

**ADDIS ABABA UNIVERSITY
COLLEGE OF HEALTH SCIENCES
SCHOOL OF NURSING AND MIDWIFERY**

**EMOTIONAL AND BEHAVIORAL PROBLEMS AND ITS ASSOCIATED
FACTORS AMONG CHILDREN AND ADOLESCENTS ON HIGHLY
ACTIVE ANTIRETROVIRAL THERAPY IN GOVERNMENTAL PUBLIC
HEALTH INSTITUTIONS IN WEST GOJJAM ZONE, AMHARA
REGIONAL STATE, ETHIOPIA, 2018**

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**RESEARCH THESIS SUBMITTED TO ADDIS-ABABA UNIVERSITY,
COLLEGE OF HEALTH SCIENCE, SCHOOL OF NURSING AND
MIDWIFERY FOR PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR DEGREE OF MASTERS OF SCIENCE IN PEDIATRIC AND CHILD
HEALTH NURSING.**

**JUNE,2018
ADDIS ABABA, ETHIOPIA**

ACKNOWLEDGEMENT

First, I would like to thank Addis Ababa University and department of nursing and midwifery for giving this chance to attend MSC program and Debretabor University for sponsoring me.

Secondly I would like to forward my deepest gratitude to my advisors Mr. Abdesa Boka and Mrs. Zureyash Mengstu for his and her valuable suggestions, advice, comments and concerns by spending their time and energy starting from proposal development to thesis report.

Then I gratefully thank all health centers and hospitals for their permission to collect data, supervisors, data collectors and all respondents of the study for their willing and genuine response.

Finally, I would like to extend my gratitude to my colleagues who genuinely suggest and comment me, Mr.wubalem fekadu (BSc, MSc in mental health and PhD Fellow) and Mr. Zelalem Belayneh (BSc, MSc, in mental health).

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ABBREVIATIONS AND ACRONYMS

| | |
|--------|---------------------------------------|
| AIDS: | Acquired Immune Deficiency Syndrome |
| AOR: | Adjusted Odds Ratio |
| ART: | Antiretroviral Therapy |
| ARV: | Antiretroviral |
| CI: | Confidence Interval |
| COR: | Crude Odd Ratio |
| EBP: | Emotional and Behavioral Problems |
| FMOH: | Federal Ministry of Health |
| HAART: | Highly Active Antiretroviral Therapy |
| HIV: | Human Immune Virus |
| PLWHA: | People Living With HIV/AIDS |
| PSCL: | Pediatrics Symptomatology Check List |
| SPSS: | Stastical package for social sciences |
| SRQ: | Self Response Questionnaire |

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ABSTRACT

Background: Children and adolescents under age 20 are projected to grow by about 33 percent accompanied with high vulnerable period for human immune virus-infection and high risk behaviors. The impact of human immune virus to emotional and behavioral problems that remains untreated may result in long-term problems. HIV-related mortality among HIV-positive children and adolescents has risen by 50% despite the scale up of antiretroviral therapy. Those with HIV are significantly more likely to have emotional and behavioral problems than the general population. This problem needs effective and safe therapies to support their emotional and behavioral development and to avoid functional impairment and social deficits.

Objective: To assess the prevalence and associated factors of Emotional and Behavioral problems among children and adolescents on highly active antiretrotherapy in Governmental public health institutions in West Gojjam Zone, Amhara regional state, Ethiopia, 2018.

Methods: An institutional based cross sectional study design was conducted from March 30 to April 30, 2018. Four hundred twenty three Study subjects were selected by systematic random sampling. Data was cleaned manually, coded and entered into Epi -data version 4.2 and exported to SPSS version 23 software for analysis. Descriptive statistics was used to describe the study population in relation to relevant variables. Multiple logistic regression, AOR, 95% CI and p-value<0.05 was used to identify Variables which had significant association.

Result: The prevalence of EBPs in the study area was found to be 43.6%. Low age (AOR= 5.33, 95%CI: 2.56- 11.04), Having non-kin care giver other than parent and relative (AOR= 4.64, 95%CI: 1.20- 17.90),Both parental lose (AOR= 2.15, 95%CI: 1.03- 4.49), Non-disclosure of HIV sero status to self(AOR= 1.99,95%CI: 1.16- 3.41) and having distressed care giver (AOR= 1.64, 95%CI: 1.04- 2.57) were significantly associated with emotional and behavioral problems.

Conclusion and recommendation: The prevalence of emotional and behavioral problems in the study area was high. Care giver mental distress, age, disclosure status, care giver type and parental lose were associated with it. Early disclosure of children for their HIV status and mental distress screen of care giver is recommended.

Keywords: behavioral and emotional problems, Pediatric symptomatology check list, children and adolescent, highly active antirethrotherapy

1. INTRODUCTION

1.1 Background

The Plan on human immune virus 2012- 2016 emphasized that receive sustainable antiretroviral medication and halve HIV related stigma that calls for a more holistic and comprehensive approach to HIV Care and Treatment (1) taking into account the World Health Organization's definition of health, which encompasses the notion that health is a state of complete physical, mental and social well-being which integrate psychosocial support(2) And mental health is defined as a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community(3, 4).

Children and adolescents living with HIV/AIDS feel uncertainty due to treatments outcome, family care, future job condition, quality of life and life expectancy which is very special for them (5). The emotional and behavioral effects of HIV on a family are not so specific that they are wholly different from other causes of child vulnerability(6).

A few studies often use the dichotomous categories of Internalizing and Externalizing Problems as a framework to conceptualize emotional and behavioral problems(7). But pediatric symptomatology assessment of Emotional and behavioral problems consist of internalizing symptoms, Attention Problems, Externalizing Problems and unclassified type of it(8). In children emotional and behavioral problems go together(9, 10) which has been an increase problems among them in many countries(11) which is characterized by inability to learn and to build or maintain satisfactory inter personal relationships with peers, teachers and or care givers that cannot be adequately explained by intellectual, sensory and health factors (12).

Most families stated that poverty, fear of disclosing status and single-parent family structure of psychosocial effect determines the quality of life of children and adolescents living with HIV infection rather than with the impairment of physical health (13). Even though, there is huge increase in the numbers of adolescents that are affected by HIV/AIDS which resulted high

prevalence of behavioral and emotional problems(14)vulnerability due to loss of parents and environmental stressors are predetermines for psychological well-being of children (15).

But HIV can still be devastating due to the interaction with those factors(16). Additionally it is important to note that emotional and behavioral outcomes among HIV/AIDS related orphaned and non-orphaned children are more strongly influenced by family size, income, caregiver-child relationship and caregiver health(17).Similarly among them in Africa experience similar concerns of emotional and behavioral problems to those in high income countries due to the late rollout of ARVS, caregiving contexts including income, HIV status, type of care giver, loss of biological parents and disclosure of HIV positive diagnosis for them are critical emergent themes relating to it as a challenge(18).

Even though factors that affect behavioral and emotional health of children and adolescence are complex, ranging from individual biological factors to complex societal issues, it is particularly important to study it due to the far reaching consequences on health, social and educational outcomes of children and adolescents(3, 19).

Health-care systems in low-income and middle-income countries have not adequately responded to the substantial burden of emotional and behavioral problems resulting in enormous treatment gaps and major shortcomings in the delivery of mental health care(20). Like notable high level of depression in children and adolescents related to HIV with receiving ART who do not obtain services for this problems(21).

The provision of behavioral and emotional support with health seeking behavior has been acknowledged to have a significant and positive impact on PLWHA particularly for children and adolescents(22). Improving the behavioral and emotional wellbeing of them should be a holistic approach that is applicable to all children and adolescents affected by AIDS(23).

1.2 Statement of the problem

Different illness such as HIV often represents a traumatic change in the life of a child and adolescent which is significantly affecting the health and welfare of them though they are estimating to have a major influence on the social and economic development (24). Even though they are projected to grow by 33 percent in the next nearly 30 years from about 84 million to 112 million by 2050 in united states, Seventy percent of current diagnosed with emotional and behavioral problems don't receive the help they need(25).

Globally, about 3.4 million children are living with HIV in the world and died due to AIDS related cases (26). Additionally, in 2015 an estimated 29 adolescents acquired HIV every hour who are the only age group in which AIDS-related deaths are not decreasing (27). AIDS-related mortality among HIV-positive children and adolescents has risen by 50% regardless of the scale up of antiretroviral therapy by psychosocial and mental health problems(28).

