ጊዜ	በጣም ብዙ ጊዜ
1	በመታመምህ/ሽ የተነሳ ምን ያህል ጊዜ ሀዘን ይሰማሃል/ሻል?	ምንም ጊዜ	በጣም ጥቂት ጊዜ	አንዳንድ ጊዜ	ብዙ ጊዜ	በጣም ብዙ ጊዜ
2	ምንም እንኳን የጤና ችግር ቢኖርብህም/ሽም ምን ያህል ጊዜ የደስተኝነት ስሜት ይሰማሃል/ሻል?	ምንም ጊዜ	በጣም ጥቂት ጊዜ	አንዳንድ ጊዜ	ብዙ ጊዜ	በጣም ብዙ ጊዜ
3	ምንም እንኳን የጤና ችግር ቢኖርብህም/ሽም ምን ያህል ጊዜ ከሌሎች የእድሜ እኩዮችህ/ሽ ያልተናነሰ መልካም ስሜት ይሰማሃል/ሻል?	ምንም ጊዜ	በጣም ጥቂት ጊዜ	አንዳንድ ጊዜ	ብዙ ጊዜ	በጣም ብዙ ጊዜ

Appendix F

አዲስ አበባ ዩኒቨርሲቲ

የድህረ ምርቃ ፕሮግራም

የሳይኮሎጂ ትምህርት ክፍል

በወጣቶች የሚሞላ መጠይቅ

መግቢያ፡- ይህ መጠይቅ በአዲስ አበባ ዩኒቨርሲቲ በካውንስሊንግ ሳይኮሎጂ ትምህርት ዘርፍ የሚደረግ የማስትሬት ዲግሪ ማሟያ ጥናት አካል ሲሆን አላማው ወጣቶች የሚያጋጥማቸውን ማህበራዊና ስነ ልቦናዊ ችግሮች በተመለከተ የዳሰሳ ጥናት ማድረግ ነው፡፡ በመሆኑም ይህንን መጠየቅ በመሙላት ለምታደርጉልኝ ድጋፍ በቅድሚያ እያመሰገንኩ የምትሰጡኝ መረጃ ሚስጥራዊነቱ የተጠበቀ መሆኑን አረጋግጥላችኋለሁ፡፡

ክፍል አንድ፡- አጠቃላይ እና ከጤና ጋር የተያያዘ መረጃ

መመሪያ፡- የሚከተሉትን ጥያቄዎች በሚገባ በማንበብ እንደአስፈላጊነቱ የ‹‹✓›› ምልክት በማድረግ ወይም በባዶ ቦታዎች ላይ መሙላት ምላሽሽን/ህን ስጪ/ጥ ፡፡

1. ዕድሜ፡- _____

2. ፆታ ፡- ወንድ ☐ ሴት ☐

3. የክፍል ደረጃ፡- _____

4. የመኖሪያ ሁኔታ፡-

   ከእናትና ከአባት ጋር ☐ ከአባት ጋር ብቻ ☐ ከዘመድ ጋር☐

   ከእናት ጋር ብቻ ☐ ከእህት ከወንድም ጋር ☐ ሌላ_____

6. ከዚህ በፊት በሽታ ገጥሞሽ/ህ ያውቃል?

   አዎ በሽታ ገጥሞኝ ያውቃል ☐ በፍጹም በሽታ ገጥሞኝ አያውቅም ☐

7. ለጥያቄ ቁጥር '5' መልስሽ/ህ 'አዎ ከዚህ በፊት በሽታ ገጥሞኝ ያውቃል' ከሆነ፣

ሀ. የገጠመሽን/ህን በሽታ(ዎች) ብትዘረዝሪ(ር)

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ለ. ከላይ (ለጥያቄ ቁጥር ሀ) ከጠቀስሻቸው/ካቸው በሽታዎች መካከል በጠና የታመምሽው/ከው በየትኛው/ኞቹ ነው?

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ሐ. ከላይ (ለጥያቄ ቁጥር ሀ) ከጠቀስሻቸው/ካቸው በሽታዎች መካከል በአነፃራዊነት ለረጅም ጊዜ የታመምሽው/ከው በየትኛው ነው?

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መ. ከላይ (ለጥያቄ ቁጥር ሐ) በጠቀስሽው/ከው በሽታ ሳቢያ ለምን ያህል ጊዜ ታመምሽ/ክ ?

