ADDIS ABABA UNIVERSITY

COLLEGE OF HEALTH SCIENCE

SCHOOL OF PUBLIC HEALTH

ASSESSMENT OF QUALITY OF LIFE AMONG CHILDREN WITH EPILEPSY AND ASSOCIATED FACTORS IN GOVERNMENTAL HOSPITALS OF ADDIS ABABA, ETHIOPIA

BY SAMUEL HAILU

A THESIS SUBMITTED TO THE SCHOOL OF PUBLIC HEALTH ADDIS ABABA UNIVERSITY FOR THE PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTERS OF PUBLIC HEALTH IN THE SCHOOL OF PUBLIC HEALTH, COLLEGE OF HEALTH SCIENCES OF ADDIS ABABA UNIVERSITY

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ADVISOR: - WUBEGZIER MEKONNEN (PhD)

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Declaration

I Samuel Hailu do hereby declare that this thesis titled the assessment of quality of life among children with epilepsy and associated factors in governmental hospitals of Addis Ababa, Ethiopia. A facility-based cross-sectional study is my original work and that all sources of materials used for this thesis have been duly acknowledged. This work has not been submitted partially, or in full, by any other person for an award of a degree in any other university or institution and I carried out the study under the guidance and supervision of Wubegzier Mekonnen (PhD). The assistance and help received during the course of this investigation have been duly acknowledged.

Samuel Hailu Signature……………. Date…………………

The thesis has been submitted for examination with my approval as an advisor.

Wubegzier Mekonnen (PhD) Signature……………...Date…………………

Approved by Examining Board

The undersigned certify that we have read this thesis “the assessment of quality of life among children with epilepsy and associated factors in governmental hospitals of Addis Ababa, Ethiopia. A facility-based cross-sectional study” and hereby recommend to school of public health to consider it as a partial fulfillment of the requirements for the award of a Master of Public Health.

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Chairman, Graduate committee	**Signature**
Dr. Wubegzier Mekonnen	-------------------------------
Advisor	**Signature**
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Internal Examiner	**Signature**
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External Examiner	**Signature**

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Special thanks go to my friend and colleague Dawit Abebe, who has helped me out of many in a precarious situation.

Abbreviation and Acronyms

AAU	Addis Ababa University
AEDs	Anti Epileptic Drugs
ANOVA	Analysis of Variance
APSI	Adolescence Psychosocial Seizure Inventory
CDC	Centers for Disease Control
CI	Confidence Interval
CSA	Central Statistics Agency
CSP	Child Seizure Profile
ETB	Ethiopian Birr
HRQOL	Health-Related Quality Of Life
LAC	Latin America and Caribbean
LMIC	Low and Middle Income Countries
MOH	Minister Of Health
OR	Odds Ratio
PAHO	Pan American Health Organization
PAQ-A	Physical Activity Questionnaire for Adolescents
PHB	Phenobarbital
PWE	People With Epilepsy
QOL	Quality Of Life
QOLIE-CH	Quality Of Life Children
SD	Standard Deviation
SDGs	Sustainable Development Goals
SRS	Simple Random Sampling
UNICEF	United Nations International Children's Emergency Fund
VIF	Variance Inflation Factor
WHO	World Health Organization
WHOQOL	World Health Organization Quality Of Life
WPSI	Washington Psychosocial Seizure Inventory

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Abstract

Background: Quality of life (QOL) is increasingly recognized as an important patient-reported outcome in health care research. However, the use is still restricted. Epilepsy impact was far more frequently evaluated considering QOL but only focused on adult patients so this research focused on children.

Objective: To assess the quality of life among children between (7-18) with epilepsy and associated factors in governmental Hospitals in Addis Ababa, Ethiopia 2021.

Methods: A facility-based cross-sectional study design was employed and data was collected from 564 children using a face-to-face interview in Addis Ababa from November 2020 to January 2021 selected using multi-stage sampling method. Probability proportionate to size technique was applied to select children from each hospital. The data was cleaned, entered through EPI-INFO 3.1and exported to STATA version 15.0 for analysis. Frequency distributions of variables were tabulated. The raw numbers of the five-point Likert scale for QOLIE-CH-48 domain scores were converted into a 0-100-point response scale, with higher scores indicating better QOL.ANOVA was used to assess the relationship between quality of life and the independent variables. Multiple linear regression was conducted to identify factors predicting quality of life. The threshold for statistical significance was $p<0.05$.

Result: -A total of 564 children participated with a response rate of 94.1%. The mean score of quality of life was 60.18±8.68 (95% CI: 59.05, 61.23). Self-depression (P= 0.0094 F=3.39), number of anti-epileptic drug (AED) (P=0.0021 F=4.97), types of seizure (P= 0.000, F=52.26) were statistically significant predictors of QOL.A score in quality of life increased by 5.03 for every unit increase in a score of seizure frequency per week with (β= 5.0395% CI:0.4 - 0.9).Quality of life of epileptic patients increased by 0.19 and 1.99 in every unit increase in a score of stigma and anxiety (β= 0.1995% CI: (-0.1 - 0.1) and(β=1.99, 95%CI: 0.007- 1.03) respectively.

Conclusion: -The quality of life among children with epilepsy was low. Stigma, seizure, depression and anxiety, and AED side effects were statically significant for quality of life. Implementing interventions that focus on early detection like self depression and stigma in children with epilepsy should be of great concern for healthcare providers.

Keywords: -epilepsy, quality of life, children, Addis Ababa, hospitals

1. Introduction

1.1.Background

Epilepsy is a neurological disorder characterized by a patient's proclivity for epileptic seizures as well as the neurobiological, cognitive, cerebral, and social consequences (1).Epilepsy is a common neurological condition that affects people of all ages, races, genders, and socioeconomic backgrounds, implying that epilepsy affects everyone (1).

Pediatric epilepsy is a complex neurological condition characterized by a wide range of unanticipated, episodic, and habitual seizures, as well as experimental, cerebral, behavioral, educational, and social challenges. As a result, epilepsy in children affects every aspect of their lives (2) (3).

On the other way emotional domain focuses on stress, worry and other psychological states. And the last one is social portion of quality of life which is social functioning and support from the other (4). Children's QOL is a distinct construct, with important factors similar as development, closeness, and fornication added to its evaluation (4).

Approximately 80% of epileptics live in low- and middle-income countries, with treatment gaps ranging from 75% in low-income countries to 50% in middle-income countries. As a result, the Sustainable Development Goals (SDGs) were established, with the goal to achieve global profitable, social and environmentally sustainable developments by 2030 won't be realized without investment in physical and internal health for all people, including those living with epilepsy (5).

In Latin America and Caribbean countries (LAC) there's no affiliated health program and legislation for epilepsy care according to Pan America Health Organization report (PAHO) (6). As a result, people with epilepsy's mortal and civil rights are constantly violated, discerned against, and negatively impact their quality of life. This thing worsens on children. Health policymakers and croakers need information on the quality of life of children with epilepsy in order to identify and apply intervention programs to ameliorate their quality of life.

1.2.Statements of the problem

Epilepsy is a neurological condition that affects numerous children and adolescents. It affects roughly 50 million people worldwide and contributes significantly to the global complaint burden. Epilepsy strikes 3% of the population at some point in their lives, with more than half of cases starting in nonage. It is most common in children, counting for 60% of cases and the maturity of clinically significant aspects of the complaint. The maturity of children with epilepsy lives in low and middle-income countries, counting for 80% of the aggregate (LMIC). Children's conditions are the leading cause of epilepsy in Africa, especially in the first many times of life. Studies reporting on the burden of epilepsy in African children range between 7.3 per 1,000 in South Africa and 41 per 1,000 in Kenya (7). The prevalence of epilepsy in Ethiopia was reported as 5.2/1000 population. The incidence was 64/100,000 population as reported in a community-based study conducted in Mescal and Marko districts of rural central Ethiopia (8)

Epilepsy initiated during childhood deserves special attention because it may be regarded as a real threat factor for emotional and behavioral problems, performing in a drop in QOL in after times. For children, the fact of knowing they have epilepsy is a strong detector of cerebral and social problems (8); this leads to significant changes in the existent's life and his family's, not only in physical but also in social and psychological aspects (9).

The previous medical approach to the care and treatment of children with epilepsy has nearly entirely concentrated on aspects such as seizure frequency and severity, as well as the effect of the drug (9). To ensure that the child's and family's perspectives on the impact and burden of epilepsy are included and directly measured, Only in completely comprehending the impact of epilepsy can effective interventions and operation strategies be developed. Despite the fact, the quantities of studies on the effect of this complaint on life of children have been veritably limited in Ethiopia and also substantially concentrated on adult cases.

So, this study will assess the quality of life among children with epilepsy to fill this gap. It also tries to correlate QOL to the main characteristics of epilepsy, hypothesizing that the social and personal effects of childhood-onset epilepsy differ in relation to the type and severity of the disease; culture and values, and possibly the duration of the disorder.

1.3 Rationale of Study

Children with epilepsy are a high- threat group and are in a critical experimental period during which numerous cognitive and social chops must be learned, quality of life is an especially important health outgrowth to assess. Lack of medical services, unavailability of antiepileptic medications, and lack of awareness of medical treatment are all common circumstances in Ethiopia, as are artistic factors (10). Despite its significance, there's a failure of exploration on the quality of life of children with epilepsy in developing countries, particularly Ethiopia. In order to give a foundation for a comprehensive treatment program for children with epilepsy, this study will use an epilepsy-specific instrument to assess the quality of life of children with epilepsy. According to one of the crucial recommendations of the child health strategic review, the WHO and UNICEF, Children who are mentally healthy can achieve and maintain psychological and social functioning and well-being. They have a strong sense of self-worth, healthy family and peer connections, the capability to work and learn, and the capability to overcome experimental obstacles and use artistic coffers to maximize growth. Likewise, the internal health of children and adolescents is critical for their active participation in social and profitable conditioning (11)

1.4 Significance of the study

This study was providing adequate information on quality of life of children with epilepsy in Addis Ababa. The finding from this study was indicating the way the health system is undertaken.

2. Literature Review

2.1 Definition of concepts

Quality of life, according to medical definitions is an assessment of an existent's well- being or lack thereof in the face of diurnal life challenges, which includes all emotional, social, and physical aspects. (4)

Quality of life, according to medical definitions is an assessment of an existent's well- being or lack thereof in the face of diurnal life challenges, which includes all emotional, social, and physical aspects. Physical pain perception, fatigue, sleep, diurnal conditioning, treatment reliance, and work capacity are all covered in the physical section (3).

The QOL rating relies on the cultural, ethnic and country economic system and consequently in all likelihood to range from country to country. Several researches have seemed at the relative contributions of physical and psychosocial functioning, seizure-related factors, and qualities of lifestyles in epilepsy patients (4).

Epilepsy may occur as a result of a genetic disorder or an acquired brain injury, such as a trauma or stroke. This is a talent disease in which a man or woman suffers from recurrent seizures. Seizures are delivered by changes in the brain's electrical and chemical activity. Epilepsy in kids motives a child to have seizures (11).

Children with epilepsy frequently trip adjustments in their quality of life such as much less mobility (12).

However, the majority of seizures in teenagers have no recognized etiology. Brain tumors or cysts, as properly as degenerative illnesses, are much less frequent reasons of childhood epilepsy. Seizures can be brought about by means of strange Genius improvement and/or Genius injuries, infection, inflammation, or unique gene mutations. Symptomatic epilepsy refers to all instances of epilepsy with an acknowledged cause. However, cause is no longer constantly convenient to discover and stays unknown (13). A National Mental Health Strategy is critical to the development of Ethiopia’s health system. Mental health is an integral component of any efficient, well-functioning structure of health care. The strategy not only for the chronically mentally ill – who often represent a small part of a population – but also for the many people who suffer from common mental disorders and substance abuse. (8)

The goal of this strategy is therefore to address the mental health needs of all Ethiopians through quality, culturally competent, evidence-based, equitable and cost-effective care. These core components, along with accessibility, the need to protect human rights, efficiency sustainability, and community involvement and participation, are the principles and values from which this strategy was developed. (8)

2.2 Measurement of quality of life among children with epilepsy

There are a number of huge classes of quality-of-life measures. There are generic measures for evaluating health-related quality of life in any team of patients, as nicely as disease-specific measures for evaluating health-related quality of life in precise sickness groups; individualized measures, which permit the inclusion of components of existence that, a reviewed to be important with the aid of individual patients (14).

The QOL covers 3 distinctive associated elements of pleasant of existence which are physical, psychological, and social. The physiological overall performance of the physique and one's understanding of one's skills are described as Physical dimensions. The psychological dimension consists of a person's stability and concord with himself and others. The social dimension has centered on the individual's capacity to talk with others and also environmental fitness has targeted the individual's potential to work out and operates each day things to do that are visible, whilst social fitness (15).

2.2.1 Magnitude of epilepsy in children

Epilepsy starts evolving in childhood in 60% of instances and most of the clinically considerable factors of the disease take place at some stage in childhood (16). The incidence of epilepsy is greater in the youngest and oldest age-groups, with estimates of 86 per 100,000 per year in to minimize to about 23–31 per 100,000 in humans aged 30–59 years, and a subsequent make bigger up to one hundred eighty per 100,000 in the over 85 age-group. In children, the incidence of epilepsy is easiest in the first 12 months of lifestyle and declines to grownup tiers by way of the quit of 10 years of age (16).

In Africa, most human beings with epilepsy go through childhood diseases, mainly in the course of the first few years of life. Studies reporting on the burden of epilepsy in African youngsters vary between 7.3 per 1,000 in South Africa and 41 per 1,000 in Kenya (7).

2.2.2 Magnitude of quality of life of children with epilepsy

A cross-sectional study done in Uganda showed the overall QOL mean score was as low as 58 (SD = 13; 95% CI: 56–60) and a median of 58 from a total of 100. The averages of the different QOL subscale scores ranged from 41 to 65, with physical functioning and emotional well-being mean scores below 50 (17).

Disturbed behavior used to be located to be significantly more frequent in young people with energetic epilepsy than in teenagers except for the disease in Tanzanian and Kenyan research(66 vs. 19%; odds ratio [OR] 8·2, 95% CI 4·3–15·6; p<0·001),and children with active epilepsy had greater behavioral issues than did these with inactive epilepsy (49% vs. 26%; OR 7·86, 95% CI 1·23–50·06; p=0·029) (18). Although effective antiepileptic drugs are an available, a vast therapy gap is evident in developing courtiers, due to the fact human and financial sources for analysis and therapy are constrained and misconceptions stigma surrounds the disease (18).