Despite an introduction of active antiretroviral therapy to improve clinical problems and decrease perinatal HIV infection, children and adolescents of HIV treatment outcome has not yet satisfactory and continuing in influencing the quality life of them (29). Due to the co-morbidity of emotional and behavioral problems of HIV-infection (13) and the usual onset of occurring emotional and behavioral problems at these age group (30).

Being adolescent by itself is a challenge for vulnerability for HIV infection which results of emotional and behavioral problems (18).Non-disclosure of HIV sero - status, loss of social and/or family support, change of primary care giver, decreased access to education and health care and social services were cited (31) as emotional and behavioral related problems among HIV/AIDS children and adolescents. Orphan hood, frequent bereavement, the feeling of helplessness in the face of disease, the lack of skills to deal with the situation, the sense of guilt and shame were found to be an impact of EBPs (19).

Suicidal ideation and attempt(32), not attend school, high drop-out rates, high rates of grade retention, engage to risky behaviors and being hyperactive and inattentive while in school were also high among HIV positive patients (33). In addition to these, as the problem progress: withdrawal, anxiety, depression and conduct disorder may ultimately result in antisocial psychiatric disorder (11).

Even though such impacts has recognized among HIV-infected children and adolescents, inconsistent prevalence of emotional and behavioral problems reported among them in different parts of the world (34) like USA (35), India (8), Spain (19), Uganda (36) and Ethiopia (37).

The low level of awareness about emotional and behavioral symptoms, the widespread traditional explanatory models as well as preference for traditional treatment options might a significant challenges to utilization of child and adolescent mental health services (38).

An expanded approach to pediatric HIV care that includes a coordinated psychosocial support (16) like expanding youth friendly service, nutritional and financial support, counseling service(14) .And also capacity building in school children, fostering children social and emotional development and forming partnership with parents(39) has been implemented to prevent and reduce emotional and behavioral problems, it is still a need of countries to deal about this problems.

However, different factors significantly influence the occurrence of emotional and behavioral problems. Notably, those HIV-positive children and adolescents who had low CD4 count, had a poor school attendance (8), lack of awareness in the causation, maintenance and aggravation of mental or behavioral problems(40) were at a higher risk of developing emotional and behavioral disorders.

The surveillance data through early identification and screening of the emotional and behavioural problems of children and adolescents on ART has been recommended (41) which would require for the development of programmes and policies that aimed the health of children and adolescents. However, the focus of most studies were on adults (42, 43). Similarly, in Ethiopia no adequate data regarding emotional and behavioral problems reported though HIV-infected children and adolescents is experiencing social challenges, exposed for unhealthy behaviors and substance abuse that magnifies this problems (44).Moreover, socio-demographic factors, children and adolescents' clinical factors and caregiver-related factors rarely studied(37)

Therefore, the study to asses the emotional and behavioral problems and its associated factors among children and adolescents on highly active antiretroviral therapy in governmental public health institutions, West Gojjam Zone, Amhara regional state might be addressed.

1.3. Significance of the study

Behavioral and Emotional problems are Challenges involved in living with chronic illness particularly on HAART children and adolescents who are the major force of the country. It is currently an emerging problem among children and adolescent in developing countries including Ethiopia. Particularly, in children and adolescent living with HIV/AIDS, the aforementioned problem poses a direct threat to them and family health and wellbeing with result of parental depression, hopelessness, and risk behaviors, such as unsafe sex, suicidal ideation and attempt, drug and alcohol addiction. Furthermore, it has an impact on increasing the risk of transmission HIV, lost to follow-up, poor adherence of ART drugs and increasing viral load. Due to emotional and behavioral problem, poor adherence to ART leading to emerging of many opportunistic infections like tuberculosis, which is planned to reduce its incidence by 80% by the end of 2030 as planned by the sustainable development goal. As a result, it is also difficult to achieve the 90-90-90 strategies by considering children and adolescent on ART under this strategy.

It will use to support the development of appropriate policies, strategy and intervention programs for the prevention and treatment of emotional and behavioral problems among families and their children and adolescents on ART. As far as my knowledge is concerned, Although literatures revealed the burden and contributing factors of emotional and behavioral problems, there is little literature stated in Ethiopia particularly with similar subjects and area. So the finding of this study use as a clue and base line information for future researchers and contributes for clinical intervention and profession development.

Furthermore, this study will provide empirical information on estimation of the prevalence and correlates of emotional and behavioral problems in HIV-infected children and adolescents.

2. LITRATURE REVIEW

Prevalence of Emotional and Behavioral problems and associated factors among children and adolescents on Highly Active Antiretroviral Therapy

Different studies reported that Emotional and Behavioural symptoms are the commonly manifested problems in children and adolescents particularly those who are on highly antiretroviral therapy.

2.1. Prevalence of emotional and behavioural problems among children and adolescents

The surveys conducted in United Kingdom provide the most robust and comprehensive data on the prevalence of mental disorders among children found that 1 in 10 children (10%) had a clinically diagnosable mental disorder with variation seen according to age, sex and ethnicity(3).

A study conducted in Germany with cross-sectional design among children and adolescents with age of 4-18 years revealed that they suffer from a variety of emotional and behavioral problems which require differentiated interpretations depending on their symptom, age and sex. In accordance with the respective case definition, between 10% and 18% of the children and adolescents were considered to have a clinically relevant score requiring counseling, diagnostics or treatment(45).

A cross-sectional study done with the title of Poorer Cognitive Performance in Perinatally HIV-Infected Children Versus Healthy Socioeconomically Matched Controls in Netherland among children and adolescents with age groups of 8-18 years showed that 17% prevalence of cognitive impairment of all HIV infected children and adolescents(46).

A study conducted in Italy with the title of Psychosocial Issues in Children and Adolescents with HIV Infection Evaluated with a World Health Organization Age-Specific Descriptor System among the age ranges of 6–20; all but one perinatally infected observed at two HIV reference centers specialized for the management of pediatric HIV infection resulted with severe or complete psychosocial limitations and restrictions was approximated to 50%(13).

A study conducted in western India on HIV infected children showed that 40% of them had EBPS(47),similarly cross-sectional study conducted In India on 258 HIV infected children

between 6 and 16 years of age, 200 were on Anti-retroviral therapy (ART) and 58 were not on ART. They were evaluated for EBP by using Pediatric Symptom Checklist (PSC) screening tool resulted with prevalence of EBP was 11.2% (8).

A study conducted in USA with the title of Externalizing Behaviors among 5-15 years of Children of HIV Seropositive Former and Current Drug Users showed that Parent Support Network Factors as Social Ecological Risks and they reported that externalizing behaviors can be observed among 32% of their children(48).

Another study done USA on Mental health functioning among children and adolescents with perinatal HIV infection and perinatal HIV exposure among ages 7 to < 16 years with 416 (295 PHIV+, 121 PHEU) revealed with overall prevalence of mental health problems at entry was 29% and greater than expected based on recent national surveys of the general population(35).

According to study done in Thailand with the total sample size of 205 children aged 12-17 were included with the study of Parenting styles and emotional intelligence of HIV-affected children uncovered that the emotional intelligence was measured by the Thai intelligent quotient with results of 89.6(49).

Among a total population of 125 adolescents with median age of 15 years (11–19) Disease disclosure and behavioral profile in a cohort of vertically acquired HIV-infected adolescents in Spain revealed with Overall score of risk of emotional and behavioral problems was 24.5%(50).

Other study conducted in Spain on emotional and behavioral problems in children and adolescents by using youth self-report and the child behavior checklist among children and adolescents with HIV (8 to 17 years old only 26.7% present with behavioral problems(19).

The prevalence rates of emotional and behavioral problems in Singaporean children based on parent, teacher and child reports of Child behavioral check list rating scales resulted with 12.5%(51).

A study conducted in Uganda on the title of Prevalence and correlates for ADHD and relation with social and academic functioning among children and adolescents with HIV/AIDS by using quantitative design that involved a random sample of 1339 children and adolescents with HIV

and their caregivers by using measures including a standardized DSM-5 referenced rating scale, the parent version (5–18 years) of the Child and Adolescent Symptom Inventory-5 (CASI-5) resulted with overall prevalence of ADHD was 6% (n = 81; 95% CI, 4.8–7.5%)(52). And similar study done on the title of Psychological Distress and Adherence to Anti-retro Viral Treatment among HIV- infected Adolescents(12-19) in Uganda revealed with behavioral disorder prevalence of (25.7%)(36).