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ክፍል ሁለት፡- የሥነ ልቦና ሁኔታ መለኪያ

መመሪያ፡- የሚከተሉትን ዓ.ነገሮች ሰዎች በእለት ተእለት ህይወታቸው ሊገጥሟቸው የሚችሉ ስሜቶችን ይወክላሉ፡፡ እባክሽን/ህን እያንዳንዱን ዓ.ነገር በጥሞና ካነበብክ/ሽ በኋላ ከተሰጡት አምስት አማራጮች ውስጥ (በጣም እስማማለሁ፣ እስማማለሁ፣አልወሰንኩም፣ አልስማማም እና በጣም አልስማማም) ስሜትሽን የሚወክለውን በመምረጥ‹‹✓› ምልክት አስቀምጪ/ጥ፡፡

.ቁ	ዝርዝር ዓ. ነገሮች	አማራጮች				
		በጣም እስማማለሁ	እስማማለሁ	አልወሰንኩም	አልስማማም	በጣም አልስማማም
	በአጠቃላይ ሲታይ በራሴ ሁኔታ እርካታ ይሰማኛል፡፡					
	አንዳንድ ጊዜ ምንም ጥሩ ጎን እንደሌለኝ አስባለሁ፡፡					
	በርካታ ጥሩ ጎኖች እንዳሉኝ ይሰማኛል፡፡					
	ማንኛውንም ነገር ከሌሎች ባላነሰ የማከናወን ችሎታ አለኝ፡፡					
	ብዙም የምመካበትና የምኮራበት ነገር እንደሌለኝ ይሰማኛል፡፡					
	አንዳንዴ ምንም ዋጋ የሌለኝና የማልጠቅም መሆኔ ይሰማኛል፡፡					
	ከሌሎች ያላነሰ ዋጋ ያለኝ ሰው እንደሆንኩ ይሰማኛል፡፡					
	ለራሴ ጥሩ ክብርና ዋጋ የምሰጥ ሰው ብሆን ብዬ እመኛለሁ፡፡					
	በአጠቃላይ እራሴን ስገመግመው በህይወት ዘመኔ ብዙም ያለተሳካልኝ ሰው መሆኔ ያመዝናል፡፡					
0	ለራሴ ጥሩ አመለካከት አለኝ፡፡					
1	ሁል ጊዜም አዝናለሁ፡፡					
2	ለወደፊት ነገሮች ይስተካከሉልኛል፡፡					
3	ህይወቴ በውድቀት እንደተሞላ ይሰማኛል፡፡					
4	በፊት ያስደስቱኝ ከነበሩ ነገሮች ምንም አይነት ደስታ ማግኘት አልቻልኩም፡፡					
5	የጥፋተኝነት ስሜት አይሰማኝም፡፡					
6	በሌሎች የመቀጣት አይነት ስሜት ይሰማኛል፡፡					
7	እራሴን እጠላለሁ፡፡					
8	ከቀድሞው ለየት ባለ ሁኔታ እራሴን አልወቅስም/ አልተችም፡፡					
9	እራሴን ማጥፋት እፈልጋለሁ፡፡					
0	በትንሽ ነገር በቀላሉ አለቅሳለሁ፡፡					
1	ከበፊቱ ለየት ባለ ሁኔታ እረፍት የማጣት/ የመቁነጥነጥ ስሜት አይሰማኝም፡፡					
2	ለነገሮች ወይም ለሰዎች ያለኝ ፍላጎት አልጠፋም፡፡					
3	ውሳኔዎች መወሰን ያስቸግረኛል፡፡					
4	ፊጽሞ የማልረባ ሰው እንደሆንኩ ይሰማኛል፡፡					

.ቁ	ዝርዝር ዓ. ነገሮች	አማራጮች				
		በጣም እስማማለሁ	እስማማለሁ	አልወሰንኩም	አልስማማም	በጣም አልስማማም
5	እንደ በፊቱ በቂ አቅም እንዳለኝ ይሰማኛል፡፡					
6	ከሁልጊዜ በተለየ ያነሰ እንቅልፍ እተኛለሁ፡፡					
7	ዘወትር እነጫነጫለሁ፡፡					
8	የምግብ ፍላጎቴ ከበፊቱ በመጠኑ ቀንሷል፡፡					
9	በምንም ነገር ላይ ትኩረት ማድረግ አልችልም፡፡					
0	ከሁልጊዜ በተለየ ሁኔታ በቀላሉ ይደክመኛል /ይሰለቸኛል፡፡					

ክፍል ሶስት፡- የማህበራዊ ኑሮ ሁኔታ መለኪያ

መመሪያ፡- የሚከተሉት ዓ.ነገሮች ሰዎች ከሰዎች ጋር ያላቸውን የእለት ተእለት ማህበራዊ ግንኙነቶች በተመለከተ የሚያስቧቸውን፣ የሚሰሟቸውንና የሚያደርጓቸውን ነገሮች ይወክላሉ፡፡ እባክሽን/ህን እያንዳንዱን ዓ.ነገር በጥሞና ካነበብክ/ሽ በኋላ ከተሰጡት አምስት አማራጮች ውስጥ (በጣም እስማማለሁ፣ እስማማለሁ፣ አልወሰንኩም፣ አልስማማም እና በጣም አልስማማም) ስሜትሽን የሚወክለውን በመምረጥ የ‹‹✓›› ምልክት አስቀምጪ/ጥ፡፡