In Ethiopia, a cross-sectional study done in Wollega zone showed the overall mean total score on the World Health Organization Quality of Life QOL scale was 60.47 with ± 23.07 SD. The mean quality of life of patients living with epilepsy in this study was low (10). A cross-sectional study done in Mekele showed that the correlation between complete rating and QOL sub scales was once described. Total quality of life showed a significant correlation with a number of seizures (19).

2.3 Factors associated with quality of life of children with epilepsy

Factors affecting the quality of life in childhood epilepsy include the age of onset of epilepsy, severity and frequency of seizures, duration of disease, and stigma and psychosocial impact of epilepsy, Anti Epileptic Drugs (AEDs) may also have an impact on the child's well-being and daily functioning.

In a study done in Wollega, Ethiopia among adult epileptic patients the mean score for physical dimension, psychological, social dimension and environment dimensions are 17.89± 6.5 SD, 15.33±6.17 SD, 7.69±3.24 SD, 19.56±7.23 SD respectively. So, based on the above-related domain this study will assess quality of life of children with epilepsy. (10)

2.3.1 Seizure frequency and severity

A seizure is a temporary disruption in normal electrical intelligence venture that causes changes in awareness, perception, behavior, or movement. Seizures can have an impact on people of all ages; alternatively they are larger than usual in children. Outcomes associated with single or recurring seizures in children vary with the resource of seizure sort and extra than one hazard factors (age, illness, family history, and family context (20)

According to CDC Overall, 0.7% of young adults and young adults had been stated to have had at least one seizure for the length of the preceding year. Compared with youngsters and early life barring seizures, an increased percentage of these with seizures had been socially and economically disadvantaged. (21)

Co-occurring stipulations had been commonly higher frequently stated with the resource of dad and mother of children and adolescents with seizures than by using the use of these barring seizures (21). Children with seizures had higher reported prevalence of mental or developmental co-occurring conditions than did children without seizures (21).

In China study about patients with generalized seizures or every seizure sorts exhibited limit scores in seizure worry than these struggling from partial seizures. Beyond that, the effects printed no correlation between QOL rankings and seizure frequency (22).

According to Nigerian locate out people with epilepsy (PWE) who had uncontrolled seizures had poorer QOL scores in domains as properly as in typical QOL and this affiliation used to be particularly significantly associated for psychological nicely being and for total QOL. Seizure severity is noted to be an inverse predictor of QOL in PWE. And also, psychological wellbeing correlated negatively with duration of seizures (23).

A cross-sectional study out about done in Uganda validated type of seizures used to be as soon as located to have an association in three personality domains especially physical, social, and cognition domains of QOL of subjects. Subjects with generalized seizures had reduce propose scores in the physical, social, and cognitive domains (24.77 4.11, 22.64 3.88, and 23.48 4.09, respectively) (25). Furthermore, seizure frequency was found to have a negative impact on the cognitive domain but no link to the overall QOL of study participants. It shows higher episodes of seizure will have a lower QOL score on cognitive domain. (24)

2.3.2 Stigma and Psychosocial Impact of Epilepsy

PWE can additionally be stigmatized and marginalized in society, which has a psychosocial impact. PWE and their households face immoderate costs of stigma in China, in accordance with lookup (22). According to a PWE survey in China, one-third of Chinese with epilepsy think about they are treated differently with the useful resource of others due to the truth of their condition, and half of those with epilepsy pick out to keep their circumstance hidden. (22).

In East and South-central Africa, younger humans with epilepsy often are prevented from attending school due to stigma. The epileptic infant may additionally moreover be shunned from house hold meals. Stigma creates an environment that leads to few or no childhood pals or plays

(25). As a stop end result of widespread misconceptions about epilepsy etiologies and transmissibility, PWE frequently faces rejection and isolation.

In fact, psychosocial factors associated with epilepsy stigma have a large have an effect on PWE's quality of existence than scientific variables such as medicinal drug side effects (26). The elements contributing to felt stigma fluctuate via way of region and culture, then again these often referred to embody seizure worry, lack of social support, and seizure severity (14). Family contributors and shut supporters of PWE moreover document immoderate levels of stigma (26). Increased tiers of felt and enacted stigma are associated with reduced levels of education, limited socioeconomic status, minorities, and these with less publicity to PWE (25). The researchers moreover discovered that a trip of stigma is strongly linked to one's great of life. Stigma, in any form, restricts a man or lady with epilepsy's personal, educational, and social opportunities, lowering the quality of existence for every individual with epilepsy and his or her family members.

Research about carried out in Ethiopia posted that 60% of the discovered persons confronted different problems due to their health problem such as stigma (24%), in particular in northwest Ethiopia the prevalence of perceived stigma used to be decided to be 71.6% related with epilepsy (19).

2.3.3 Anti-epileptic drugs effect

The intention of treatment is to get lower back to an ordinary existence with whole seizure manipulate the utilization of entirely one anti-epileptic drug (AED). When in distinction to treatment with greater AEDs, mono therapy is recommended due to the truth it has fewer destructive drug effects, no drug-drug interactions, better compliance, and limited prices (27).

Studies in developed worldwide areas with sufficient sources for therapy have then again proven that 17-40 percent of youngsters do no longer reply to the first drug used and might also moreover require extra than one AEDs (27).

In the Ugandan study, AEDs side effects and site had been notably related to mental and social functioning. Poly therapy, AEDs side consequences and Site are significant. On the different hand, hospital and AED side effects had been appreciably related to bodily and emotional wellbeing (17).

In Amanuel specialized hospital study, Phenobarbital (PHB) used to be the most often prescribed drug ever as mono therapy. PHB appears to be the most often used drug in Ethiopia, as various local lookup produced a share ranging from fifty 5 to 92.8%. (28).

Physical functioning and emotional well-being rankings are the most affected QOL domains despite PWEs being on AEDs. This is perhaps because, in spite of diminished seizure frequency, many physical matters to do are typically restrained for fear of seizure occurrence (28).

2.3.4 Age-related effect

The doable impact of age-related factors, which includes age, age at onset of seizures, and duration, on QOL of sufferers with epilepsy is a source of conceptual and methodological concern. Potential pastime lies in the assessment of the impartial contribution of every one of these elements on QOL, as properly as of their joint effect.

In person patients, on the grounds that various epilepsies begin early in life, a longer length of the sickness is heavily confounded via ageing, which itself is related to cognitive decline and poor QOL (29).

Early age at onset of epilepsy or childhood-onset epilepsy was once some other appreciably associated with greater seizure frequency that additionally subsequently impaired QOL amongst children. In Kenyan study additionally, early-stage incidences have an effect on seizure frequency of young people (30).

The age of epileptic youth used to be discovered to have a vast influence on overall QOL and five subscales. Older adolescents can also have decreased shallowness as a result of feeling ashamed of their situation and being worried about social isolation. In the language domain, youngsters aged 6 to9 years historical carried out better. This is due to less difficult adaptability and larger mastering abilities in the younger age crew (30).

2.4 Conceptual frame work

The conceptual framework in this find out about used to be primarily based on an epilepsy-specific illustration of child QOL posted by using Ronen et al (31). The frameworks posited that epilepsy and related factors were predictors of QOL, with child, family, and neighborhood traits as doable mediators or moderators of that relationship. Further empirical checking out through Ronen et al confirmed that child (mental health), household (parent support), and neighborhood elements exhibited unbiased outcomes on QOL.

The outcomes of epilepsy, co-morbidity, and child, family, and neighborhood elements on QOL were investigated. The posited mediated relationship between parental support, peer support, cognition, and seizures and QOL via the kid's intellectual fitness have been additionally tested On the different hand, the conceptual framework encompasses components of QOL that have an effect on health such as psychological, environmental, physical, and social relationship. This conceptual model allows for the size of a combination of structural, procedures and consequence measures (32)

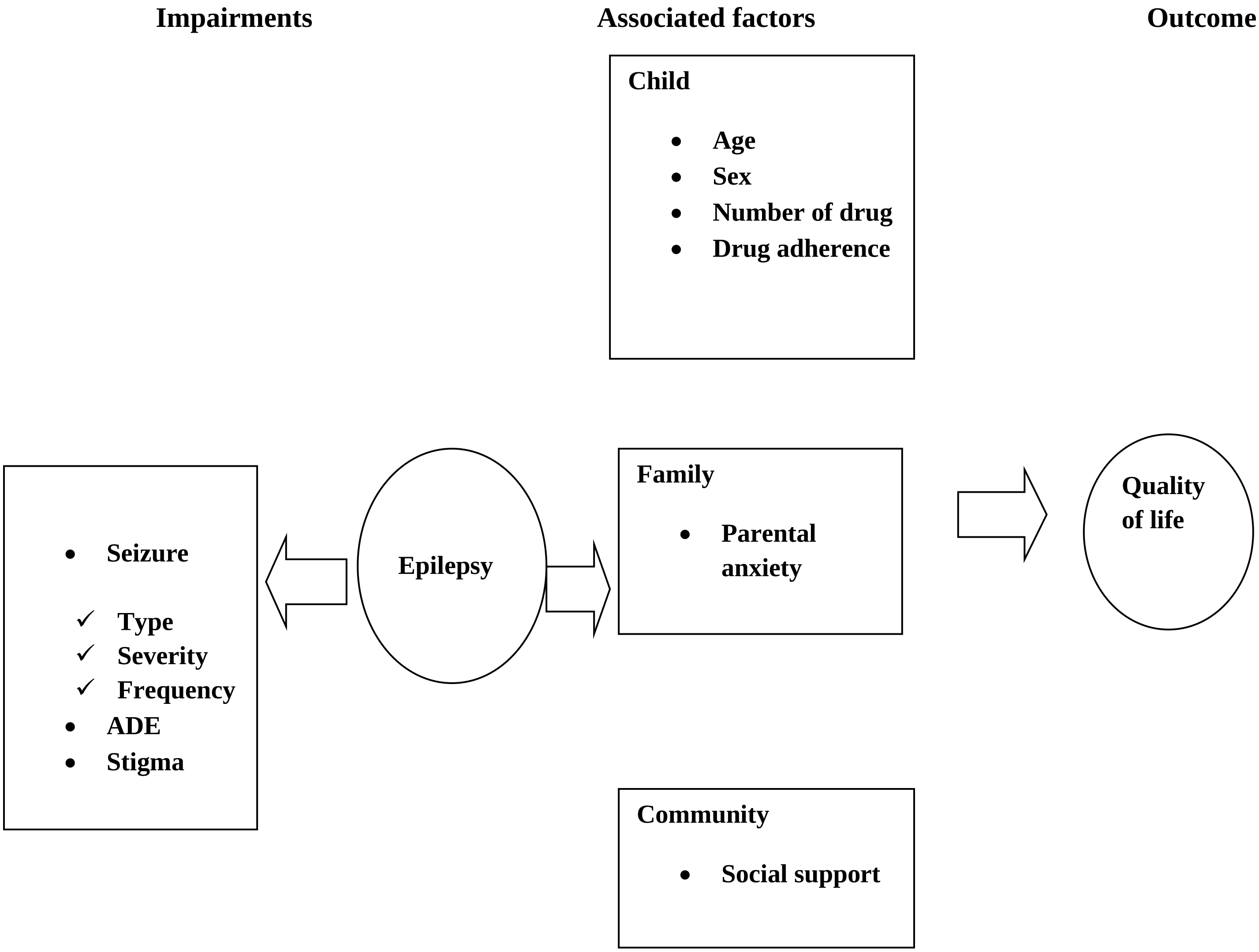

Figure 1:- Conceptual framework adopted from other studies to assess the quality of life among children (7-18) and associated factors attending outpatient department of governmental Hospital, Addis Ababa, Ethiopia.

3. Objective

3.1General objective

- To assess the quality of life of epileptic children aged 7-18 years and its associated factors among those attending outpatient departments of governmental Hospitals in Addis Ababa, Ethiopia 2021

3.2Specific objective

- To describe the magnitude of quality of life of epileptic children aged 7-18 years in public hospitals of Addis Ababa

- To identify factors associated with the quality of life among epileptic children aged 7-18 years in public hospitals of Addis Ababa.

4. Methods

4.1 Study area

The study was conducted in Addis Ababa, the capital city of Ethiopia with a population of more than 4.6 million peoples (33). The majority of the population is less than 30 years of age. The number of children aged 5 to 17 years in Ethiopia is estimated to be 37,332,738 which accounts for 42.6 per cent of the national population. Of this, 52.3 % are males and 47.7 % are females (33). In a large community-based epidemiological study, the prevalence of epilepsy in Ethiopia was reported as 5.2/1000 population (34) historically, care is given by mental health practitioners and estimated that 25% of the patients receiving treatment at the main outpatient and in neurology departments of hospitals. As of 2014, Addis Ababa had 52 hospitals, 12 of them governmental hospitals, and more than 40 are private. 11 hospitals give service related to epilepsy among children. (35)

4.2 Study Design and period

The study was conducted from November 2020 to January 2021. The study design for this particular research was facility-based cross-sectional study design

4.3 Population

4.3.1 Source population

All children which were (below 18) with epilepsy who are on antiepileptic medications and who had follow-up within governmental hospitals in Addis Ababa.

4.3.2 Study population

The study populations were selected children with epilepsy who are on antiepileptic medications and who had at least one follow-up during the data collection period in the governmental hospitals in Addis Ababa.

4.3.3 Inclusion and Exclusion criteria

4.3.3.1 Inclusion criteria

- ✓ Children (7-18) with epilepsy who are on antiepileptic medication and who had at least one follow-up were included in this study.
- ✓ For children (7-9) their parents give the answer in behave of the children

4.3.3.2 Exclusion criteria

- ✓ Children with co-morbid neurodevelopment conditions (mental retardation, developmental delay) and chronic medical conditions were excluded.
- ✓ Children with epilepsy who were in in-patient department were also excluded.

- ✓ Children who had a first visit for follow up

4.4 Sample size and procedure

4.4.1 Sample Size Determination

The sample size was determined by using single population proportion formula and the proportion was taken from the previous literature in Ethiopia. According to study conducted in

Mekele Hospitals which is “Socio demographic, Clinical Variables, and Quality of Life in Patients with Epilepsy in Mekele City, Northern Ethiopia”, 77.97% (0.77) of persons living with epilepsy had poor QOL (19).