A cross-sectional study done in Malawi on the title of Factors associated with depression among 562 participants enrolled adolescents living with HIV with the mean age of 14.5 years showed that the prevalence of depression was 18.9 % (43).

A case-control study conducted in Nigeria with the title of the prevalence of depression in children and adolescents with HIV infection was 20% while that of the control was 6.7%(34).

A cross-sectional study that prospectively done on the Evaluating mental health difficulties and associated outcomes among HIV-positive adolescents in Tanzania stated that Emotional and behavioral threshold scores Strength and difficulty questions ≥ 17 were reported among 13.7% of study participants(28).

Regarding to our country, Ethiopia with cross-sectional study design among children from 6-14 years of age on highly active antiretroviral treatment resulted with 39.3% prevalence of emotional and behavioral problems(37).

2.2. Factors associated with emotional and behavioral problems

2.2.1. Socio-Demographic Factors

A study conducted in England (16, 48), In Germany(45), In Brazil(53), Cross-sectional study in China(54) and in Spain (50), in India(55) quantitative design study in in central and South Western Uganda(52) and in our country study conducted in ,Ethiopia(56) revealed that gender has significantly associated with children and adolescent's emotional and behavioral problems.

A research done in USA(35), in London, England Department of Psychology(16),In the Hamburg Health Survey study in Germany(45), in Pakistan(7), in Uganda(52) and cross-sectional study in Tanzania with statically value of (95% CI 1.05–1.18, $p < .001$)(28), in south Nigeria, sub – Saharan- Africa(34), in Rwanda (95% CI 1.15–2.44; $P = .007$)(57),and cross-sectional, longitudinal study conducted in south Africa Children in late adolescence (16-18 years) reported higher anxiety and depression scores than children aged between 10 and 12 years ($p < 0.05$) and children between 13-15 years ($p < 0.05$). Children in late adolescence also reported lower affability scores than those aged 13-15 years ($p < 0.01$) and those aged between 10-12years (17), cross-sectional study conducted in Ethiopia (58) and other study(37) showed that age has significant associated with emotional and behavioral problems of children and adolescent on highly active antirethrotherapy.

A case – control study done in Thailand(59), In-depth qualitative interviews study conducted in south Africa(17, 18) and cross-sectional study conducted in Ethiopia, Low family monthly income with (AOR, 3.44, 95% CI, 1.89-6.25) (37) revealed that family income has significantly associated with emotional and behavioral problems of children and adolescents.

Among the socio-demographic variables study done in Uganda only religion was significantly associated with emotional and behavioral problems ($p < .05$)(36)

A research conducted on HIV and Child Mental Health in Rwanda(57) showed that Estimates of adjusted for education level of primary care giver and primary caregiver type displayed the same pattern of significant effects as unadjusted estimates.

According to study done in India school attendance($p = 0.034$) (8), in Ghana(23), currently not attending school ($p < 0.001$) and other study done in Tanzania (95% CI 1.12–2.43; $p = .01$)

were detected to have significant association with early manifestation of emotional and behavioral problems in the study group.

A study done in USA(48), China(60) and similar study done in South Africa(17) indicated that children's psychosocial outcomes is determined by family size.

2.2.2. Care Giver Related Factors

According to research done In Italy(13), Malawi(61), south Africa (18) and similar study in Ethiopia, parental loss (AOR, 1.89, 95% CI, 1.10-3.25)(37) revealed that parental lose has positively associated with emotional and behavioral problems in children and adolescents.

A study conducted in USA(35, 48),Thailand(59),India(8),South Nigeria(34) and Kenya(62) showed that non-kin care giver other than parents and relatives were positively associated with developments of children's emotional and behavioral problems.

A research in USA(35, 63),English London(55), Indonesia(64) central and South Western Uganda(52) with higher odds of mental health problems at $P < 0.10$, maternal parenting stress had a positive relationship with children mental health problems($p < 0.05$), (AOR of 1.11 per unit increase in psychological distress scores of caregiver $p = 0.004$) respectively revealed that caregiver psychological distress has positively associated with their children and adolescents emotional and behavioral problems.

Findings in Spain(50), China (60),Thailand(59) and Uganda(52) patient's care giver academic level(OR = 0.09 (CI 0.009–0.94), $p = .044$.) Showed that care givers educational level has positively associated with their children and adolescents emotional and behavioral problems.

A research done in Ghana(23) and South Africa (65) revealed that HIV infection and AIDS illness with its death outcome in children and adolescents of caregiver raise risks of parental economic health and psychosocial health problems of children and adolescent.

2.2.3 Children and adolescents related Factors

A study finding in India(8) and Uganda(52) CD4 count ($p = 0.015$) were detected to have significant association with early manifestation of emotional and behavioral problems in the children and adolescents.

According to research done in Spain(50)($p=0.038$),WHO(66) and south Africa(18) revealed that unaware of sero HIV status causes emotional and behavioral problems.

Findings in south Nigeria, sub-Saharan Africa(34) revealed that duration of treatment prior to study showed statistical significant association with emotional and behavioral problems of children and adolescents with HIV/ AIDS.

2.3. Conceptual framework

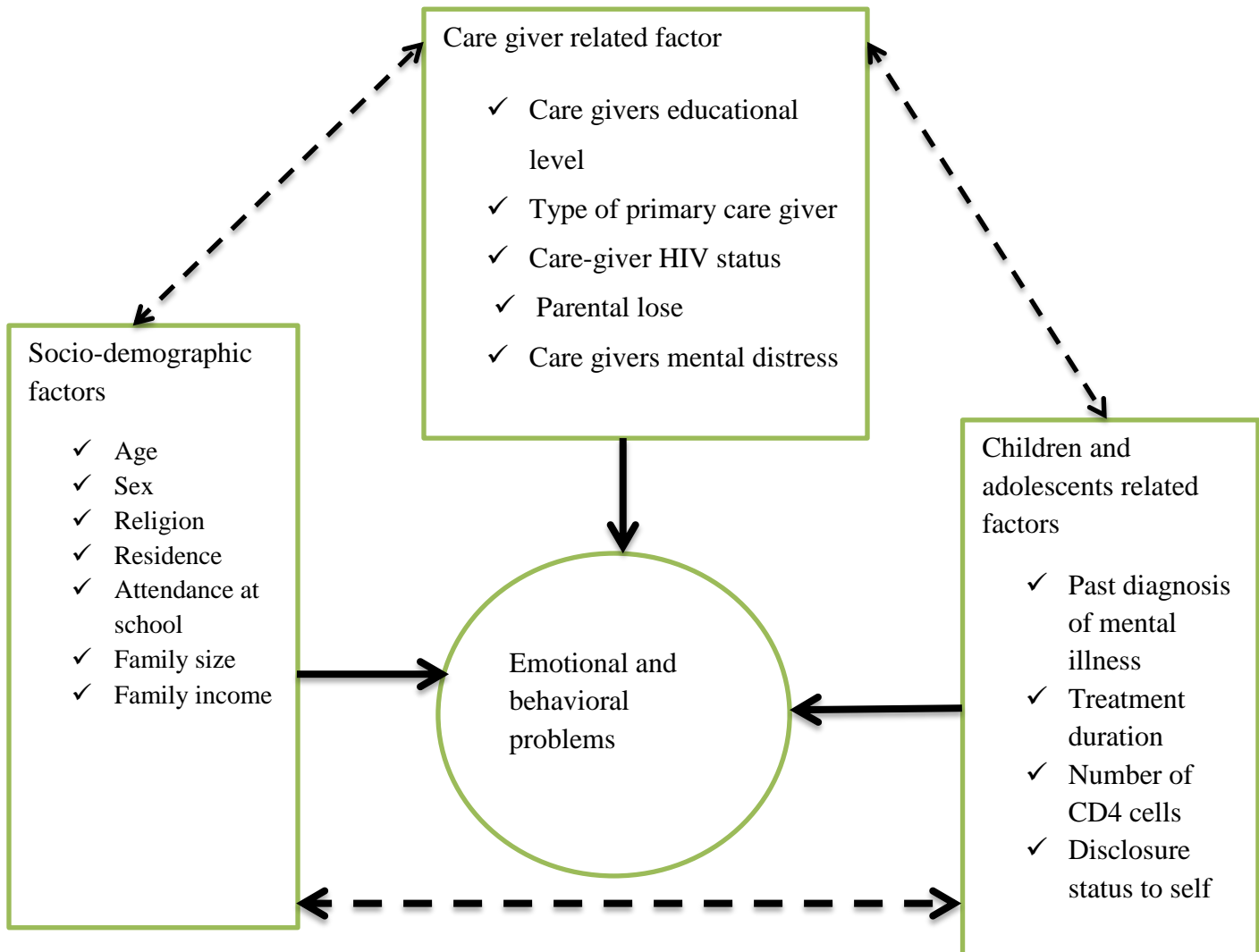


Figure 1: Adapted Conceptual framework of factors associated with EBP among children and adolescents on Highly Active Antiretroviral Therapy (8, 19, 37, 52).