.	ዝርዝር ዓ.ነገሮች	አማራጮች				
		በጣም እስማማለሁ	እስማማለሁ	አልወሰንኩም	አልስማማም	በጣም አልስማማም
	ከቤተሰቦቼ ጋር የቅርብ ግንኙነት እንዳለኝ ይሰማኛል፡፡					
	ከምኖርበት ማህበረሰብ ጋር የሚያመሳስለኝ ብዙም የጋራ ነገር እንደሌለኝ ይሰማኛል፡፡					
	ከቤተሰቦቼ ጋር ያለኝ ግንኙነት ውሱን ነው፡፡					
	ከቤተሰቦቼ ጋር ብዙም አልግባባም፡፡					
	ችግር በገጠመኝ ጊዜ በቅርብ ካሉ ጓደኞቼ እርዳታ የምጠይቅ አይመስለኝም፡፡					
	የምኖርበት ማህበረሰብ ለእኔ ብዙም የሚጨነቅ አይመስለኝም ፡፡					
	ከጓደኞቼ ጋር መቀራረብ/ቅርብ /መሆን ፈታኝ ነው /እፈልጋለሁ፡፡					
	የምኖርበት ማህበረሰብ አካል የሆንኩ መስሎ ይሰማኛል፡፡					

		በጣም አስማማለሁ	አስማማለሁ	አልወሰንኩም	አልስማማም	በጣም አልስማማም
	በምኖርበት አካባቢ ብዙ ጓደኞች የሉኝም ።					
0	በተቸገርኩ ጊዜ ሊረዳኝ የሚችል ምንም ጎረቤት የለኝም።					
1	ጓደኞቼ በርካታ ድጋፍና እገዛ ያደርጉልኛል።					
2	ቤተሰቦቼ ለምናገረው ነገር ብዙም ትኩረት/ቦታ/ ሰጥተው አያዳምጡኝም።					
3	እኔ በምፈልገው መንገድ የሚረዱኝ በጣም ጥቂት ጓደኞቼ ብቻ ናቸው።					
4	በምኖርበት ማህበረሰብ አመለካከቴንና እምነቴን የሚረዱኝና የሚጋሩኝ ሰዎች አውቃለሁ።					
5	በደንብ ከማላውቃቸው ሰዎች ጋር ስሆን ይጨንቀኛል።					
6	በማህበራዊ ሕይወቴ ደካማ ነኝ።					
7	ከሌሎች ሰዎች መረጃ መጠየቅ አይከብደኝም።					
8	ማህበራዊ ስብሰቦች/ ሰርግ ልደት ወዘተ/ አይመቹኝም።					
9	ብዙ ሰዎች በተሰበሰቡበት እራሴን/ሀሳቤን መግለጽ ይከብደኛል።					
0	በአዳዲስ ሁኔታዎች፣ ሀፍረቴን ለማስወገድ/ለመላመድ ብዙ ግዜ አይወስድብኝም።					
1	ለኔ አዲስ ከሆኑ ሰዎች ጋር ስተዋወቅ እንደወትሮው መሆን ይከብደኛል።					
2	ትልቅ ቦታ ካላቸው/ከተከበሩ ሰዎች ጋር ሳወራ አፍራለሁ/ይጨንቀኛል።					
3	በማህበራዊ ኑሮ ችሎታዬ ምንም ጥርጥር የለኝም።					
4	ከሰው ጋር ዓይን ለዓይነን መተያየት አልችልም።					
5	ከሰዎች ጋር ስሆን ነጻነት አይሰማኝም።					
6	ከእንግዳ ሰዎች ጋር ማውራት አይከብደኝም።					
7	ከተቃራኒ ጾታ ጋር ስሆን የበለጠ አይናፋርነት ይሰማኛል።					
8	ኮሌሎች ጋር በቀላሉ መተዋወቅ/መዛመድ እችላለሁ።					
9	ከሌሎች ሰዎች የመገለል/የመነጠል ስሜት ይሰማኛል።					
0	ስሜቴን ላጋራው የምችለው ሰው አለ።					
1	በፈለግኩኝ ጊዜ ከሌሎች ጋር በቀላሉ መገናኘት እችላለሁ።					
2	ከሌሎች ጋር ሆኜ ብቸኝነት ይሰማኛል።					
3	ጓደኛ የሌለኝ ብቸኛ እንደሆንኩ ይሰማኛል።					

Declaration

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

Name: Mignot Bekele

Signature: _____

Place: Addis Ababa University

Date of submission: June 17, 2009

I, the undersigned, declare that this thesis has been submitted for examination with my approval as a University Advisor.

Name: Sintayehu Tadesse (PhD)

Signature: _____

Place: Addis Ababa University

Date: _____