By considering 95% confidence level (CI) and 5% margin of error the sample size was calculated using the following formula:

Where $n = \frac{(Z\partial/2)2\ p\ (1-p)}{d2}$

n= required sample size

Z=the standard normal deviation at 95%confidence interval; = 1.96

P= 5% (0.05)

1-p= proportion of population that do not possess the character of interest.

Therefore, $n = \frac{(Z_{\partial/2})^2\ p\ (1-p)}{d2}$

$$n_i = \frac{(1.96)^2 (0.77) (1-0.77)}{(0.05)^2} = 272$$

Calculating the sample size using different associated factor factors

Second an attempt was made to calculate the sample size by considering the different associated factors. The prevalence of had adverse reaction was taken as 27% in Mekele study 2018 (19).The prevalence of stigma was taken as 33.7 % (10). School absenteeism due to seizure was taken as 69.4%.

The sample size for no adverse drug reaction:

$$n_i = \frac{(1.96)^2 (0.27) (1-0.27)}{(0.05)^2} = 302$$

The sample size for stigma

$$n_i = \frac{(1.96)^2 (0.337) (1-0.337)}{(0.05)^2} = 343$$

The sample size for school absenteeism due to seizure

$$n_i = \underline{(1.96)^2 (0.694) (1-0.694)} = 326$$

$(0.05)^2$

The largest value is 382 for stigma is taken as sample size to increase the power of the study. The n_i computed this way will be adjusted using what is called 'Design Effect' (DE) of 1.5:

$\mathbf{n_i=343*1.5=514}$

By considering a non-response rate of 10 % the final sample size was:

$\mathbf{n_f= 572+ 10\% = 564}$

4.5 Sampling procedure

the sample selection procedure was two-stage sampling technique, first 6 governmental hospitals (from federal (373) and regional hospitals (191)) was selected with simple random sampling technique out of 11 hospitals, and then children was selected with probability proportional to size sampling technique from the selected hospitals. All children who came to selected hospital enumerate as a respondents.

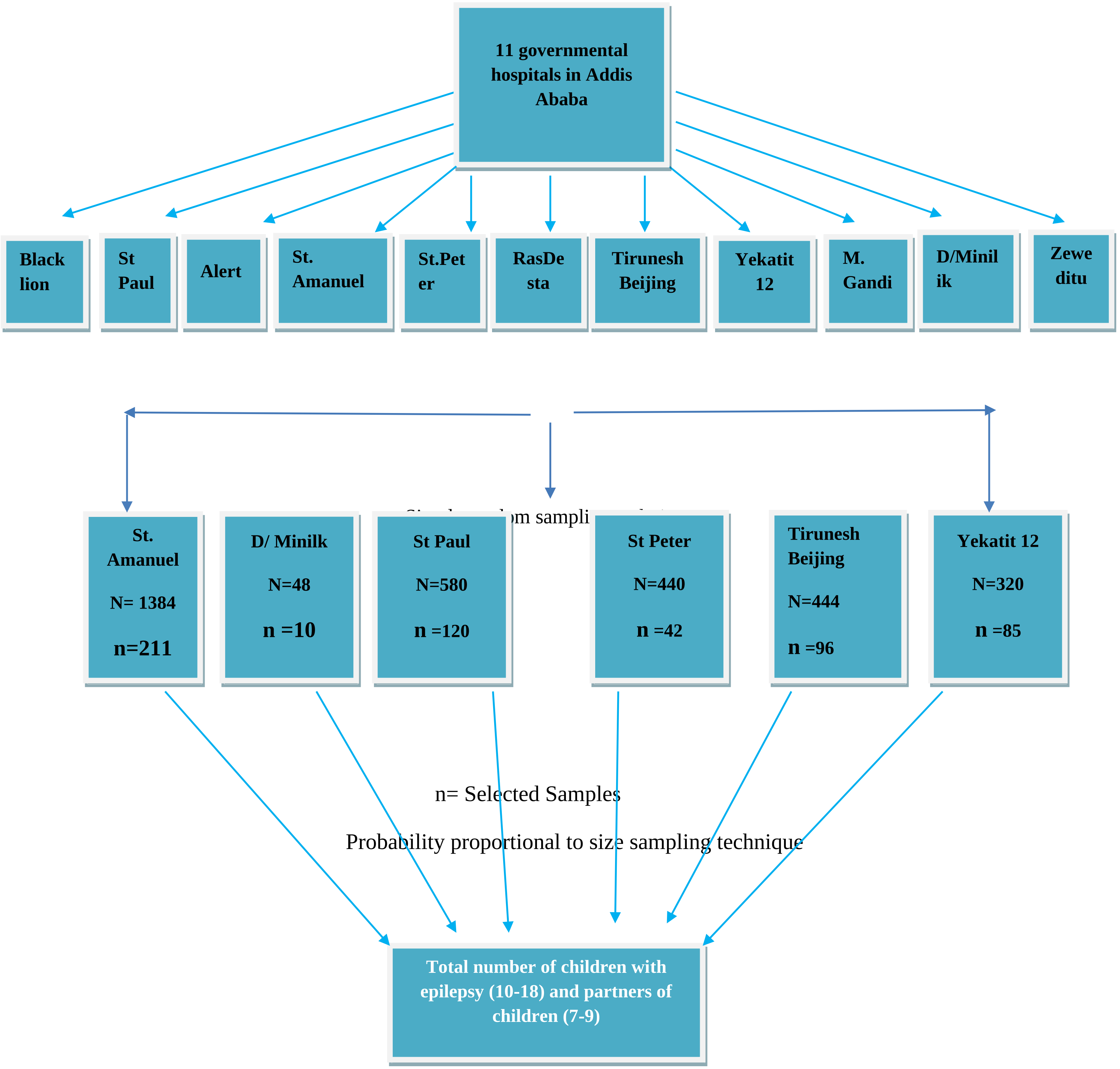

Figure 2 Schematic presentation of sampling for the study to assess quality of life among children with epilepsy between 7-18 and associated factors in governmental hospitals Addis Ababa, Ethiopia

4.6 Data collection method

4.6.1 Instrument

The QOL instruments were children with Epilepsy Questionnaire QOLIE-CH-48. These instruments have been developed to assess multiple aspects of quality of life (QOL) in children with epilepsy (36). Instruments to assess QOL in children with epilepsy have used a self- report of the child (10-18) and parents for children (7-9).

Quality of Life in Epilepsy Inventory for children the QOLIE-CH-48 is the children's version of the QOLIE family of instruments. It is a 48-item self-report scale designed for children aged below 18 years.

It was present during the completion of the questionnaire and clarified any queries, thereby ensuring that the questionnaire items were not misunderstood. The tool used in the study was translated to Amharic by a non-medical language expert. This version was compared with the original and anomalies were rectified by the same process.

Data were taken from children's interviews and parents' (the caregivers) interviews after an informed written assent was obtained from the caregivers and after giving detailed directions in filling the form using data extraction format. Information needed to measure patients’ quality of life was collected through face-to-face interview with caregivers and child who is above 10 years of age using Amharic version of QOLIE-CH-48 questionnaire. Nurses who had basic knowledge of epilepsy treatment collect the data from November 2020 to January 2021.

4.7 Measurements

4.7.1 Variables

4.7.1.1 Independent variables

Socio-demographic characteristics (age, sex,) types of epilepsy, times since last seizure, etiology of seizures, number of AED, self-depression, anxiety and seizure frequency

4.7.1.2 Dependent variables

Quality of life, the components are physical function (Physical restriction, Energy and fatigue, Pain, Get Around and Capacity Work), attitude / mental function (Attention/Concentration, Memory Negative Feeling and Language) and Social function (Social activities, Social interaction and Stigma.

4.8 Operational definition

Quality of category is defined as good (from each component) participant scores mean and above the mean score of quality of life-related questions and, poor if the score is below the mean score of quality of life measuring questions.

Antiepileptic medications: are drugs used to control epileptic seizure.

Adverse drug reaction (ADR): is an unwanted and undesirable effect of a medication that occurs during usual therapeutic use.

Anxiety and self-depression: The five-item patient health questionnaire for anxiety and depression was used to measure anxiety and depression among epileptic patients. The total score was determined by adding together the scores of each of the 5 items. Scores were rated as never, not often, sometimes, often, and very often.

QOLIE-CH-48: contains 48 items in eight subscales: Physical Functioning (5 items) (see table 3), Attitude toward Epilepsy (4 items) (see table 3), Epilepsy Impact (12 items), Memory/Concentration (10 items) (see table 3), Social support, stigma and social function (6 items) (see table 4), AED (9 items) (see table 5), and a total score.

To account for these differences, the scoring procedure for the QOLIE 48 first converts the raw proceeded numeric values of items to 0-100-point scores with higher converted scores always reflecting better quality of life. To perform these steps, proceeded numeric values for response on some QOLIE48 items are in the direction such that higher number reflects a more favorable health states for example a circled response of 5 for items 1corresponds to best possible quality of life while circled response of 0 corresponds to worst possible quality of life.

A QOLIE 48 overall score can be derived by weighting and summary QOLIE 48 scales scores. The scales weights were derived from components of the QOL (physical, attitude and social)

4.9 Data Quality control

The quality of data was assured by giving appropriate training for data collectors on the research tools (questionnaires). Moreover, close supervision was also done during data collection for its completeness and consistency. Pilot testing was also done in 5% of the study participants in Ras Desta memorial hospital which is not included in the actual study. The data was cleaned by running frequency for each categorical variable and cross-checking with the original questionnaire (hard copy). Double data entry was done on 5% of the collected data to compare the quality of data and the finding showed that the data has been entered properly and consistently.

4.10 Data analysis

Data were coded and entered into the Epi-data version 3.1statistical program and then exported to STATA Version 15.0 for further analysis. Descriptive statistical methods were computed for the study variables. Then, means and standard deviations were used to describe numerical variables as well as frequencies for nominal and ordinal variables.

ANOVA was used to assess the mean difference in QOL score between categories of independent variables. The assumptions of ANOVA include, the dependent variable is continuous, the independent variables are categorical, the observations are independent and there are no significant outliers in the outcome variables, homogeneity of variance, normally of distribution among the errors, and absence of multi- collinearity among the independent variables were assessed and all of them were fulfilled. Finally, a P-value of less than 0.05 was taken as a cut-off point to declare statistically significant associations between the independent variables and the quality-of-life score among epileptic patients.

Multiple linear regression was also fitted to identify the best predictors of quality of life. Moreover, to control the effect of confounders with 95% confidence interval and adjusted odds ratios were used to measure the strength of association and direction. Statistical significance was set at a P value of <0.05.

4.11 Ethical consideration

Ethical approval was obtained from the Research Ethics Committee of the School of Public Health in Addis Ababa University. Based on the ethical clearance, official permission was obtained from Addis Ababa City Administration health office and the respected hospitals. In writing from Addis Ababa City Administration health office and the hospital ethics committee involved in the research. As neurologic department, be made aware of all nurse’s research taking place in the organization to monitor the effect of all such projects taking place. It was also needed to be convinced of the values of the research and the competency of the researcher. The main ethical principles that were considered in conducting this research study are respect for person, confidentiality, and beneficence/ non-malfeasance.

As individuals are autonomous beings, they had the right to decide whether or not they get involved in this research. This fact was stated clearly in the questionnaire's cover letter (see annex i). Informed assent was sought from their parents (caregivers). Before assent is sought the researcher was given details of nature and purpose of the research. The potential subjects who was access to the data and the proposed outcome of the research. Completion of the questionnaire by participants was taken as their giving consent to participate in the study. Participants were given adequate time to consider their participation.

Face to face interview can potentially protect the anonymity and privacy of the respondents contributing to the confidentially of responses. The treatment team was not aware of the results of the survey and participation in this study did not involve changes or variations in the clinical management of the patients. Privacy and confidentiality were ensured during patient interviews and review of patient’s charts. Name and addresses of the participants were not recorded in the data extraction formats.

4.12 Dissemination Plan

After writing the report, the result was submitted to Addis Ababa university school of public health office and any concerned body.

5. Results

5.1 Socio-demographic characteristics and general condition of children with epilepsy

A total of 564 participated in this study with a response rate of 94.1%. From this 265 (46.9%) of the respondents were caregivers of the children aged 7-9 years and children who can't respond by themselves. From the total number of children, 348 (61.7%) were male, and216 (38.3%) were females. The mean age of respondents is 13.7 (± 0.13) years (Table 2).

Concerning the disease duration, 274 (48.58%) of children suffered for a duration of 6-10 years, followed by 2-5 years 248 (43.97%). Out of the total children with epilepsy involved in the study, 353 (62.59%) had one seizure attack per week followed by one seizure attack per month, 154 (27.3%). About the type of seizure, 298 (52.84) of the study participants had a complex partial type of seizure. Most of the study participants, 415(73.58%) didn't know the cause of the disease. Regarding number of Anti-epileptic drugs (AED), taken by children was mono therapy 375 (66.49%).

Table 1: The distribution of study participants by socio-demographic characteristics and general condition of children with epilepsy as reported by parents in Addis Ababa, Ethiopia 2021 (N=564)

Variable	Frequency	Percent
Age of children		
7- 14	331	58.69
15-18	233	41.31
Sex of children		
Female	216	38.3
Male	348	61.7
Number of care givers		
Female	168	63.4

Male	97	36.6
Duration of disease		
<2 years	23	4.08
2-5 years	248	43.97
6-10 years	274	48.58
> 10 years	19	3.37
Seizure frequency		
None	13	2.3
One per week	353	62.59
One per month	154	27.3
One per year	44	7.8
Type of seizure		
Generalized	193	34.22
Complex partial	298	52.84
Others	73	12.94
Etiology of seizure		
Idiopathic	415	73.58
Familial	134	23.76
Symptomatic	14	2.48
Number of AEDs		
None	36	6.38
Mono therapy	375	66.49
Di therapy	135	23.94
Poly therapy	18	3.19

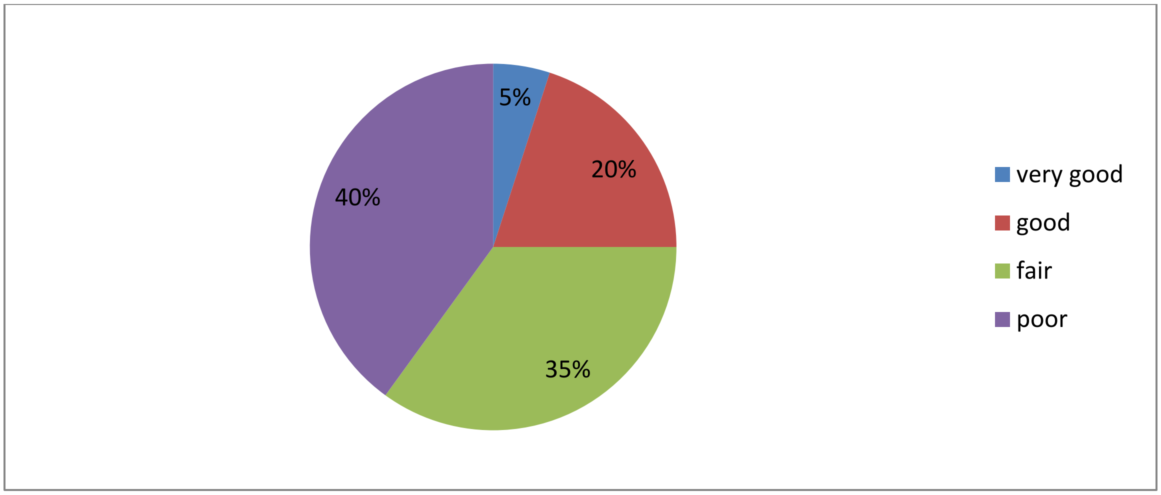

Figure 3: General health perception of children with epilepsy as reported by parents (caregivers) of the children (7-18) in governmental hospitals in Addis Ababa Ethiopia 2021.