2. OBJECTIVES

2.1. General Objective

To assess the prevalence and associated factors of Emotional and Behavioral problems among children and adolescents on Highly Active Antiretroviral Therapy in governmental public health institutions West Gojjam zone, Amhara regional state, Ethiopia, 2018.

2.2. Specific Objectives

To determine the magnitude of Emotional and Behavioral problems among children and adolescents on Highly Active Antiretroviral Therapy in governmental public health institutions in West Gojjam zone, Amhara regional state, Ethiopia, 2018.

To identify factors associated with Emotional and Behavioral problems among children and adolescents on Highly Active Antiretroviral Therapy in Governmental public health institutions, West Gojjam zone, Amhara regional state, Ethiopia, 2018.

3. METHODS

3.1. Study Area and Period

This study was conducted in West Gojjam zone, governmental public health institutions. West Gojjam zone is found in Amhara region state and its capital city is Finote selam which is 330 km far from Addis Ababa, capital city of Ethiopia at Northwest direction. This zone has 6 governmental public hospitals and 104 governmental health centers. Among those health centers and hospitals, only 23 health centers and five hospitals have HIV and ART care clinic. ART care is provided by well-trained health professionals for the total source population of 3214 children and adolescents. This study was conducted from March 30 to April 30/2018

3.2. Study Design

An institutional based cross-sectional study design was conducted.

3.3. Population

3.3.1. Source population

Children and adolescents on HAART in West Gojjam zone governmental public health institutions.

3.3.2. Study population

Children and adolescents on HAART in eight selected West Gojjam zone governmental public health institutions who had follow-up visit during the study period.

3.3.3. Study unit

Children and adolescent on HAART with care giver pair were enrolled.

3.4. Eligibility Criteria

3.4.1. Inclusion Criteria

Children and adolescents with age range of 5-18 years

On HAART at least for a month were included with their primary caregivers' consent.

3.4.2. Exclusion Criteria

Children and adolescents who were admitted to an inpatient care.

3.5. Sample Size Determination

To determine the prevalence of emotional and behavioral problems, single population proportion formula was used for calculating the minimum number of sample required for this study by considering the following assumptions:

$$n_i = \frac{(Z_{\alpha/2})^2 \cdot p \cdot (1-p)}{D^2} \text{ Where}$$

n = minimum sample size required for the study

Z= standard normal distribution (Z=1.96) with CI =95% and $\alpha=0.05$

P= the prevalence of EBPS Among children and adolescents on HAART is unknown, so P= 50% (0.5)

W= Absolute precision or tolerable margin of error (W) =5%=0.05

$$= \frac{(Z_{\alpha/2})^2 \cdot p \cdot (1-p)}{D^2} = \frac{(1.96)^2 \times 0.5(1-0.5)}{(0.05)^2}, n=384$$

Minimum sample size calculated by Open EPI statistical package 3 was 384.

Even though the source of population was less than 10,000 which was 3214 the sample size was not adjusted by correction formula, for the sake of increasing

sample size. After considering ten percent non response rate the final sample size was as follows:

$$384+38.4=422.4=423$$

3.5.1. Sampling technique and procedure

Among 28 health institutions which had ART clinic eight health institutions was selected randomly. The allocation of the sample to each selected health institutions was made proportionally. Then, individual study participant was selected by systematic random sampling method during data collection period. The pooled sampling interval two was calculated by dividing the study population to the total sample size for each health institution and this interval was used in all health facility to select study subjects. The first child or adolescent was either the first or second randomly then every second sampling units was enrolled in the sampling frame.

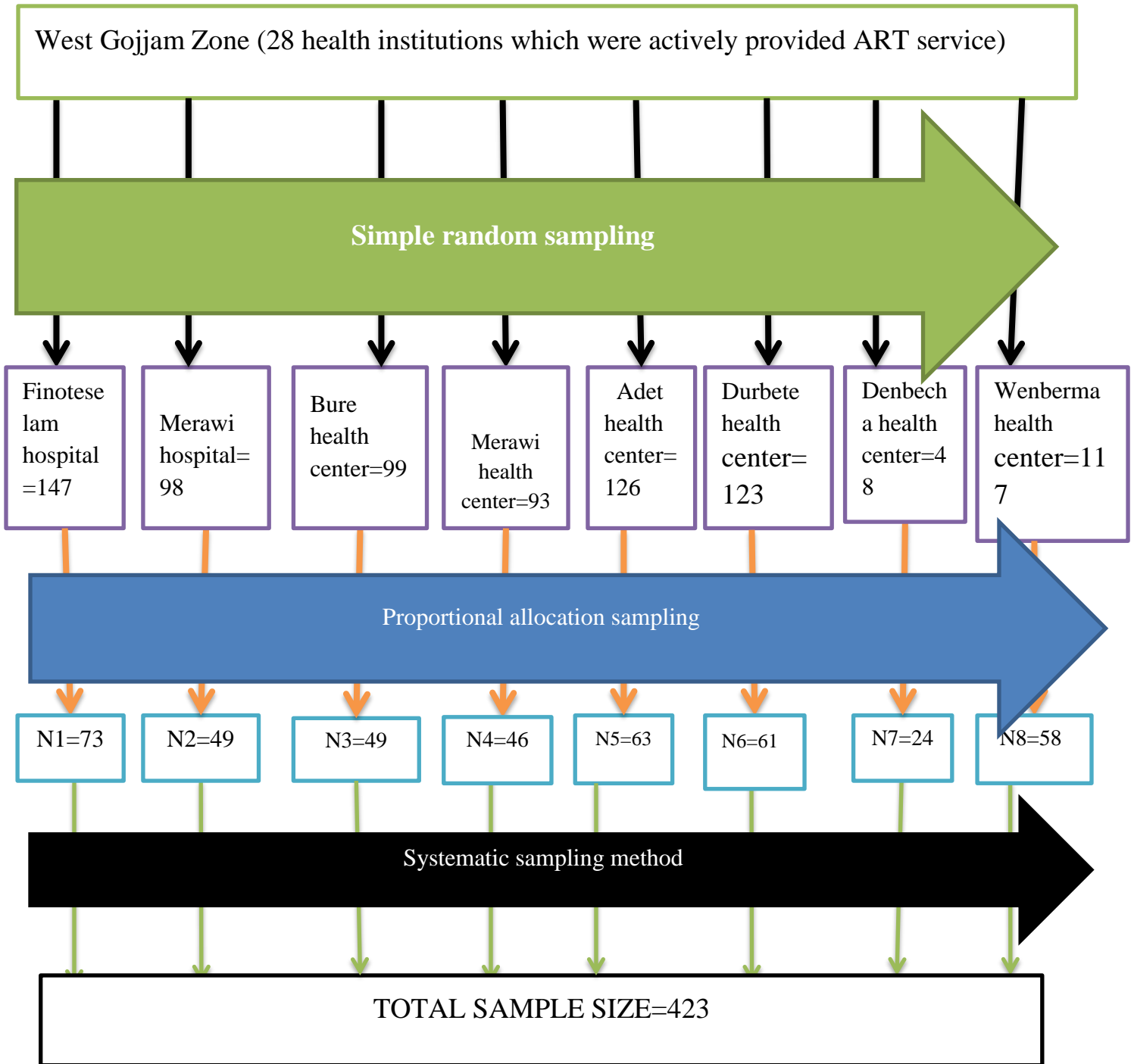


Figure 2. Schematic presentation of sampling procedure

3.6. Variables of the study

3.6.1. Dependent variable

Emotional and behavioral problems

3.6.2. Independent variables

Socio demographic variables of children and adolescents

- Age ,
- Sex
- Religion
- Residence
- Attendance at school
- Family size

Care-giver related factors

- Care giver's HIV status
- Care givers education level
- Care giver mental distress
- Types of Care givers
- Parental lose
- Monthly income