According to figure 3, general health perception of children was relatively poor. The result shows most of the respondents (around 75%) of children have poor perceptions about their health-related to other children.

5.2 Physical functioning measures of quality of life

Around 207 (36.7%) of children with epilepsy involved in this study didn't do heavy activities like running and active sports. But, 113 (20.0%) participants do light exercises like carrying packages or school bags. Among the total respondents about 282 (50.35%), participants do fewer things than they like to do and also about 302 (53.55%) of the participants need extra efforts to perform school works, sports, or other activities. With regards to school performance, 374 (66.31%) of children with epilepsy had some trouble inside the school compound but out of school this figure drops to less percent which is 18.26.

Table 2: Physical functioning measures of quality of life of children (7-18) with epilepsy as reported by children and parents for children (7-9) in Addis Ababa, Ethiopia 2021 (N=564)

Variables	Measuring scales				
	Very often	Often	Sometimes	Not often	Never
Heavy activities	2 (0.35%)	17 (3.01%)	132 (23.4%)	206 (36.52%)	207 (36.7%)
Moderate activities	38 (6.74%)	85 (15.07%)	201 (35.64%)	97 (17.2%)	143 (25.35%)
Light activities	113 (20%)	216 (38.3%)	102 (18.1%)	39 (6.91%)	94 (16.67%)
Do fewer things than you would have liked to do?	282 (50.35%)	193 (34.22%)	84 (14.09%)	5 (0.53%)	0
Limit the kind of school work, sport or other activities	232 (41.13%)	224 (39.72%)	106 (18.79%)	2 (0.35%)	0
Difficulty while performing activities (it took extra effort)	175 (31.03%)	302 (53.55%)	72 (12.77%)	10 (1.77%)	5 (0.89%)
Skip from school for no reason	37 (6.56%)	163 (28.9%)	270 (47.87%)	73 (12.94%)	21 (3.72%)
In Trouble in school	2 (0.35%)	57 (10.11%)	374 (66.31%)	124 (21.99%)	7 (1.24%)
In Trouble out of school	0	30 (5.32%)	103 (18.26%)	279 (49.47%)	152 (26.95%)

Summarize physical functioning score

Variable	Mean	Sta. dev.	Min	Max	Kurtosis	skewness	[95% Conf. Interval]
Total physical functioning score	23.19	4.17	13	35	2.72	-.03988	(22.8 -23.5)

The mean score for physical dimension is 23.18 ±4.17 SD with a range of 13 to 35. According to the result, the mean score is below the average so the participants scored were lower in the physical domain (Table 3)

5.3 Attitude functioning measures of quality of life

Most of children with epilepsy 270 (48.4%) thought that they had trouble on concentrating activities some of the times and 190 (33.69%) had trouble on concentrating activities most of the time. Regarding concentration during reading 260 (46.1%) had trouble on concentrating activities some of the times. Most of the time related to solving problems around 231(40.96%) had difficulty and around 224 (40.51%) of children had trouble all the time while playing games. Similarly, 208 (36.88%) of the respondents perceived short-term memory loss all the time. Some of the time children had trouble understanding their teachers its account around 245 (43.44%).When-, came to seizure about half of the children 284 (50.35%) worry about having another seizure happing in a day. Similarly, 314 (55.67%) of children feel fear of dying because of seizure due to epilepsy.

Table 3: Attitude functioning measures of quality of life of children (7-18) with epilepsy as reported by children and parents for children (7-9) in Addis Ababa, Ethiopia 2021 (N=564)

Variables	Measuring scales				
	All of the time	Most of the time	Some of the time	A little of the time	None of the time
Had trouble concentrating in activities	48(8.51%)	191 (33.69%)	271 (48.40 %)	52(9.4%)	0
Had trouble concentrating on reading	49 (8.69%)	225(39.89%)	260 (46.1%)	24 (4.26%)	6 (1.06%)
Having difficulty solving problem	206 (36.52%)	231 (40.96%)	125 (22.16%)	2 (0.35%)	0
Had difficulty on complicated things like	224 (40.51%)	215 (38.88%)	111 (18.81%)	1 (0.18%)	13 (1.63%)

playing games					
Had trouble remembering thing you read hours or days before	208 (36.88%)	170 (30.14%)	136 (24.11%)	21 (3.72%)	29(5.14%)
Had trouble understanding your teachers	55 (9.75%)	152 (26.95%)	245 (43.44%)	91 (16.13%)	21 (3.72%)
Worry about having another seizure in a day	284 (50.35%)	158 (28.01%)	64 (11.35%)	41 (7.27%)	17 (3.01%)
Fear dying because of seizure	314 (55.67%)	103 (18.26%)	79 (14.01%)	35 (6.21%)	33 (5.85%)
Worry about hurting yourself during seizure	232 (41.13%)	114 (20.21%)	118 (20.92%)	67 (11.88%)	33 (5.85%)

Summarize attitude score

Variable	Mean	Sta. dev.	Min	Max	kurtosis	Skewness	[95% Conf. Interval]
Total attitude functioning score	22.48	6.5	11	41	2.77	0.5255098	(21.9- 23.01)

The mean score for attitude dimension is 22.48 ±6.5 SD with a range of 11 to 41. According to the result, the mean score is below the average so the participants scored were lower in the attitude domain (Table 4)

5.4 Social functioning (social support, school behavior) measures of quality of life

The majority of the respondents 350 (62.05%) thought that they have someone around to help them and also available to talk about trouble related to epilepsy 284(50.35%). From acceptance point of view, 305 (54.07%) children accepted to share their view on good or bad points. A round 284 (50.35%) children have a helper to share ideas about troubling things.

Table 4 social functioning (social support, school behavior) measures of quality of life of children (7-18) with epilepsy as reported by children and parents for children (7-9) in Addis Ababa, Ethiopia 2021 (N=564)

Variables	Measuring scales				
	Very often	**Often**	**Sometimes**	**Not often**	**Never**
Having someone available to help you if you needed and wanted help	207 (36.7%)	143 (25.35%)	214 (37.94%)	0	0
Have someone you could confide in or talk to about things that were troubling you	141 (25%)	143 (25.35%)	169 (29.96%	111 (19.68%)	0
Have someone you could talk to when you were confused and needed to sort things out	124 (22.02%)	131 (23.27%)	137 (24.33%)	103 (18.29%)	69 (12.08%)
Have someone who accepted you as you were, both your good points and bad points	236 (41.84%)	69 (12.23%)	181 (32.09%)	61 (10.82%)	17 (3.0

Summarize social functioning score

Variable	Mean	Sta. dev	Min	Max	Kurtosis	Skewness	[95% Conf. Interval]
Total social functioning score	14.52	2.97	8	20	2.42	0.0639504	(14.27-14.76)

The mean score for attitude dimension is 14.52 ±2.97 SD with a range of 8 to 20. According to the result, the mean score is higher than the average so the participants scored were higher in the social functioning domain (Table 5)

5.5 Effect of anti-epilepsy medications

Among, the total respondents 354 (62.77%) respondents feel that epilepsy medications limit their social activities like playing games with their friends and classmates. Similarly, 403 (71.46%) of respondents most often feel alone because of epilepsy and medication. Most of the children376 (66.67%) had a presence of adverse drug reaction; and 344 (61.56%) of the children had poor self-imagination about their looks. Around 529 (93.79) had a limit set by parents/ family because of their epilepsy medication.

Accordingly, of the total participants, 458 (81.21%) feel that epilepsy medication limited their independence. Similarly, 346 (61.35%) of the respondents perceived limitation in school performance due to epilepsy medication and also 445 (78.9%) feel that epilepsy medication limited their social life.

Table 5: Effect of anti-epilepsy medications related to quality of life of children(7-18) with epilepsy as reported by children and parents for children (7-9) in Addis Ababa, Ethiopia 2021 (N=564)

Variables	Measuring scales				
	Very often	**Often**	**Sometimes**	**Not often**	**Never**
Feel that epilepsy medication limited your social activities	94 (16.67%)	260 (46.1%)	188 (33.33%)	8 (1.42%)	14 (2.48%)
Feel alone and isolated from other because of	124 (21.99%)	279 (49.47%	94 (16.67%)	29 (5.14%)	38 (6.74%)

epilepsy medication					
Use epilepsy or medication side effects as an excuse to avoid doing something you didn’t really want to do	145 (25.71%)	231 (40.96%)	136 (24.11%)	32 (5.67%)	20 (3.55%)
Feel epilepsy medication limited your school performance	150 (26.6%)	196 (34.75%)	185 (32.8%)	33 (5.85%	0
Feel you have limitation because of epilepsy medication	95 (16.84%)	310 (54.96%)	88 (15.6%)	46 (8.16%)	25 (4.43%)
Feel that epilepsy medication limited your independence	160 (28.37%)	298 (52.84%)	61 (10.82%)	34 (6.03%)	11 (1.96%)
Feel that epilepsy medication limited social life	149 (26.42%)	296 (52.48%)	53 (9.4%)	53 (9.4%)	13 (2.3%)
Feel that epilepsy medication limited your participation in sports	131 (23.23%)	294 (52.13%)	82 (14.54%)	46 (14.54%)	11 (8.16%)
	Very bad	**Bad**	**Ok**	**Good**	**Very good**
About how you looked (side effect such as acne, hair change weight gain)	114 (20.21%)	230 (40.78%)	157 (27.84%)	54 (9.57%)	9 (1.6%)
	A lot	**Some**	**Not much**	**A little**	**Not at all**
Limit set by parents/ family	336 (59.57%)	193 (34.22%)	33 (5.85%)	0	2 (0.35%)

because of your epilepsy medication							
Summarize AED total of children with epilepsy							
Variable	Mean	Sta. dev	Min	Max	Kurtosis	Skewness	[95% Conf. Interval]
AED total	21.2	6.81	10	42	3.71	0.8222911	(20.6-21.7)

The mean score for AED effect is 21.2±6.81 SD with a range of 10 to 42. According to the result, the mean score is very low from the average so the participant’s scores were lower in effect of AED on quality of life. (Table 6)

Table 6 Other related factors which affect quality of life of children(7-18) with epilepsy as reported by children and parents for children (7-9) in Addis Ababa, Ethiopia 2021 (N=564)

Variables	Measuring scales				
	Very often	**Often**	**Sometimes**	**Not often**	**Never**
Self-Depression	132 (23.4%)	296 (52.48%)	75 (13.3%)	45 (7.89%)	16 (2.84%)
Anxiety	127 (22.52%)	317 (56.21%)	72 (12.77%)	48 (8.51%)	0
Stigma	114 (20.21%)	199 (35.28%)	174 (30.85%)	77 (13.65%)	0

Having moderate to severe anxiety and self-depression, resulted in decreased quality of life in epileptic patients. About 428 (75.88 %) of children reported that they had self-depression most likely through their age due to epilepsy, 313 (56.06) had presence of social stigma with epilepsy. (See table 7).Believing that epilepsy is caused by evil spirits negatively affects the quality of life of epileptic patients. This could be due to the influence of cultural beliefs on attitudes and uncaring actions of the community towards patients with epilepsy.

5.6 Mean summary quality of Life Score of children (7-18) with epilepsy in Addis Ababa Ethiopia 2021

Table 7 Mean summary of quality of life of children (7-18) with epilepsy in Addis Ababa Ethiopia 2021

Variables	N	Mean	SD	Min	Max	Kurtosis	[95% Conf. Interval]
Physical components	564	23.18	4.17	13	35	2.72	(22.8 -23.5)
Attitude components	564	22.48	6.44	11	41	2.76	(21.9- 23.01)
Social functioning	564	14.52	2.97	8	20	2.41	(14.27-14.76)
AED	564	21.20	6.81	10	42	3.77	(20.6-21.7)
QOL	564	60.18	8.68	41	89	2.77	(59.5-60.9)

Descriptive statistics were performed to find out means and standard deviations of QOL measurement scale. Quality of life contains 3 main components this is physical, psychological (attitude), and social. So, the mean score for physical dimension is 23.18 ±4.17 SD with a range of 13 to 35.According to the result, the mean score is below the average so the participant's scores were lower in the physical domain. The mean score for the Psychological (attitude) dimension is 22.48 ±6.44 SD with a range of 11 to 41. This is below the average so the participant's scores were lower in the attitude domain. The mean score of social dimensions is 14.52±32.97 SD with a range of 8 to 20. The mean score is higher than the average, so the participants scored were higher in the social functioning domain. The mean score of anti-epileptic drug effect is 21.2±6.81 SD with a range of 10-42. The mean score is very low for the average, so the participant's scores were lower in effect, of an AED on quality of life. Among three domains of QOL, participants scored highest in the social domain, while the lowest mean score was for physical domain and attitude domain.

The overall mean total score is 60.18±8.68 standard deviation. The minimum score of this WHOQOL BREF in this study is 24 and the maximum score is 120 with the range of score 96.The mean quality of life of people living with epilepsy in this study was low. More than half, 351 (62.23%) of epileptic patients have an overall weighted average quality of life score below the mean score level, and the remaining, 213 (37.77 %) had an overall weighted average quality of life score above the mean.