Child and adolescent Clinical related factors

Past diagnosis of mental illness

Number of CD4 level

Treatment duration on ART

Disclosure status to self

3.7. Data collection procedures and instruments

3.7.1. Data collection instrument

A pre-tested interviewer administered questionnaire was used for data collection. Participants who fulfilled inclusion criteria and who gave consent to participate was interviewed. The questioner had four parts which contain the socio-demographic characteristics, child and adolescent clinical related characteristics, care-giver related characteristic and pediatric symptomatology check list (PSCL). The tool used to assess emotional and behavioral problems in children and adolescents. Pediatric Symptom Checklist (PSC) was a recent validated tool in children with chronic disease (67-69) It can easily be administered by any health care professional caring for these children. The tool had also been validated in children with HIV infection(67) All parents or primary caregivers was asked to complete a PSC, a set of 35 questions with answers rated as never, sometimes, often with corresponding scores of 0, 1, and 2 respectively. The total score was calculated by adding together the score for each of the 35 items. Items that was left blank were simply ignored (i.e., score equals 0). Four or more items which were left blank considered as invalid questioner. This question was explained to the respondents in the Amharic Language and their response was noted. The total score was calculated by adding together the score for each of the 35 questions. Cut-off score of 24 and above for age 5-6 years, 28 or higher for age six and greater years was taken to indicate EBP respectively(8). and care givers' mental distress level was measured by WHO's SRQ-20 assessment tool (9).

3.7.2. Data collection technique

The data was collected by eight trained health professionals supervised by two MSC health professionals and principal investigator by assigning each data collector and at different eight health institution on a daily basis from 2:00am (local time) until the entire subjects expected for the day was addressed. The study participants were found in their follow up visit. Participants who fulfilled the inclusion criteria and her/his primary care-giver was given a letter of information and sign the informed consent and can continue to answer the questions, but for those who didn't agree, the data collector thanked them and stopped the interview.

3.8. Operational and conceptual definitions

Emotional and behavioural problems: In this study it was defined as having emotional and behavioral problems when scores greater than PSCL-35 item cut off points.

Caregiver: Someone who most giving care and regularly responsible taking care of patients more than other family member or other persons rather than by a professional who is reimbursed for services.

Children: refers to persons who are under 18 years of age

Adolescents: refers to persons who are in 10-19 years of age but for the purpose of this study between 5 – 18 years of age.

Care giver mental distress SRQ has 20 questions and the score of all questions was combined. The minimum and maximum score were 0 to 20. With cut point 7 and for care giver SRQ score more than 7 was considered as having mental distress.

3.9. Data quality and control

Data collection tool: Amharic version questionnaire was used for data quality and the questionnaire was prepared in English and translated to Amharic, and back translated to English by two language experts to check for consistency of the questionnaire. The structured tool has been adopted and modified from a different study conducted which passed through peer review for validity of the instrument and published.

Training of data collectors: Half day training and clear orientation was provided on the process of data collection for data collectors and clear explanation and orientation was provided for the structured questionnaire and how to approach the participants before they started interviewing care.

Pretest: Before the actual data collection pretest was done by 5% (22) sample size of the study at adisalem health center two weeks before the actual data collection to evaluate the clarity of questions and validity of the instrument and reaction of respondents to the questions.

Supervision: Data collectors were closely monitored and guided by two MSc nurse supervisors during data collection for completeness of the data and appropriate collection of the data.

Multivariate analysis: Variables which passed bivariate analysis ($p < 0.2$) entered to multivariate analysis in order to control confounder variable.

Multicollinearity checking; which resulted with Pearson correlation coefficient < 0.75 , S.E < 2 and variance inflation factor less than ten.

4.10. Data entry and analysis

After data collection the data was cleaned manually, coded and entered into Epi info version 4.2 and exported to SPSS version 23 software for further analysis. After coding, and entering the data to the software descriptive statistics was used to calculate the result in proportion, frequencies, cross tabulation and mean. Tables and pie chart were used to present the result. A bivariate binary logistic regression was used to identify candidate variables for final model (multiple logistic regressions) at p- value < 0.20. Finally the independent predictors or a variable which had significant association was identified by using multiple logistic regressions. The cut point to declare the presence of association between dependent and independent variable was p-value<0.05 or AOR, 95% CI.

4.11. Ethical consideration

Before starting the data collection, ethical clearance was obtained from Institutional Review Board of Addis Ababa University, college of Health Sciences, school of Nursing and Midwifery, West Gojjam Zone health office, each health institutions and written consent was obtained from the care givers of study participants after describing the purpose of the study. All interviewers was instructed on how to comply with strict confidentiality practices for all clients both during and after data collection.to maintain confidentiality; the name of individuals was not cited on the questionnaire. Those who were not interested to participate in the survey were respected for their self-determination / decisions. No need of writing name and phone numbers of the respondents to keep confidentiality.

4.12. Dissemination of results

After the data collection and analysis, the draft report will be prepared using standard outline and presented to Addis Ababa University College of health science, school of nursing and midwifery. By incorporating all the relevant comments which will be forwarded by the peer, audience and participants when it is going to be approved by Institutional Review Board of Addis Ababa University, college of health Sciences, school of Nursing and Midwifery, the report will be finalized and the findings will be communicated with Addis Ababa University, college of Health Sciences, school of Nursing and Midwifery, West Gojjam Zonal health department and Zonal

Women and Children affairs and respective stake holders. The findings will be presented to different research symposiums and annual research conference and the investigator will publish the paper in international and/ or local journals.

5. RESULTS

5.1 Socio-demographic characteristics of children and adolescents

A total of 423 care givers with their children and adolescents were included in the study with 411 (97.2%) response rates. The mean age of children and adolescents was 11.67 ± 3.25 years and more than half of the children and adolescents were males with frequency of 246(59.9%). Two hundred seventy six (67.2%) were urban in residence and majority of the children and adolescents 352(85.6%) were Orthodox follower. Three hundred thirty five (81.5%) children and adolescents were attended school. Two hundred thirty two (56.4%) of them had one to three family size. The mean Monthly income of the family was 1660.34 Ethiopian birr (SD = 1271.14 birr) but two hundred forty six (59.9%) had monthly income of below average.

Table 1: Socio-demographic characteristic of children and adolescent on HAART follow-up during data collection, in West Gojjam Zone, Amhara, 2018. (N=411).

| Variables | Categories | Frequency | Percentage (%) |
|--|------------|-----------|----------------|
| Age of children and adolescents(years) | 5-9 | 110 | 26.8 |
| | 10-14 | 211 | 51.3 |
| | 15-18 | 90 | 21.9 |
| Sex | Male | 246 | 59.9 |
| | Female | 165 | 40.1 |
| Religion | Orthodox | 352 | 85.6 |
| | Protestant | 42 | 10.2 |
| | Muslim | 17 | 4.1 |
| | Other | 0 | 0 |
| Residence | Urban | 276 | 67.2 |
| | Rural | 135 | 32.8 |
| Attended school | Yes | 335 | 81.5 |
| | No | 76 | 18.5 |
| Family size | 1-3 | 232 | 56.4 |
| | 4-6 | 156 | 38.0 |
| | >6 | 23 | 5.6 |
| Family income | <1660.34 | 264 | 59.9 |
| | >1660.34 | 165 | 40.1 |

5.2. Children and adolescents related factors

Majority of children and adolescents had not history of diagnosis for mental illness 394(95.9%) and more than quarter of them 347(84.4%) were on ART treatment for greater or equal to six months duration. Most of the children and adolescents 288(70.1%) were disclosed to self of their HIV sero-status. Three fourth of the children and adolescents 310(75.4%) had recent CD4 cells greater than five hundred cells/mm³. (Table 2)