5.7 Factors associated with quality of life of children in Addis Ababa Ethiopia 2021

5.7.1 Analysis of Variance (ANOVA)

The data fulfills the first three assumptions of ANOVA. That is the dependent variable is continuous variable, the independent variables are categorical and the observations are independent. The other three assumptions (normal distribution, homogeneity of variance, and presence of significant Outlier) were checked.

5.7.1.1 Fit the model for each factor separately and present the results

S.no	Source	Partial Sum of Squares	Df	Mean Square	F	Sig.
1.	Age	2328.1	12	194.01	2.66	0.00
2.	Sex	63.2	1	63.21	0.84	0.36
3.	Length of sickness per year	1800.4	12	150.04	2.03	0.02
4.	Seizure frequency	3798.1	3	1266.06	18.34	0.00
5.	Type of seizure	9641.6	2	4820.81	82.40	0.00
6.	Etiology of seizure	604.7	3	201.57	2.70	0.04
7.	Number of AED	1949.7	3	649.90	8.98	0.00
8.	Self-depression	11004.55	4	2751.14	48.89	0.00
9.	Anxiety	7430.49	3	2476.83	39.59	0.00

10.	Stigma	6855.76	3	2285.25	35.94	0.00

- **Interpretation**

Since all the p-values are less than 0.05 for all the factors separately (except sex), all are statistically significant. Thus, we reject the null hypothesis for all the factor levels but for sex, we fail to reject null hypothesis.

5.7.1.2 Fit all main effects only together in the model, test the hypothesis, interpret results, and present

Source	**Partial sum of square**	**Df**	**Mean square**	**F**	**Sig.**
Model	23154.46	46	503.36	13.48	0.00
Age	1430.49	12	119.21	3.19	0.00
Sex	0.41	1	0.41	0.01	0.92
Length of sickness	573.66	12	47.81	1.28	0.23
Seizure frequency	1274.99	3	425.00	11.38	0.00
Types of seizure	3903.60	2	1951.80	52.26	0.00
Etiology of seizure	50.73	3	16.91	0.45	0.71
Number of AED	556.77	3	185.59	4.97	0.00
Self-depression	506.98	4	126.74	3.39	0.01
Anxiety	1056.84	3	352.28	9.43	0.00
Stigma	709.59	3	236.53	6.33	0.00
Residual	19308.99	517	37.35		
Total	42463.45	563	75.42		

R-squared = 0.5453 Adj R-squared = 0.5048

- **Interpretation**

Since for all the p-values less than 0.05 for test of between subjects' effects (except sex, length of sickness, and etiology of seizure), are statistically significant. Thus, we reject the null hypothesis for these factors levels but for (sex, length of sickness, and etiology of seizure) we fail to reject null hypothesis.

5.7.1.3 Perform post hoc test for all factors and report the result

	Scheffe				
	Mean Difference	**Std. Err.**	**P>|t| or sig.**	**[95% Conf. Interval]**	
Type of seizure				Lower bound	Upper bound
Complex partial vs. Generalize	5.67	.71	0.0	3.93	7.4
Others vs. Generalize	13.06	1.1	0.0	10.5	15.7
Others vs. Complex partial	7.39	.9	0.0	4.9	9.8

The mean difference is significant at the 0.05 level.

- ✓ In Scheffe test there is statistically significant difference in quality of life between Complex partial and Generalize, and between Others and Generalize (with p-value of 0.000)

Multiple comparisons

	Scheffe				
Seizure frequency	**Mean Difference**	**Std. Err.**	**P>|t| or sig.**	**[95% Conf. Interval]**	
				Lower bound	Upper bound
One per week vs. none in past year	0.01	2.35	1.0	-6.6	6.6
One per month vs. none in past year	-5.25	2.40	0.1	-11.9	1.5
One per year vs. none in past year	-5.99	2.62	0.16	-13.3	1.4
One per month vs. one per week	-5.26	0.80	0.0	-7.5	-3.01
One per year vs. one per week	-6.00	1.33	0.0	-9.7	-2.3
One per year vs. one per month	-0.74	1.42	0.9	-4.7	3.2

The mean difference is significant at the 0.05 level.

- ✓ In Scheffe test there is statistically significant difference in quality of life between seizure frequency one per month and one per week and between one per year and one per week (with p-value of 0.00).But there is no statistically significant difference in quality of life between one per year and none in past year.

Multiple comparisons

	Scheffe				
Number of AED	**Mean Difference**	**Std. Err.**	**P>|t| or sig.**	**[95% Conf. Interval]**	
				Lower bound	Upper bound
Mono therapy Vs none	-3.5	1.5	0.1	-7.7	0.62
Di therapy Vs none	-5.5	1.6	0.008	-9.9	-1.04
Poly therapy Vs none	-11.4	2.5	0.0	-18.3	-4.5

Di therapy Vs mono therapy	-1.9	.8	0.1	-4.4	0.41
Poly therapy Vs mono therapy	-7.8	2.1	0.002	-13.6	-2.09
Poly therapy Vs di therapy	-5.8	2.1	0.05	-11.8	0.11

- ✓ In Scheffe test there is statistically significant difference in quality of life between di therapy and none, between poly therapy and none and also poly and mono therapy (with p-value of 0.008, 0.000, and 0.002 respectively) but there is no statistically significant difference in quality of life between di therapy and mono therapy (p=0.147).

- ✓ Post hoc tests are not performed for age and sex because there are fewer than three groups.

5.7.2 Multiple linear regression analysis of factors associated with quality of life among children with epilepsy

Multiple linear regression was conducted to examine the best combination of factors for predicting quality of life. In Multiple linear regression, seizure frequency, type of seizure, etiology, number of AED, self-depression, anxiety and stigma were factors significantly associated with quality of life.

A score in quality of life increased by 5.03 for every unit increase in a score of seizure frequency per week with (β=5.03, 95% CI: 0.4 - 0.9).A score in quality of life increases by 5.98 for every unit increase in a score of type of seizure with (β=5.98, 95% CI: 0.4 - 0.7).Quality of life of epileptic patients increased by 0.19, 1.99 in every unit increase in a score of stigma and anxiety (β=0.19, 95% CI: (-0.1 - 0.1), (β=1.99, 95% CI: 0.007- 1.03) respectively.

In every unit experience of perceived depression quality of life reduce by 3.49 (β= - 3.49, 95%, CI: -0.7 - - 0.2). Children who take di therapy have increased quality of life by 2.21 (β = 2.21, 95%, CI: (0.02 - 0.4) compared with poly therapy (Table 9)

Table 8፡ Multiple linear regression analysis of factors associated with quality of life among children with epilepsy attending public hospitals in Addis Ababa Ethiopia, 2021

Variable	**QOL**		**Crude β (95% CI)**	**P value**	**Adjusted β (95% CI)**	**P value**
	Poor (%)	Good (%)				
Male Vs Female	224(64.4)	124 (35.6)	**-1.33 (**-0.13 - 0.02)	0.18	**-0.72** (-0.10 - 0.04)	0.469
15-19 Vs Below 15	129(60.5)	84(39.5)	**-0.70 (**-0.1- 0.05)	0.48	**0.29** (-0.035 0.12)	0.289
Duration of disease						
2-5 Vs <2	162(65.3)	86 (34.7)	**-0.42** (-0.3 - 0.2)	0.67	**0.97** (-.09 - 0.26)	0.33
6-10 Vs<2	160 (58.4)	114(41.6)	**0.24** (-0.2 - 0.2)	0.8	**1.12** (-.08 - 0.3)	0.26
>10 Vs<2	15 (78.9)	4 (21.1)	**-1.20** (-0.5 - 0.1)	0.2	**-1.16** (-0.4- 0.102)	0.25
Seizure frequency						
One per week Vs None in past years	193 (54.6)	160 (45.4)	**0.51** (-0.2 - 0.33)	0.6	**5.03** (0.4 - 0.9) **€€**	0.01
One per month Vs None in past years	118 (76.6)	36 (23.4)	**-1.10** (-0.4 - 0.12)	0.3	**4.49** (0.4 - 0.95) **€€**	0.00
One per year Vs None in past years	32(72.72)	12 (27.28)	**-0.74**(-0.4 - 0.2)	0.5	**4.63**(0.4 - 1.07)	0.00
Type of seizure						
Complex partial Vs Generalized	171(57.4)	127(42.6)	**5.95** (0.16 - 0.33)	0.00	**6.42** (0.2 - 0.5) **€€**	0.00
Other Vs Generalized	21(28.8)	52 (71.2)	**8.59** (0.4 - 0.6)	0.00	**5.98**(0.4 - 0.7) **€€**	0.00
Etiology						
Familial Vs Idiopathic	67(50)	67 (50)	**3.35** (0 .06 - 0.3)**€**	0.001	**1.11** (-0.03 - 0.13)	0.268
Symptomatic Vs Idiopathic	9 (64.3)	5 (35.7)	**0.13** (-0.23 - 0.27)	0.9	**-1.55** (-0.4 - 0.05)	0.122
Number of AED						
Mono therapy Vs None	229 (61.1)	146 (38.9)	**-1.65** (-0.3 - 0.02) **€**	0.100	**0.46** (-0.15 - 0.24)	0.647
Di therapy Vs None	89 (65.9)	46 (34.1)	**-2.07** (-0.3 - -0.009)**€**	0.039	**2.21** (0.02 - 0.4) **€€**	0.028
Poly therapy Vs None	16 (88.9)	2 (11.1)	**-2.99** (-0.7- -0.14)**€**	0.003	**1.40** (-0.08 - 0.5)	0.647

Self-depression						
Often Vs Very often	241 (81.4)	55 (18.6)	**-6.63** (-0.4 - -0.2)€	0.00	**-3.49** (-0.7 - -0.2) €€	0.001
Sometimes Vs Very often	23 (30.7)	52 (69.3)	**3.35** (0.08- 0.33) €	0.001	**-0.44** (-.17 - 0.11)	0.662
Not often Vs Very often	8(17.8)	37 (82.2)	**4.54** (0.19- 0.48)€	0.00	**-0.12** (-0.5 - 0.5)	0.904
Anxiety						
Often Vs Very often	243 (76.6)	74 (23.4)	**-5.55** (-0.35 - -0.16) €	0.00	**0.71** (-0 .2- 0.4)	0.480
Sometimes Vs Very often	35 (48.6)	37 (51.4)	**0.27** (-0.11 - 0.14)	0.789	**-1.16** (-.2 - 0.07)	0.245
Not often Vs Very often	9 (18.75)	39 (81.25)	**4.14** (0.16 - 0.46) €	0.00	**1.99** (0.007- 1.03) €€	0.047
Stigma						
Often Vs Very often	162 (81.4	37 (18.6)	**-2.26** (-0.22 - -0.016) €	0.02	**0.19** (-0.1 - 0.1) €€	0.001
Sometimes Vs Very often	76 (43.6)	98 (56.4)	**4.67** (0 .14 - 0.36) €	0.00	**1.16** (-0.04 - 0.2)	0.848
Not often Vs Very often	34 (44.2)	43 (55.8)	**3.7**(0.12 - 0.38) €	0.00	**-1.39** (-0.3 0.05)	0.164

€ = shows there is an association in Crude β

€€ = shows an association in adjusted β

Predictor variables: Socio demographic and clinical variables.

Dependent variables: quality of life

6. Discussion

This study, it estimated the QOL score for children with epilepsy in Addis Ababa who had been on AEDs and also assessed the relative importance for different QOL sub scores and associated factors. This study showed that more than half of epileptic patients have an overall weighted average quality of life score below the mean score level. The mean score for physical dimension, Psychological (attitude) dimension, and social dimension is (23.18, 22.48 and 14.52 respectively). The mean score of social dimensions is 14.52. The overall mean total score on the QOL scale is 60.18. Age, sex, seizure frequency, type of seizure, etiology, number of AED, self-depression, anxiety, and stigma were factors significantly associated with quality of life.

In this study, the overall mean total score of QOL scale is 60.18. This study is similar to a study done in Amanuel specialized hospital, Wollega, Oromia, with a mean score of (60.14, 60.47 respectively) (28) (10). The similarity may be due to the same study area and study design. But this is higher than finding from a study in Kenya (49.9%) and study in India among children (52.1%) (37) (7). This difference may be due to the study done in different countries. However; the finding of this study is lower than the study done in Brazilian adolescents with epilepsy (68.7%) (38)The possible reason could be this cross-sectional study was conducted using QOL, but others were conducted using the Quality-of-Life Inventory for Epilepsy (QOLIE-31).This implies that to increase quality of life of children we have to focus on facility service and way of approach.

Regarding the quality-of-life score of the domains of QOLIE-48, Participants scored the lowest average score on the attitude domain, and the highest score was found in the social functioning domain. This is similar to the study done in north Wollo in adult epileptic patients (39). This is due to the study area which is done in Ethiopia. The other similar finding is in Ugandan study physical functioning and emotional well-being scores are the lowest average score QOL domains (17). This is likely because, despite reduced seizure frequency, many physical activities are usually restricted for fear of seizure occurrence. But in Brazilian study scores were high score in all the domains, with the exception of Attitudes toward Epilepsy domain (38). The difference might be due to variation in belief, culture, and lifestyle factors which affect quality of life measures. This implies working on the main domains to improve QOL rather than giving the medication only.

In this study, medication adverse effects had a mean score is 22.48. This indicates the patients have experienced low mental and physical effects related to AEDs. Rather this figure increase in Amanuel specialized hospital study which is 36 (28). This is may be due to higher in adults and varies through ages. And also, higher medication effect subscale score studies were conducted in West Africa (40). This difference is due to variations in psychological, socio-cultural beliefs, and lifestyle of the patients. Although clinical management of seizures also aims to reduce on AEDs side effects, it is evident that AEDs' have an effect on mental functioning of some patients and can potentially depress their QOL. This shows that health facilities also focus on the side effect of the medication to enhance the life of the children

The higher rate of mono therapy (66.49%) reported in this study is in line with the result of previous studies done in Ethiopia. the study conducted at Gonder hospital in North Ethiopia reported that 82.2% of epileptic patients were on mono therapy (41). Patients who were taking two or more AEDs had lower quality of life as compared to patients who took single AED. But in Mekele study there was no significant association between type of antiepileptic medication and quality of life. This could be due to comparable efficacy and safety of the medications. Similarly, in Sudanese children study was found to have a significantly poor QOL and especially so in the group with epilepsy and longer seizure and treatment durations, as well as those on poly therapy (42). In the Kenyan study the participants' use of poly AED therapy was large (54%) compared with this study (30%). This is because of elongation of medication affects day to day life of the patients (30). This implies frequency of follow-up must be increased to improve their personal life.