Table 2: Children and adolescents related factors for EBPs of them on HAART –follow-up in governmental public health institution, West Gojjam Zone, Amhara, Ethiopia, 2018 (N=411).

| Variables | Categories | Frequency | Percentage (%) |
|--|--------------------------------|-----------|----------------|
| History of mental illness diagnosis | Yes | 17 | 4.1 |
| | No | 394 | 95.9 |
| Duration of ART treatment | 1-6 month(s) | 64 | 15.6 |
| | Greater or equal to six months | 347 | 84.4 |
| Disclosure to self of HIV sero-status | Yes | 288 | 70.1 |
| | No | 123 | 29.9 |
| Number of recent CD4 cells/mm ³ | <200 | 6 | 1.5 |
| | 200-349 | 29 | 7.1 |
| | 350-500 | 66 | 16.1 |
| | >500 | 310 | 75.4 |

5.3. Care-giver related factors

Almost half of the care –givers of children and adolescents 200(48.7%) were below 12th grade in educational level and majority of care-givers 341(83.0%) were parents for those children and adolescents. Below half of children and adolescents 181(44.0%) had single parental lose which mean that either father or mother is died. Three hundred twenty six (79.3%) of care –givers of children and adolescents had positive HIV sero- status. And more than half of care-givers of children and adolescents 239(58.2%) had no history of mental distress diagnosis. (Table 3).

Table 3:Care-giver related factors for EBPs of children and adolescents on HAART follow-up in governmental public health institution, West Gojjam Zone,Amhara,Ethiopia,2018(N=411) .

| Variables | Categories | Frequency | Percentage (%) |
|---|----------------------------|-----------|----------------|
| Care giver educational level | 1-11 th grade | 200 | 48.7 |
| | 12 th completed | 22 | 5.4 |
| | College and higher | 32 | 7.8 |
| | Illiterate | 157 | 38.2 |
| Primary care giver relation with children and adolescents | Parent | 341 | 83.0 |
| | Relative | 57 | 13.9 |
| | Non-kin | 13 | 3.2 |
| Parental lose | Single | 181 | 44.0 |
| | Both | 65 | 15.8 |
| | Both alive | 165 | 40.1 |
| Care giver HIV sero status | Positive | 326 | 79.3 |
| | Negative | 79 | 19.2 |
| | Unknown | 6 | 1.5 |
| Care giver mental distress | Yes | 172 | 41.8 |
| | No | 239 | 58.2 |

5.4. The prevalence of Emotional and behavioral problems among children and adolescents

Out of 411 children and adolescents 179 of them had above PSCL cut points with the prevalence of emotional and behavioral problems among them with 179 (43.6%, CI=38.8-48.4).

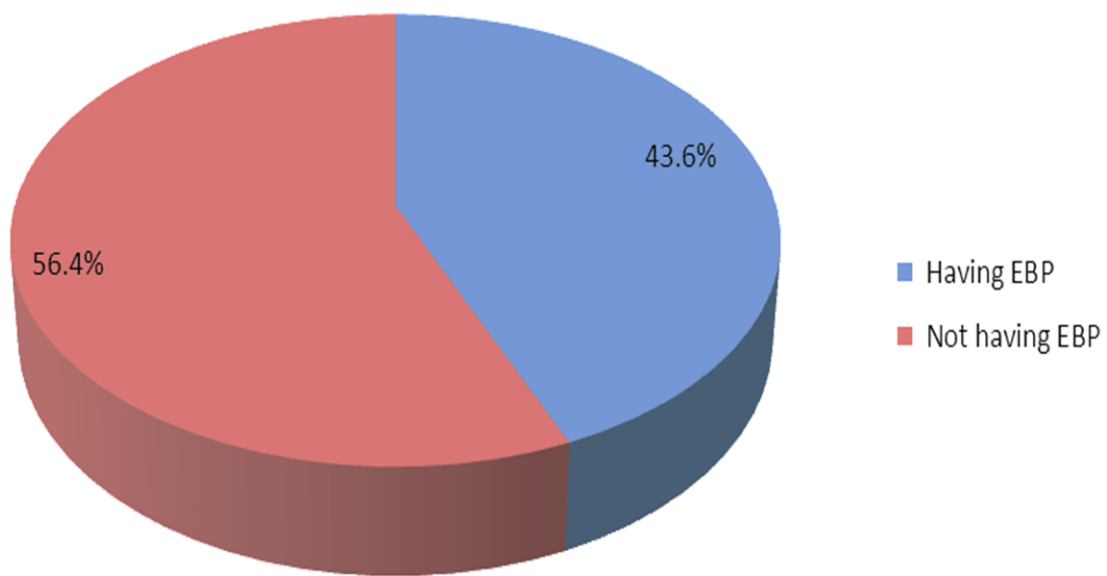


Figure 3: prevalence of emotional and behavioral problems Among on HAART children and adolescents, West Gojjam, Amhara, Ethiopia, 2018.

5.5. Factors associated with Emotional and behavioral problems

In bivariate logistic regression analysis factors which were significantly associated with emotional and behavioral problems were age of children and adolescents, religion, attendance of school, care-giver educational level, child-care-giver relationship, care-giver mental distress, parental lose and HIV-sero status disclosure to self. Variables revealed as significant on bivariate analysis were introduced into multiple logistic regression. In multiple logistic regression analysis factors that were significantly associated with emotional and behavioral problems were, ages of child and adolescent, parental lose, HIV-Sero status disclosure to self, type of care-giver and care giver mental distress. Children and adolescents with the age of 5-9 years old were 5 times more likely to have emotional and behavioral problems where as those with the age of 10-14 years old were 2 times more likely to have emotional and behavioral problems when compared with those with the age of 15-18 years old. (AOR= 5.33, 95%CI: 2.58-11.04, AOR=1.95, 95%CI: 1.08-3.55). Children and adolescents who had non kin care-givers other than parents and relatives were 4.64 times more likely to have emotional and behavioral problems when compared with those who had parent care-givers. Children and adolescents who had single parental lose were 1.73 times more likely to develop emotional and behavioral problems (AOR=1.73, 95%CI: 1.07-2.81). And also those who had both parental lose were 2.15 times more likely to have emotional and behavioral problems when compared with children and adolescents who had both parents (AOR=2.15, 95%CI: 1.03-4.49). Children and adolescents who were not disclosed their HIV sero status to self were 1.99 times more likely to develop emotional and behavioral problems compared with those who were disclosed their HIV sero status to self (AOR= 1.99, 95%CI: 1.16- 3.41). And children and adolescents who had care giver, diagnosed with mental distress were 1.64 times more likely to be screened for emotional and behavioral problems than those who had not distressed care-givers (AOR= 1.64, 95%CI: 1.04, 2.57) (Table 4).

Table 4: Bivariate and multivariate logistic regression analysis of associated factors of Emotional and behavioral problems among children and adolescents on HAART follow-up in Governmental public health institution, West Gojjam Zone, Amahara, Ethiopia, 2018, (n=179).

| Variables | Emotional and behavioral problems | | COR(95%CI) | AOR(95%CI) | P-Value |
|--|-----------------------------------|------------------|-------------------------|-------------------------|--------------|
| | Yes, N(%) | NO, N (%) | | | |
| Age in years | | | | | |
| 5-9 | 70(63.6) | 40(36.4) | 3.88(2.14-7.00) | 5.33(2.56-11.04) | 0.000 |
| 10-14 | 81(38.4) | 130(61.6) | 1.38(0.82-2.33) | 1.95(1.08-3.55) | 0.03 |
| 15-18 | 28(31.1) | 62(68.9) | | | |
| Religion | | | | | |
| Orthodox | 141(40.1) | 211(59.9) | 0.96(0.36-2.57) | 0.81(0.27-2.43) | 0.70 |
| Protestant | 31(73.8) | 11(26.2) | 4.03(1.23-13.18) | 3.02(0.83-10.99) | 0.09 |
| Other | 7(41.2) | 10(58.8) | | | |
| School attendance | | | | | |
| Attended | 137(40.9) | 198(59.1) | | | |
| Non attended | 42(55.3) | 34(44.7) | 1.79(1.08-2.95) | 0.61(0.31-1.18) | 0.14 |
| Care giver educational level | | | | | |
| 1-11th Grade | 95(47.5) | 105(52.5) | | | |
| 12 th completed | 14(63.6) | 8(36.4) | 1.93(0.78-4.81) | 0.81(0.26-2.48) | 0.71 |
| College/Higher | 13(40.6) | 19(59.4) | 0.76(0.35-1.61) | 0.99(0.43-2.33) | 0.99 |
| Illiterate | 57(36.3) | 100(63.7) | 0.63(0.41-0.97) | 0.64(0.40-1.04) | 0.07 |
| primary-care giver relationship with children and adolescent | | | | | |
| Parent | 135(39.6) | 206(60.4) | | | |
| Relative | 35(61.4) | 22(38.6) | 2.43(1.37-4.32) | 1.95(0.93-4.07) | 0.08 |
| Non-kin | 9(69.2) | 4(30.8) | 3.43(1.04-11.37) | 4.64(1.20-17.90) | 0.03 |
| Parental lose | | | | | |
| Single | 84(46.4) | 97(53.6) | 1.69(1.09-2.60) | 1.73(1.07-2.81) | 0.03 |
| Both | 39(60.0) | 26(40.0) | 2.92(1.62-5.28) | 2.15(1.03-4.49) | 0.04 |
| Both alive | 56(33.9) | 109(66.1) | | | |
| HIV Sero-status disclosure to self | | | | | |
| Disclosed | 104(36.1) | 184(63.9) | | | |
| Non disclosed | 75(60.98) | 48(39.02) | 2.76(1.79-4.27) | 1.99(1.16-3.41) | 0.01 |
| Care-giver mental distress | | | | | |
| Distressed | 87(50.6) | 85(49.4) | 1.64(1.10-2.43) | 1.64(1.04-2.57) | 0.03 |
| Non distressed | 92(38.5) | 147(61.5) | | | |

6. DISCUSSION

This study determined the prevalence and factors to emotional and behavioral problems among on HAART 5-18 years' old children and adolescents in West Gojjam Zone. The prevalence of emotional and behavioral problems among on HAART follow-up children and adolescents in this study was 43.6%. Which is almost similar with a study conducted in western India (40%)(47),Ethiopia(39.3)(37). And it was lower than study conducted in Uganda (58.5%)(70). But it was higher than a study conducted in USA(7.4%)(71), Pakistan (21%, 24.5%)(50, 72), India (30%,11.2%)(8, 10), Uganda(6%)(52), Portugal(26.7%)(19) and Rwanda (26%)(22). This variation might be due to the difference in study period, socio-economical, health care delivery system variation, study subject developmental and technological and cultural difference between the study areas.

There was high prevalence of emotional and behavioral problems among 5-9 and 10-14 years of children (63.6%, 38.4%) respectively when compared with 15-18 years of children and adolescents (31.1%) which is similar with study conducted in USA(35). This might be due to late disclosure of HIV sero status to self which relieves the stress and anxiety that accompanies secrecy and deception. Disclosed children and adolescents of their HIV sero status may feel relief at learning the cause of their illness and may feel more in control and decrease disruptive behaviors. This finding is inconsistent with study done in USA(48),Uganda(52),Malawi(43)and Ethiopia(37). This variation might be due to delivery of psychosocial training programs integrated with ART service, awareness of illness of adolescents strive to ensure that they are fully informed of their status which develops self-management skills, improve social functioning, school performance and open involvement for medical decisions.

This study revealed that children and adolescents who didn't aware of their HIV sero status were more likely to have emotional and behavioral problems than those who had been told their HIV sero status (AOR=1.99, 95%CI: 1.16, 3.41,P=0.01).This could be due to the fact that children and adolescents who didn't disclose their status to self blames him/herself why they have to continue to take drugs every day, maintains false understanding of illness, parents may use forceful means to ensure child takes medication and their imagination creates unnecessary worry. This is similar with a study conducted in Spain(50),Malawi(AOR,1.2,95%CI,P= 0.02)(43),WHO report on disclosure(66) and South Africa(18) .The possible explanation for this might be that

being aware for illness promotes self-control, trusting with the situation and developing adaptive means for illness. And also it might help feeling relief at learning the cause of their illness and may be more willing to access health education, social and peer support that improves emotional and behavioral health.

Children and adolescents who had non kin care givers other than parents and relatives were more likely to have emotional and behavioral problems when compared to those who had parent and relative care givers (AOR= 4.64, 95%CI: 1.20- 17.90, P=0.03) which can be explained as those who lived with parents were less likely to develop emotional and behavioral problems than those who stayed with non-kin (foster parents and adoptees). The possible reason may be because of biological parents tend to be more protective and nurturing with their children than non-kin care givers who lack of control over their lives. This was consistent with previous literature findings like in USA(35),Thailand(59),India(8),SouthNigeria(34)and Kenya(AOR=3.67,P=0.03)(62)which supported that type of care giver has associated with emotional and behavioral problems.

Those children and adolescents who had both and single parental lose were more likely to be screened for emotional and behavioral problems than children and adolescents who had parents. This finding is consistent with study done in Malawi(43), South Africa(18, 61), South Nigeria(34), Kenya(62) and Ethiopia(37).This was probably because of the increased levels of loss due to the late rollout of ARVS and challenges to caregiving contexts including poverty, stigma and minimally supported foster care arrangements, the loss of their parent/s appeared to influence how they adapted the loss due to worrying about who was going to care for them, loss of someone who loved them and miss of care from them, Children orphaned by AIDS may face additional psychological and social challenges including the impending or actual death of the surviving parent, disruptions in subsequent care and financial hardship; these challenges may pose a heightened risk of prolonged mental and behavioral problems for these children.

Care givers who had been screened for psychological distress could pose children and adolescents to have emotional and behavioral problems. This finding revealed that those children and adolescents who had distressed care giver were more likely to have emotional and behavioral problems when compared with those who had normal care giver(AOR=1.64,95%CI:1.04-2.57,P=0.003).This finding is in line with study conducted in

USA(35, 63), London UK(65),Uganda(AOR=1.11,P=0.004)(52) and south Africa (61).The possible cause for this finding might be due to loss of care giver who was advocate or intimate comforter for children and adolescents due to debilitating illness or psychological distress .And children and adolescents might be worry due to having psychosocial distress care giver that resulted on them with stigma, economical constraints, and caring responsibility for remaining family members.

7. STRENGTH AND LIMITATION OF THE STUDY

7.1 STRENGTH OF THE STUDY

Even though this study is a pioneering effort in investigating emotional and behavioral problems on HAART children and adolescents, there are certain strengths and limitations.

- Most study was conducted on single centered study but this study was conducted eight different setting (institutions) which might assess different socio-cultural disparities hence the results can be generalizable.

7.2 LIMITATION OF THE STUDY

- Using multiple informants are an essential component of empirically based assessment but the current study was only parent form whom data were gathered and analyzed.
- Assessing psychological disease in a child is the presence of multiple confounding variables. These confounders can only be assessed if the study is done as a long-term follow up but the study was conducted with cross sectional study design which cannot show causality.
- A systematic bias due to natural bias of respondents in the reporting of data

8. CONCLUSION AND RECOMMENDATION

8.1 CONCLUSION

This study related to emotional and behavioral health on HIV infected children and adolescents raises the critical importance of considering emotional and behavioral health as an integral component to children and adolescent care. The prevalence of emotional and behavioral problems among on HAART children and adolescents in Governmental public health Institution, West Gojjam Zone, Amhara, Ethiopia was high 179(43.6%). Age, disclosure status, type of care giver, parental lose and care giver mental distress were significantly associated emotional and behavioral problems in this study. It reveals that children and adolescents' psychosocial well-being is influenced by interactions between caregivers, children biography and their clinical conditions.

Caregivers also need especial emphasis for emotional and behavioral health screening in order to facilitate better care of children and adolescents with HIV/AIDS. It is therefore, critical to integrate psychiatric services into the routine care of HIV-infected children and adolescents. This will help to provide proper treatment outcome and ensure improved quality of life in a multi-pronged approach both for children and their families.

8.2 RECOMMENDATION

❖ For Health Professionals

- It is recommended to Give age related HIV information to children and caregivers
- Give psychosocial training for those children and adolescents on HAART particularly those who have non kin care givers and parental lose.
- Screen emotional and behavioral health while they are coming to ART services particularly for those early ages and who have distressed care giver.