Regarding the factors related to the quality of life, age, seizure frequency, types of seizure and ages at the onset of epilepsy were statistically significant with quality of life among epileptic patients. The quality of life among male children was statistically significant than female. This finding in line with study done in north Wollo being male was associated with increased quality of life scores among epileptic patients (39). This is due to cultural causes affecting females than males. This implies that social support for those women must be increased.

In this study, there is statistically significant difference in quality of life between seizure frequency one per month and one per week. Similarly with study frequent seizures during the last follow-up and a year before lead to poorer quality of life scores as compared to no seizure in Gondar hospital study (41).And also in Wollega study, most of the respondents who had frequent seizures reported poor quality of life (10). Moreover, in Kenyan study increasing seizure frequency was found to be significantly associated with QOL impairment among the PLWE (30). This is may be due to, people with epilepsy frequently experiencing rejection and isolation due to the commonly held misconception of the community. This shows family education on epilepsy must be enhanced to follow their children.

In this study quality of life of epileptic patients increased by 0.19, in every unit increase in a score of stigma (β=0.1995% CI: (-0.1 - 0.1). But in Amanuel specialized hospital study Patients who had perceived stigma were negatively associated with quality of life because might be when seizures are controlled this social stigma slightly decreases (28). On the other hand, this study showed that self-depression was statistically significant influence quality of life. But in Amanuel specialized hospital study, epileptic patients with comorbid depression were negatively associated with quality of life. Because due to the study participants in saint Amanuel specialized hospital study the study participants were adults. In line with this study, significant findings got in United Arab Emirates that self-depression are one of the two strongest predictors of QOL. This is due to using the same scale measuring for quality-of-life measurement. This implies comprehensive treatment might need to improve quality of life of children.

Early age at onset of seizure or childhood-onset seizure increases decreases quality of life children. On the other hand, in North Wollo study as the age of onset of epilepsy increases, the quality of life of patients was also increased (39). This variation varies through ages the participants are adults in North Wollo study. In Kenyan study also early-stage occurrence affects quality of life of children (30) .These similarities might be due to study design. In Indian study age of onset of seizure was associated with overall QOL score. Lower QOL score was seen in children with onset of epilepsy at age less than or equal to 6 months (43). This might be similarity of study design.

The present study found that type of seizures was statistically significant in association with overall QOL and affects physical, social, and cognition domains. A score in quality of life increases by 5.98 for every unit increase in a score of type of seizure with (β=5.98, 95% CI: 0.4 - 0.7).In contrast in Iraq study type of seizure did not have a significant association with total QOL. A possible explanation of this significance difference might be related to age as a potential confounder. This implies clinical management might give according to the types of seizures. (44)

7. Strength and Limitation of the study

7.1 Strength

- The data used for this paper is taken by trained nurses.

7.2 Limitation

- The research design is cross-sectional in nature and cannot confirm causality.
- Face-to-face interview of parent for children 7-9 was used which may not be convenient to study exact feeling of children.
- Private health institutions were not included.
- Social desirably bias

8. Conclusion and Recommendation

8.1 Conclusion

This study revealed that the quality of life among children with epilepsy was low. Among three domains of QOL, participants scored highest in the social domain, while the lowest mean score was for physical domain and attitude domain.

Perceived stigma, having a seizure in the last one-month, co morbid depression and anxiety, AED adherence, AED side effects, and poor social support were statically significant for quality of life.

8.2 Recommendation

8.2.1 For the general population

Patients who had perceived stigma were associated with quality of life. On the other hand, this study showed that self-depression was statistically significant influence quality of life. Therefore, the wider public should be aware of the disadvantages of stigma for epileptic children.

8.2.2. For health care providers

Implementing interventions that focus on early detection like self depression and stigma in children with epilepsy should be of great concern for healthcare providers. It is better to enhance providing clinical counseling on how to cope with these psychological social challenges to achieve better health outcomes.

8.2.3. For programmers and policymakers

Large proportion of children had AED side effects and the proportion was higher among poly therapy users. Therefore, emphasis should be given to these children to improve the care and quality of life of children with epilepsy.

8.2.4 For researchers

Further study needs specifically qualitative study to be conducted to explore the reasons why children have low quality of life and to see the wider social challenges that may affect quality of life among children.

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Annex

My name is_____________________. I belong to the research team studying quality of life among children with epilepsy. The study is being conducted by Samuel Hailu. The objective of this study is to assess quality of life among children with epilepsy and associate factors in governmental hospitals Addis Ababa, Ethiopia.

Title: -Addis Ababa University College of Health Science School of Public Health Questionnaire for a study on the assessments of quality of life among children with epilepsy in governmental hospitals Addis Ababa, Ethiopia

You are being invited to take part in a research study. Before you decide, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully. Ask if there is anything that is not clear or if you would like more information.

All information you provide for this study is confidential and anonymous. Name are not recorded anywhere and nothing can be attributed to you personally

The research is interested in finding out about quality of life with epilepsy on children. The study will help to develop quality care service for children with epilepsy. This study is trying to improve the understanding of quality of life with epilepsy. Which implies on the wellbeing of persons in all domains of functioning including physical, psychological, social and educationalthe results of all this work may help us to understand these diseases and give better care and treatments to children with epilepsy in future.

You have been chosen because of your age and eligible for the study. You have to decide to take part; you will be provided this information sheet to keep and be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason.

You will be asked to take part in an interview which takes 30-45 min. this interview will be conducted with an interviewer. You will be asked question on quality of life. You will be able to skip any questions that you do not want to answer.

All information given by you will be kept confidential and no one except the research team members will have access to the information. Your participation is completely voluntary and you are not obligated to answer any question you are not willing to respond. If you feel any discomfort with the question, it is your right to drop it at any time you want. You may even decide not to engage in this study from the very beginning. The result of the study will be written up into a report. I hope I have clarified the purposes of the study.

If you have any question, you can ask me now or you may ask the principal investigator, Samuel Hailu, whose telephone is 0921768986

Annex I

PARENT/GUARDIAN AND PATIENT CONSENT FORM

Title: - the assessment of quality of life among children with epilepsy and associated factors in governmental hospitals of Addis Ababa, Ethiopia 2021

Protocol Number ……………………

Principal Investigator: - Samuel Hailu

Declaration by Parent/Guardian

I have read the Participant Information Sheet or someone has read it to me in a language that

I understand. I understand the purposes, procedures and risks of the research described in the project.

I have had an opportunity to ask questions and I am satisfied with the answers I have received.

I freely agree to my child participating in this research project as described and understand that I am free to withdraw them at any time during the research project without affecting their future health care.

I understand that I will be given a signed copy of this document to keep.

☐ I agree to my child receiving the treatment allocation for this intervention only.

☐ I agree to the use of de-identified (coded) data obtained in this study to be used for

Furtheranalysis

I have read the above information. I have asked all of my questions and I have received answers. I agree to enroll my child in this study.

……………………………………   …………………………………..

Signature of Parent/Guardian Date

INVESTIGATOR

I have fully explained to the parent/guardian .... the nature and purpose of the program and the procedures to be employed as described above and such risks as are involved in their performance, and I have provided the parent/guardian with a copy of the Patient Information Sheet.

……………………………   …………………………………..

Signature of Investigator   Date

………………………………….   …………………………………..

Name Title

Annex II

Information sheet for hospitals

Re: -the assessment of quality of life among children with epilepsy and associated factors in governmental hospitals of Addis Ababa, Ethiopia 2021

I am currently undertaking honors masters in AAU and research proposal is to be submitted as a partial fullfiment of the course. The information needed to complete this study will be gathered by means of a questionnaire a copy of which you will find enclosed. This will consistof quality of life assessment and associated factor with epilepsy. The results could prove to be beneficial in identifying any issues that need to be addressed should you agree to the staff nurses participating, I would be grateful if you would provide me with a list of children in your hospital. Each participant will receive a cover letter and consent will be implied on receipt of completed questionnaires confidentiality and anonymity will be assured at all times.

Thank you for taking the time to read this letter. If you have only queries or would like to discuss this matter furthers before making a decision, please do not hesitate to contact me at the above address or telephone number.

Yours sincerely

………………………………

Annex III Questionnaires

Part I Demographic characteristics and general condition of the child			
No	Question	Response and coding	Remarks
1.	How old are you in your last birthday	…………………….	
2.	Sex of respondent	Female………..1 Male…………..2	
3.	What is the age at which the Epilepsy started this child?	……………………	
4.	Seizure frequency (past year)	………………………	
5.	Type of seizure	Generalized ……….1 Complex partial……2 Others………………3	
6.	Etiology of seizure	Idiopathic…………1 Cryptogenic ……….2 Familial …………...3 Symptomatic……….4	
7.	Number of antiepileptic drugs	None……………….1 Mono therapy………2 Di therapy……..…..3 Poly therapy………..4	

Part II Health Perception			
8.	In general, would you say your health is:	Excellent…………..1 Very Good…………2 Good………………3 Fair………………..4 Poor……………….5	
Part III Physical Functioning			
9.	Heavy activities, such as running, participating in very active sports (such as gymnastics, roller-balding, skiing)?	Very often………………….1 Often……………………….2 Sometimes………………….3 Not often……………………4 Never ……………………….5	
10.	Moderate activities (such as walking to school, bicycle riding)?	Very often………………….1 Often……………………….2 Sometimes………………….3 Not often……………………4 Never ……………………….5	
11.	Light activities (such as carrying packages or a school bag full of books)?	Very often………………….1 Often……………………….2 Sometimes………………….3 Not often……………………4 Never ……………………….5	
12.	Other daily activities (such as taking a bath/shower alone, going to and from school alone)	Very often………………….1 Often……………………….2 Sometimes………………….3 Not often……………………4 Never ……………………….5	
13.	Do fewer things than you would have	Very often………………….1 Often……………………….2	

	liked to do?	Sometimes…………………3 Not often……………………4 Never ……………………….5	
14.	Limit the kind of schoolwork, chores, sports, or other activities you did?	Very often…………………1 Often……………………….2 Sometimes…………………3 Not often……………………4 Never ……………………….5	
15.	Have difficulty performing the schoolwork, chores, sports, or other activities you did(for example, it took extra effort)?	Very often…………………1 Often……………………….2 Sometimes…………………3 Not often……………………4 Never ……………………….5	
16.	Did you skip school for no reason?	Very often…………………1 Often……………………….2 Sometimes…………………3 Not often……………………4 Never ……………………….5	
17.	Were you in trouble in school (with teachers or other staff)?	Very often…………………1 Often……………………….2 Sometimes…………………3 Not often……………………4 Never ……………………….5	
18.	Were you in trouble out of school (with police, security guards, bus driver, etc.)?	Very often…………………1 Often……………………….2 Sometimes…………………3 Not often……………………4 Never ……………………….5	
Part IV Attitude toward Epilepsy			
19.	Had trouble concentrating on an	All of the time……………1	

	activity?	Most of the time…………..2 Some of the time…………..3 A little of the time…………4 None of the time…………..…5	
20.	Had trouble concentrating on reading?	All of the time……………1 Most of the time……………..2 Some of the time…………..3 A little of the time…………4 None of the time…………..…5	
21.	Had difficulty thinking?	All of the time……………1 Most of the time…………..2 Some of the time…………..3 A little of the time…………4 None of the time…………..5	
22.	Had difficulty figuring out and solving problems (such as making plans, making decisions, learning new things)?	All of the time……………1 Most of the time…………..2 Some of the time…………..3 A little of the time…………4 None of the time…………..5	
23.	Had a problem with complicated projects that require organization or planning like computer games or difficult homework)?	All of the time……………1 Most of the time…………..2 Some of the time…………..3 A little of the time…………4 None of the time…………..5	
24.	Had trouble remembering things you read hours or days before?	All of the time……………1 Most of the time…………..2 Some of the time…………..3 A little of the time…………4 None of the time…………..5	

25.	Had trouble finding the correct word?	All of the time…………..1 Most of the time…………..2 Some of the time…………..3 A little of the time…………4 None of the time…………..5	
26.	Had trouble understanding your teachers?	All of the time…………..1 Most of the time…………..2 Some of the time…………..3 A little of the time…………4 None of the time…………..5	
27.	Had trouble understanding what you read?	All of the time…………..1 Most of the time…………..2 Some of the time…………..3 A little of the time…………4 None of the time…………..5	
Part V Socio functioning (social support, school behavior and feeling of stigma)			
28.	Have someone available to help you if you needed and wanted help?	Very often………………….1 Very often………………….1 Often……………………….2 Sometimes………………….3 Not often……………………4 Never ……………………….5	
29.	Have someone you could confide in or talk to about things that were troubling you?	Very often………………….1 Often……………………….2 Sometimes………………….3 Not often……………………4 Never ……………………….5	
30.	Have someone you could talk to when you were confused and needed to sort	Very often………………….1 Often……………………….2	

	things out?	Sometimes…………………3 Not often……………………4 Never ……………………….5	
31.	Have someone who accepted you as you were, both your good points and bad points?	Very often…………………1 Often……………………….2 Sometimes…………………3 Not often……………………4 Never ……………………….5	
Part VI effects of epilepsy and anti-epilepsy medications			
32.	Feel that epilepsy or medications limited your social activities (such as hanging out with friends, doing extra-curricular activities) compared with social activities of others your age?	Very often…………………1 Often……………………….2 Sometimes…………………3 Not often……………………4 Never ……………………….5	
33.	Feel alone and isolated from others because of your epilepsy/ seizures?	Very often…………………1 Often……………………….2 Sometimes…………………3 Not often……………………4 Never ……………………….5	
34.	Miss classes because of seizures or medications?	Very often…………………1 Often……………………….2 Sometimes…………………3 Not often……………………4 Never ……………………….5	
35.	Use epilepsy or medication side effects as an excuse to avoid doing something you didn’t really want to	Very often…………………1 Often……………………….2 Sometimes…………………3	

	do?	Not often……………………4 Never ……………………….5	
36.	Feel embarrassed or "different" because you had to take medications?	Very often…………………1 Often……………………….2 Sometimes………………….3 Not often……………………4 Never ……………………….5	
37.	Feel that epilepsy or medications limited your school performance?	Very often…………………1 Often……………………….2 Sometimes………………….3 Not often……………………4 Never ……………………….5	
38.	Feel you had limitations because of your seizures?	Very often…………………1 Often……………………….2 Sometimes………………….3 Not often……………………4 Never ……………………….5	
39.	Feel that epilepsy or medications limited your independence?	Very often…………………1 Often……………………….2 Sometimes………………….3 Not often……………………4 Never ……………………….5	
40.	Feel that epilepsy or medications limited your social life or dating?	Very often…………………1 Often……………………….2 Sometimes………………….3 Not often……………………4 Never ……………………….5	
41.	Feel that epilepsy or medications limited your participation in sports or physical activities?	Very often…………………1 Often……………………….2 Sometimes………………….3 Not often……………………4	

		Never ……………………….5	
42.	About how you looked (side effects such as weight gain, acne/pimples, hair change, etc.)?	Very bad……………………1 Bad………………………….2 Ok…………………………..3 Good………………………..4 Very good…………………...5	
43.	How much were you bothered by: Limits set by parents/family because of your epilepsy or medications?	A lot………………………..1 Some……………………….2 Not much…………………..3 A little………………………4 Not at all…………………….5	
Part VI Epilepsy Impact			
44.	I consider myself to be less than perfect because I have epilepsy	Strongly agree………………1 Agree………………………..2 Dis agree…………………….3 Strongly disagree……………4	
45.	If I applied for a job, and someone else also applied who didn't have epilepsy, the employer should hire the other person.	Strongly agree………………1 Agree………………………..2 Dis agree…………………….3 Strongly disagree……………4	
46.	I can understand why someone wouldn't want to date me because I have epilepsy.	Strongly agree………………1 Agree………………………..2 Dis agree…………………….3 Strongly disagree……………4	
47.	I don't blame people for being afraid of me because I have epilepsy.	Strongly agree………………1 Agree………………………..2 Dis agree…………………….3 Strongly disagree……………4	
48.	I don't blame people for taking my opinions less seriously than they	Strongly agree………………1 Agree………………………..2 Dis agree…………………….3	

	would if I didn't have epilepsy.	Strongly disagree……………4	
49.	I feel that my epilepsy makes me mentally unstable	Strongly agree………………1 Agree………………………..2 Dis agree…………………….3 Strongly disagree……………4	
50.	How good or bad has it been that you have epilepsy?	Very bad……………………1 A little bad…………………..2 Not sure…………………..…3 A little good…………………4 Very good……………………5	
51.	How bad or good have you felt it is to have epilepsy?	Very bad……………………1 A little bad…………………..2 Not sure…………………..…3 A little good…………………4 Very good……………………5	
52.	How fair has it been that you have epilepsy?	Very unfair…………………..1 A little unfair………………..2 Not sure……………………..3 A little fair…………………..4 Very fair…………………….5	
53.	How happy or sad has it been for you to have epilepsy?	Very sad……………………..1 A little sad…………………..2 Not sure……………………..3 A little happy………………..4 Very happy………………….5	
54.	How often do you feel that your epilepsy kept you from starting new things?	Very often…………………1 Often……………………….2 Sometimes………………….3 Not often……………………4 Never ……………………….5	

55.	Worry about having another seizure?	Very often…………………1 Often……………………….2 Sometimes………………….3 Not often……………………4 Never ……………………….5	
56.	Fear dying because of seizures?	Very often…………………1 Often……………………….2 Sometimes………………….3 Not often……………………4 Never ……………………….5	
57.	Worry about hurting yourself during a seizure?	Very often…………………1 Often……………………….2 Sometimes………………….3 Not often……………………4 Never ……………………….5	
Factor affecting quality of life			
58.	Depression	Very often…………………1 Often……………………….2 Sometimes………………….3 Not often……………………4 Never ……………………….5	
59.	Anxiety	Very often…………………1 Often……………………….2 Sometimes………………….3 Not often……………………4 Never ……………………….5	
60.	Stigma	Very often…………………1 Often……………………….2 Sometimes………………….3 Not often……………………4 Never ……………………….5	

በአዲስ አበባ ዩኒቨርሲቲ የጤና ሳይንስ ኮሌጅ የህብረተሰብ ጤና ትምህርት ክፍል
በአዲስ አበባ ከተማ የሚገኙ የሚጥል በሽታ ያለባቸው ህጻናት የአናናር ሁነታ በአዲስ አበባ መንግስታዊ
ሆስፒታሎች ለማጥናት የተዘጋጀ የአማርኛ መጠይቅ

ጤናይስጥልኝ፤

ስሜ_________________________እባላለሁ::በአዲስ አበባ ከተማ የሚገኙ የሚጥል በሽታ ያለባቸው ህጻናት የአናናር ሁነታ በአዲስ አበባ መንግስታዊ ሆስፒታሎች ከሚያጠኑት አካላት አንዱ/ዷ ነኝ። ጥናቱ የሚካሄደው በአዲስ አበባ ዩኒቨርሲቲ የህብረተሰብ ጤና ትምህርት ቤት የህብረተሰብ ጤና የድህረ-ምረቃ ተማሪ በሆነው በሳሙአል ሀይሉ ነው። የጥናቱ ዋና ዓላማ የሚጥል በሽታ ያለባቸው ህጻናት የአናናር ሁነታ አንጻር ያላቸው ውጤታማነት ምን ይመስላል የሚለውን ለማጥናት ነው።

ርዕስ፡- በአዲሰ አበባ ከተማ የሚገኙ የሚጥል በሽታ ያለባቸው ህጻናት የአኗኗር ሁኔታ በአዲስ አበባ በሚገኙ መንግስታዊ ሆስፒታሎች

አንተን/አንችን የምጠይቅህ/ሽ በዚህ ጥናት ላይ እንድትሳተፍ/ፊ እና ለጥያቄዎቹ ትክክለኛ ምላሽ እንድትሰጠኝ/እንድትሰጬኝ ነው። ያንተ/ቺ በዚህ ጥናት ላይ መሳተፍ የሚጥል በሽታ ያለባቸው ህጻናት የአናናር ሁነታ አንጻር ያላባቸው ተፅዕኖ ምን እንደ ሚመስል ለመለየት ይጠቅማል።

ይሄ ጥናት የሚጥል በሽታ ያለባቸው ህጻናት አኗኗር በተመለከተ ነው። የጥናቱም ጥቅም የተሻለ የህክምና ክትትል እንዲያገኙ ታሳቢ ያደረገ ነው። የጥናቱም ጥቅም የተሸለ የህክምና ክትትል እንዲያገኙ ታሳቢ ያደረገ ነው። የአኗኗር ሁኔተ ማሳደግ የአካላዊ፣ የሥነ-ልባናዊ፣ የማህበራሰባዊ እና የትምህርት ሁኔታዎችን ያጠቃለልላል። ስለሆነም እነዚህ ሁሉ በተገቢው መልኩ እንዲሄዱ የተሻለ ህክምና በቀጣይ እንዲያገኙ ያደርጋል።

በዚህ ጥናት የተመረጡት መስፈርቱን ስለሚያሟሉ ነው ጥናቱን ከመሳተፎ በፊት የፍቃደኝነት ቅጽ እንዲፈርሙ ይጠየቃሉ፡፡ ጥናቱ ከ30-45 ደቂቃ የሚፈጅ ነው፡፡ ጥያቄዎቹ የእለት የህጻኑን/ኗን/ ውሎ የተመለከተ ነው፡፡ ያልተረዷቸውን ጥያቄዎች መዝለል ይቻላል፡፡

ሁሉም መረጃዎች ሚስጥራዊ ናቸው፡፡ ከሚከታተሎት ባለሙያና ከጥናቱ አጥኚዎች በስተቀር የተሳትፎው ሁኔታ በፍቃደኝነት የተመሰረተ ነው በምንም ሁኔታ አይገደዱም አስፈላጊ ነው ባሉት ሰዓት ማቋረጥ ይችላሉ፡፡ የዚህ ጥናት ውጤት ሪፖርት ያደርጋል፡፡ነገር ግን ስምም ሆነ አድራሻ አይገለጽም፡፡

አሁን ስለ ጥናቱ እንደተረዱ አስባለሁ፡፡ ስለ ጥናቱ ዓላማ በሚገባ አብራርቸልሃለሁ/አብራርቸልሻለሁ የሚል ተስፋ አለኝ፡፡ ጥያቄ ካለህ/ሽ አሁኑኑ መጠየቅ ትችላለህ/ትችያለሽ ወይም ዋናውን ሳሙኤል ሀይሉን በሚከተለው አድራሻ መጠየቅ ይቻላል፡፡

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የጥናቱ መረጃ ቅጽ፤

ቅጽ 1

የቤተሰብ /የአሳዳጊ የፍቃደኝነት ቅጽ

ርዕስ፡- በአዲሰ አበባ ከተማ የሚገኙ የሚጥል በሽታ ያለባቸው ህጻናት የአኗኗር ሁኔታ በአዲስ አበባ በሚገኙ መንግስታዊ ሆስፒታሎች

መለያ ቁጥር ------------------------------

የጥናቱ መሪ ሳሙኤል ሃይሉ

መግለጫ

- **በሚገባኝ እና በምረዳው ቋንቋ የተገለጸ በመሆኑ ቃለ መጠይቁን ራሴ አንብቤ ተረድቻለሁ**
- **የጥናቱን አላማ፣ ሂደት፣ ጥቅምና ጉዳት በሚገባ ተረድቻለሁ**
- **ጥያቄዎችን እንድጠይቅ እድሉን አግቻለሁ፡፡ ተገቢውንም መልስ ተቀብያለሁ፡**
- **በዚህ ጥናት ላይ ልጄ እንዲሳተፍ ፍቃደኝነቴን ገልጫለሁ ባልፈለግንም ሰዓት ከጥናቱ መውጣት እንደምንችል ተረድቻለሁ፡፡ ይህም የጤና ክትትሉ ላይመ ተጽእኖ እንደሌለው ተገልጾልኛል፡፡**
- **የጥናቱንም ዶክመንት የማግኘት መብት እንዳለኝ አረጋግጫለሁ፡፡**

☐ **ልጄ በጥናቱ እንዲሳተፍ ፈቅጃለሁ፡፡**

ስለ ጥናቱ በቃልየተደረገልኝ ማብራሪያ እና ከእኔ ምን እንደ ሚጠበቅ በሚገባ ተረድቻለሁ። እንዲሁምበማንኛውም ጊዜ ምክንያቴን የማሳወቅ ግዴታ ሳይኖርብኝ ከቃለ መጠይቁ መውጣት እንደምችልና ከቃለ መጠይቁ በመውጣቴ እኔም ሆንኩ ቤተሰቦቼ የተለመደው/መደበኛው አገልግሎት ላይ ምንም አይነት ተፅዕኖ እንደማይደረግብኝ ተረድቻለሁ።

በጥናቱ ለመሳተፍ ፈቃደኛነህ/ሽ?

1. አዎ……………………………..ወደሚቀጥለው ገጽ ሂድ/ጅ

2. አይ…………………………… ወደሚቀጥለው ተሳታፊ ሂድ/ጅ

ቃለ-መጠይቁን ያካሄደው መረጃ ሰብሳቢ ፊርማ---------------------

መረጃው የተሰበሰበበት ቀን--------/--------/-------------

ቅጽ 2

ለሆስፒታሎች ሥለ ጥናቱ የተዘጋጀ አጭር መግለጫ

ርዕስ፡-

እኔ በአ/አ/ዩ የህብረተሰብ ጤና ትምህርት ቤት የምማር ሲሆን አሁን የማጠናው ጥናት የማስተርስ ትምህርቴ ማሟያነት ነው። ይህ መግለጫ የተዘጋጀው በሆስፒታሎቹ በሚገኙት ህጻናት ላይ በሚደረገው ቃለ መጠይቅ ላይ ማብራሪያ ለመስጠት ነው። ጥናቱ የሚጥል በሽታ ያለባቸው ህጻነት አኗኗር እና ከሱ ጋር ተያይዞ የሚገጥማቸው ችግር በተመለከተ ነው። አላማውም ያሉትን ጉዳዮች ለማሳወቅ እና ለሚንከባከባቸው የጤና ባለሙያዎች ያንንም ያካተተ ድጋፍ እንዲያደርጉላቸው ለማስገንዘብ ነው። የጥናቱም ጥቅም የተሸለ የህክምና ክትትል እንዲያገኙ ታሳቢ ያደረገ ነው። የአኗኗር ሁኔተ ማሳደግ የአካላዊ፣ የሥነ-ልባናዊ፣ የማህበራሰባዊ እና የትምህርት ሁኔታዎችን ያጠቃልላል፡፡ ስለሆነም እነዚህ ሁሉ በተገቢው መልኩ እንዲሄዱ የተሻለ ህክምና በቀጣይ እንዲያገኙ ያደርጋል።

በዚህ ጥናት የተመረጡት መስፈርቱን ስለሚያሟሉ ነው ጥናቱን ከመሳተፎ በፊት የፍቃደኝነት ቅጽ እንዲፈርሙ ይጠየቃሉ፡፡ ስለሚስጥራዊነቱም ማብራሪያና በተዘጋጀው ቅጽ ያለዉ ፊርማ ተሳታፊው ፈቃደኝነቱን መስጠቱን ነው፡፡

ከ አክብሮት ጋራ

ተ. ቁ	ጥያቄዎች	መልሶች
1.	እድሜህ/ሽ ስንትነው	……………
2.	ጾታ	ሴት………….1 ወንድ……,,…2
3.	የሚጥልበሽታከያዘህ/ሽ ምንያህልጊዜሆነ ……………	………………
4.	ለምንያህልጊዜያንቀጠቅጥሃል/ሻል………………..	………………………
5.	የማንቀጥቀጥአይነቶች	ሙሉየሰውነትአካል………..1

		ግማሽየሰውነትክፍል.........2 ሌላ 3
6.	የማንቀጥቀጥመነሻምክንያቶች	አይታወቅም.....................1 ምስጢራዊየሆነ...............2 በዝምድናየተሳሰረ.............3 ምልክትያለው.................4
7.	የሚወሰዱመድሃኒቶችብዛት	ምንም..............................1 አንድመድሃኒት.................2 ሁለትመድሐኒት................3 ብዙመድሃኒት...................4
8.	አሁንያለህ/ሽ የጤናሁኔታእንዴትይገለጻል	እጅግበጣምጥሩ................1 በጣምጥሩ........................2 ጥሩ................................3 በቂ.................................4 ደካማ.............................5
9.	ከባድስራዎችለምሳሌመሮጥ፣ጂምናስቲክ	በጣምብዙጊዜ.................1 ብዙጊዜ..........................2 አንዳንድጊዜ.....................3 በጥቂቱ............................4 በፍጹም...........................5
10.	መካከለኛስራዎችለምሳሌበእግርወደ ት/ቤትመሄድ	በጣምብዙጊዜ.................1

		ብዙጊዜ........................2 አንዳንድጊዜ....................3 በጥቂቱ..........................4 በፍጹም..........................5
11.	ቀለልያሉስራዎችለምሳሌእቃመያዝ /መጻህፍት	በጣምብዙጊዜ................1 ብዙጊዜ........................2 አንዳንድጊዜ....................3 በጥቂቱ..........................4 በፍጹም..........................5
12.	ሌሎችየእለትእንቅስቃሴዎች	በጣምብዙጊዜ................1 ብዙጊዜ........................2 አንዳንድጊዜ....................3 በጥቂቱ..........................4 በፍጹም..........................5
13.	ባለፉትሳምንታትአካላዊወይንምስነልቦናዊችግሮችንየተመለከተጥያቄዎችከተለመደውባነሰመልኩየሰራኸው /የሰራሽውበጋራነው	በጣምብዙጊዜ................1 ብዙጊዜ........................2 አንዳንድጊዜ....................3 በጥቂቱ..........................4 በፍጹም..........................5
14.	ከተለምዶከትምህርትቤትየቤትስራጀምሮእስከየተለምዶድርጊቶች ለመስራትያቃተህ/ሽ ጊዜ	በጣምብዙጊዜ................1 ብዙጊዜ........................2 አንዳንድጊዜ....................3

		በጥቂቱ.............................4 በፍጹም............................5
15.	የተለመዱስራዎችንለማከናወንተጨማሪጥረቶችአስፈልጎህ/ሽ ነበር	በጣምብዙጊዜ..................1 ብዙጊዜ..........................2 አንዳንድጊዜ......................3 በጥቂቱ.............................4 በፍጹም............................5
16.	ያለምንምምክንያትትምህርትአቋመህ/ሽ ታውቃለህ/ሽ	በጣምብዙጊዜ..................1 ብዙጊዜ..........................2 አንዳንድጊዜ......................3 በጥቂቱ.............................4 በፍጹም............................5
17.	ከመምህራንወይንምከሌሎችባለሙያዎችጋርችግርውስጥገብተህ/ ሽ ታውቂያለህ/ሽ	በጣምብዙጊዜ..................1 ብዙጊዜ..........................2 አንዳንድጊዜ......................3 በጥቂቱ.............................4 በፍጹም............................5
18.	ከትምህርትቤትውጪከሰዎችጋርለምሳሌታክሲውስጥከጥበቃጋር ግጭት /ችግርውስጥገብተህ/ሽ ታውቃለህ/ሽ	በጣምብዙጊዜ..................1 ብዙጊዜ..........................2 አንዳንድጊዜ......................3 በጥቂቱ.............................4 በፍጹም............................5

19.	ስሜትንተቆጣጥሮትኩረትሰጥቶስራለመስራትተቸግረህ/ሽ ነበር	በጣምብዙጊዜ.................1 ብዙጊዜ..........................2 አንዳንድጊዜ.....................3 በጥቂቱ............................4 በፍጹም...........................5
20.	ትኩረትሰጥቶለማንበብተቸግረህ/ሽ ነበር	በጣምብዙጊዜ.................1 ብዙጊዜ..........................2 አንዳንድጊዜ.....................3 በጥቂቱ............................4 በፍጹም...........................5
21.	ለማሰብናለማመዛዘንተቸግረህ/ሽ ነበር	በጣምብዙጊዜ.................1 ብዙጊዜ..........................2 አንዳንድጊዜ.....................3 በጥቂቱ............................4 በፍጹም...........................5
22.	ከበድያሉችግሮችንለማሰብተቸግረህ/ሽ ነበርለምሳሌ (እቅድለማውጣትውሳኔዎችንለመወሰንአዲስነገርለመስራት	በጣምብዙጊዜ.................1 ብዙጊዜ..........................2 አንዳንድጊዜ.....................3 በጥቂቱ............................4 በፍጹም...........................5

23.	ውስብስብየሆኑስራዎችንለመስራትተቸግረሀ/ሽ ነበርለምሳሌከባድየቤትየኮምፒውተርጌም	በጣምብዙጊዜ.................1 ብዙጊዜ..........................2 አንዳንድጊዜ.....................3 በጥቂቱ............................4 በፍጹም...........................5
24.	ቀንያደረከውን /ያደረክሽውንለማስታወስትቸገራለሀ/ሽ	በጣምብዙጊዜ.................1 ብዙጊዜ..........................2 አንዳንድጊዜ.....................3 በጥቂቱ............................4 በፍጹም...........................5
25.	ስሜትለማብራራትትክክለኛቃልለማግኘትትቸገራለሀ	በጣምብዙጊዜ.................1 ብዙጊዜ..........................2 አንዳንድጊዜ.....................3 በጥቂቱ............................4 በፍጹም...........................5
26.	መምሀራኖችንለመረዳትትቸገራለሀ/ሽ	በጣምብዙጊዜ.................1 ብዙጊዜ..........................2 አንዳንድጊዜ.....................3 በጥቂቱ............................4 በፍጹም...........................5

27.	ያነበብከውን /ሽውንለመረዳትትቸገራለህ/ሽ	በጣምብዙጊዜ.................1 ብዙጊዜ..........................2 አንዳንድጊዜ.....................3 በጥቂቱ............................4 በፍጹም...........................5
28.	እርዳታበምትፈልግበትሰዓትአቅርበየሚያወራህሰውታገኛለህ/ሽ	በጣምብዙጊዜ.................1 ብዙጊዜ..........................2 አንዳንድጊዜ.....................3 በጥቂቱ............................4 በፍጹም...........................5
29.	በሚያስጨንቁጉዳዮችላይለማውራትየሚከለክልህወይምየሚያወራህሰውታገኛለህ/ሽ	በጣምብዙጊዜ.................1 ብዙጊዜ..........................2 አንዳንድጊዜ.....................3 በጥቂቱ............................4 በፍጹም...........................5
30.	ግራበምትጋባበትጊዜአቅርበየሚያወራህሰውወይምችግርህንየሚፈታልህታገኛለህ/ሽ	በጣምብዙጊዜ.................1 ብዙጊዜ..........................2 አንዳንድጊዜ.....................3 በጥቂቱ............................4 በፍጹም...........................5
31.	ጥሩነገርስታደርግኀበዝስታጠፋደግሞተውየሚልህሰውታገኛለህ/ሽ	በጣምብዙጊዜ.................1 ብዙጊዜ..........................2

		አንዳንድጊዜ......................3 በጥቂቱ............................4 በፍጹም...........................5
32.	የሚጥልበሽታስላለብህ/ሽ ወይንምመድሃኒትስለምትወስድማህበራዊህይወትህላይተጽዕኖፈ ጥሮብሃል (ለምሳሌከጓደኞችህጋርጊዜማሳለፍ	በጣምብዙጊዜ.................1 ብዙጊዜ..........................2 አንዳንድጊዜ......................3 በጥቂቱ............................4 በፍጹም...........................5
33.	በበሽታምክንያትየብቸኝነት/የመገለልስሜትይሰማሃል	በጣምብዙጊዜ.................1 ብዙጊዜ..........................2 አንዳንድጊዜ......................3 በጥቂቱ............................4 በፍጹም...........................5
34.	በበሽታውምክንያት ት/ቤትቀርተህታውቃለህ/ሽ	በጣምብዙጊዜ.................1 ብዙጊዜ..........................2 አንዳንድጊዜ......................3 በጥቂቱ............................4 በፍጹም...........................5
35.	የመድሃኒቱየጎንዮሽጉዳትምትፈልገውን /ምትፈልጊውንበጋራእንዳሰራ/ሪ አድርጎሃል/ሻል	በጣምብዙጊዜ.................1 ብዙጊዜ..........................2 አንዳንድጊዜ......................3 በጥቂቱ............................4 በፍጹም...........................5

36.	ቅርየመሰኘትስሜትወይንምየመቆጨትስሜተለመድሃኒቱምክንያ ትተሰምቶህ/ሽ ያውቃል	በጣምብዙጊዜ.................1 ብዙጊዜ..........................2 አንዳንድጊዜ.....................3 በጥቂቱ............................4 በፍጹም...........................5
37·	መድሃኒትበመውሰድህ/ሽ የት/ቤትውጤትላይተጽዕኖፈጥሮብሃል/ሻል	በጣምብዙጊዜ.................1 ብዙጊዜ..........................2 አንዳንድጊዜ.....................3 በጥቂቱ............................4 በፍጹም...........................5
38.	በተደጋጋሚስለሚጥልየፈልከውን /የፈለክሽውንእንዳትሰራእንደከለከለህ/ሽ ታስባለህ/ሽ	በጣምብዙጊዜ.................1 ብዙጊዜ..........................2 አንዳንድጊዜ.....................3 በጥቂቱ............................4 በፍጹም...........................5
39·	በሽታውራሴንችዬእንዳልቆምአድርጎኛልብለህ/ሽ ታስባለህ/ሽ	በጣምብዙጊዜ.................1 ብዙጊዜ..........................2 አንዳንድጊዜ.....................3 በጥቂቱ............................4 በፍጹም...........................5

40.	በሽታውመድሃኒቱንመውሰድህየማህበራዊግንኙነትህላይተጽዕኖእንዳደረገታስባለህ/ሽ	በጣምብዙጊዜ……………..1 ብዙጊዜ……………………2 አንዳንድጊዜ…………………3 በጥቂቱ……………………….4 በፍጹም………………………5
41.	በሽታውመድሃኒቱንመውሰድህ/ሽ ስፖርታዊእንቅስቃሴከማድረግአግዶኛልብለህ/ሽ ታስባለህ/ሽ	በጣምብዙጊዜ……………..1 ብዙጊዜ……………………2 አንዳንድጊዜ…………………3 በጥቂቱ……………………….4 በፍጹም………………………5
42.	የጎንዮሽጉዳቶቹንበምንአይነትመልኩነውየምትረዳቸውከመድሃኒቱየጎንዮሽጉዳትጋርየተያያዙጥያቄቆችየምትረጃቸው ለምሳሌመወፈር፣ የጸጉርለውጥብጉርመውጣት	በጣምበመጥፎ………………1 በመጥፎ………………………2 በምንም……………………….3 በጥሩ………………………..4 በጣምጥሩ…………………….5
43.	በመድሃኒቱምክንያትምንያህልበቤተሰብናከጓደኛተገድበሃል	በጣምብዙጊዜ……………..1 ብዙጊዜ……………………2 አንዳንድጊዜ…………………3 በጥቂቱ……………………….4 በፍጹም………………………5

44.	የሚጥልበሽታስላለብኝትክክልአይደለሁምብዬአስባለሁ	በጣምእስማማለሁ...............1 እስማማለሁ.......................2 አልስማማም.....................3 በጣምአልስማማም 4
45.	በሽታውከሌለባቸውሰዎችጋርለስራብወዳደርእኔንአይመርጠኝም ብዬአስባለሁ	በጣምብዙጊዜ.................1 ብዙጊዜ..........................2 አንዳንድጊዜ.....................3 በጥቂቱ............................4 በፍጹም...........................5
46.	በሽታውየፍቅርግንኙነትለማሰብሊያግደኝይችላል	በጣምብዙጊዜ.................1 ብዙጊዜ..........................2 አንዳንድጊዜ.....................3 በጥቂቱ............................4 በፍጹም...........................5
47.	በሽታውንአይተውሰዎችቢርቁኝትክክልናቸውብዬአስባለሁ	በጣምብዙጊዜ.................1 ብዙጊዜ..........................2 አንዳንድጊዜ.....................3 በጥቂቱ............................4 በፍጹም...........................5
48.	በበሽታውምክንያትየእኔንሀሳብባይቀበሉኝመወቀስአይኖርባቸውም	በጣምብዙጊዜ.................1 ብዙጊዜ..........................2 አንዳንድጊዜ.....................3 በጥቂቱ............................4 በፍጹም...........................5

49.	በበሽታውምክንያትተረጋግቼማሰብእንዳልችልአርጎኛልብዬአስባለሁ	በጣምብዙጊዜ.................1 ብዙጊዜ.........................2 አንዳንድጊዜ....................3 በጥቂቱ...........................4 በፍጹም..........................5
50.	የሚጥልበሽታበጋራአስተሳሰብንየተመለከቱጥያቄዎችበሽታውስለኖረብኝምንአይነትስሜትይሰማኛል	በጣምመጥፎ.....................1 መጥፎ............................2 እርግጠኛአይደለሁም............3 ጥሩ...............................4 በጣምጥሩ.........................5
51.	የሚጥልበሽታስላለብኝመጥፎወይንምጥሩስሜትይሰማኛል	በጣምመጥፎ.....................1 መጥፎ............................2 እርግጠኛአይደለሁም............3 ጥሩ...............................4 በጣምጥሩ.......................5
52.	የሚጥልበሽታስላለብኝፍትሃዊአይደለምብዬአስባለሁ	በጣምፍትሃዊ....................1 ፍትሃዊያልሆነ...................2 እርግጠኛአይደለሁም............3 በጣምደህና.......................4 ደህና..............................5
53.	ምንያህልየመደሰትወይንምየመከፋትስሜትይሰማኛል	በጣምአስከፊ.....................1 አስከፊ............................2 እርግጠኛአይደለሁም.......................3 በትን..............................4 በጣምደስተ.......................5

54.	አዲስነገርእንደልጀምርበበሽታው ገድቦኛልብዬአስባለሁ	በጣምብዙጊዜ..................1 ብዙጊዜ...........................2 አንዳንድጊዜ......................3 በጥቂቱ.............................4 በፍጹም............................5
55.	የማንቀጥቀጥሁነታይቀጥልብኛል ብለህ/ሽ ታስባለህ/ሽ	በጣምብዙጊዜ..................1 ብዙጊዜ...........................2 አንዳንድጊዜ......................3 በጥቂቱ.............................4 በፍጹም............................5
56.	በበሽታውእሞታለሁብለህ/ሽትፈራለህ/ሽ	በጣምብዙጊዜ..................1 ብዙጊዜ...........................2 አንዳንድጊዜ......................3 በጥቂቱ.............................4 በፍጹም............................5
57.	በህመሙምክንያትእራሲንእጎዳሊሁብለህ/ሽ ታስባለህ/ሽ	በጣምብዙጊዜ..................1 ብዙጊዜ...........................2 አንዳንድጊዜ......................3 በጥቂቱ.............................4 በፍጹም............................5