❖ For Health Centers and hospitals

- Each health institutions should integrate ART with psychosocial services
- It is recommended to give emotional and behavioral health to non-disclosed and orphan on HAART children and adolescents.
- It is recommended to prepare adequate psychosocial training unit which could be delivered by trained health personnel.

❖ For Zonal and district health bureau

- Facilitate all health institutions that provide ART service to prepare their own organized psychosocial service units
- Assign well trained health professionals who could deliver emotional and behavioral health service and ART service.
- Integrate with international/local NGOS for supporting those who faced parental lose and had non kin care givers of children and adolescents. .

❖ For future researchers

- Conduct it by including parental, youth and teacher version assessment methods.
- Study it with long term follow up for controlling multiple confounders of psychosocial problems.

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10. ANNEXES

ANNEX 1: INFORMATION SHEET

Good morning/good afternoon! My name is _____. I am here today to collect data on emotional and behavioral problems and associated factors among children and adolescents on highly active antiretroviral therapy at governmental public health institutions, West Gojjam zone.

The study is being conducted by Demewoz kefale, postgraduate program student at Addis Ababa University College of health sciences school of Allied health, Department of Nursing and Midwifery. The objective of this study is to assess the prevalence and associated factor of emotional and behavioral problems among children and adolescents on HAART.

You are being asked to take part in this study and to respond genuinely. Your name will not be written in this form and will never be used in connection with any information you tell us.

There is no possible risk associated with participating in this study except the time spent for completing the questionnaire. All information given by you will be kept strictly confidential. Your participation is voluntary and you are not obligated to answer any question you do not wish to answer. If you feel discomfort with the question, it is your right to withdraw at any time you wish. If you have questions regarding this study or would like to be informed of the results after its completion, please feel free to contact the principal investigator.

Address of the principal investigator:

Cell phone: +251920253332, Email- demewozk@yahoo.com

Data collector's name _____ Signature _____ Date _____

ANNEX 2: INFORMED CONSENT FORM

Consent to participate in a study entitled “emotional and behavioral problems and associated factors among on HAART children and adolescents, in governmental public health institutions, West Gojjam Zone, Amhara Regional state, Ethiopia, 2018”.

Greetings! My name is Demewoz kefale, 2nd year MSc student in pediatrics and child health nursing, at Addis Ababa university College of Health Sciences Department of nursing and Midwifery. I am working on this research project with the objective of assessment of emotional and behavioral problems and associated factors among children and adolescents on HAART in governmental public health institutions, West Gojjam Zone, Amhara Regional state, Ethiopia.

Purpose of the study: The study will involve primary care giver taking care of their children at ART clinic at study area ART unit. Conducting the study will enable to determine the prevalence of emotional and behavioral problems and identify the associated factors of EBP on HAART children and adolescents.

Participant in this study: The study will involve primary care givers of children and adolescents on HAART. If you agree to participate in the study you will be required to answer interview questions, attended by research assistant.

Confidentiality: All information which will be collected during this study will be kept strictly confidential and will not be revealed to anybody outside the research team.

Risks: We do not expect that any harm will happen to you because of joining this study. If you feel tired/ exhausted, you will be able to stop the interview temporarily or decline at any time if you feel too uncomfortable.

Rights to withdraw and alternatives; Taking part in this study is completely your choice. If you choose not to participate in the study or if you decide to stop participating in the study you will continue to receive all services that you would normally get from the ART unit. You can stop participating in this study at any time even if you have already given your consent.

Benefits: There might be direct benefit to you and your children from participating in this study. If you and your children screen for mental distress and emotional and behavioral problems

respectively, you and your children will link to psychiatry and psychology consultation. And again, the information that you provide may help health professionals to better understand how the problem can be prevented and managed.

In case of injury: We do not anticipate that any harm will occur to you as a result of participation in this study. However if any physical injury resulting from participation in this study occur, we will provide you with medical treatment according to the current standards of care in Ethiopia. There will be no additional compensations to you.

Who to contact: If you ever have questions about this study, you should contact the principal investigator Demewoz kefale, Tel-+251920253332 Addis Ababa University College of Health Sciences, School of Allied Sciences, Department of Nursing and Midwifery.

Signature:

Participant agrees..... Participant doesn't agree

I _____ have read the contents in this form. My questions have been answered. I agree to participate in this study.

Signature of participant _____

Signature of witness (if mother/ caretaker cannot read) _____

Signature of research assistant (data collector) _____

Date of signature _____

ANNEX 3: ENGLISH VERSION QUESTIONNAIRE CIRCLING THE ALTERNATIVE

SELF-REPORTING QUESTIONNAIRE (SRQ-20) (care-giver distress)

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

PEDIATRIC SYMPTOMS CHECKLIST (PSCL)

Emotional and behavioral health goes together in children. Because parents or care givers are often the first to notice a problem with their child’s behavior and emotions you may help your child get the best care possible by answering these questions. Please indicate which statement best describes your child.

Please mark under the heading that best describes your child

| | Items | NEVER (0) | SOMETIMES (1) | OFTEN (2) |
|----|---------------------------------|-----------|---------------|-----------|
| 1. | Complains of aches and pains | | | |
| 2. | Spends more time alone | | | |
| 3 | Tires easily, has little energy | | | |
| 4 | Fidgety, unable to sit still | | | |
| 5 | Has trouble with teacher | | | |
| 6 | Less interested in school | | | |
| 7 | Acts as if driven by a motor | | | |
| 8 | Daydreams to much | | | |
| 9 | Distracted easily | | | |
| 10 | Is afraid of new situations | | | |
| 11 | Feels sad, unhappy | | | |
| 12 | Is irritable, angry | | | |
| 13 | Feels hopeless | | | |
| 14 | Has trouble concentrating | | | |
| 15 | Less interested in friends | | | |
| 16 | Fights with other children | | | |
| 17 | Absent from school | | | |
| 18 | School grades dropping | | | |

| | | | | |
|-------|---|--|--|--|
| 19 | Is down on him or herself | | | |
| 20 | Visits the doctor with doctor finding nothing wrong | | | |
| 21 | Has trouble sleeping | | | |
| 22 | Worries a lot | | | |
| 23 | Wants to be with you more than before | | | |
| 24 | Feels he or she is bad | | | |
| 25 | Takes unnecessary risks | | | |
| 26 | Gets hurt frequently | | | |
| 27 | Seems to be having less fun | | | |
| 28 | Acts younger than children his or her age | | | |
| 29 | Does not listen to rules | | | |
| 30 | Does not show feelings | | | |
| 31 | Does not understand other people's feelings | | | |
| 32 | Teases other | | | |
| 33 | Blames others for his or her troubles | | | |
| 34 | Takes things that do not belong to him or her | | | |
| 35 | Refuses to share | | | |
| Total | | | | |

Thank you so much for your cooperation

ANNEX FOUR: AMHARIC VERSION QUESTIONERS.

አባሪዎች

አባሪ 1: የመርጃ ቅጽ

እንደምን አደሩ/ እንደምን አረፈዱ

ስሜ _____ ነው :: ዛሬ እዚህ የተገኘሁት በአማራ ክልላዊ መንግስት ምዕራብ ጎጃም ዞን በሚገኙ የመንግስት ጤና ተቋማት ውስጥ የኤች አይ ቪ ኤድስ መድሃኒት በሚወስዱ ህፃናት እና ወጣቶች ላይ ያላውን የስነ ልቦና እና የባህሪ ችግሮች መጠን እና ለችግሩ ምክንያት ሊሆን የሚችሉ ነገሮችን መረጃ ለመሰብሰብ ነው።

ጥናቱ በአዲስ አበባ ዩኒቨርሲቲ የጤና ሳይንስ ኮሌጅ፣ የአላይድ ሄልዝ ትምህርት ቤት፣ የነርቪንግ እና የአዋላጅ ነርስ ትምህርት ክፍል የድህረ ምረቃ መርሀ ግብር ተማሪ በመሆኑት በደመወዝ ከፋለ በመከናወን ላይ ይገኛል። የዚህ ጥናት አላማ የኤች.ኤይ.ቪ መድሃኒት በሚወስዱ ህፃናት እና ወጣቶች መካከል የስነ ልቦናና ባህሪያዊ ችግር እና ተጓዳኝ ምክንያቶች ለመመዘን ነው።

የዚህን ጥናት ክፍል የሚጠየቁ ሲሆን በቅንነት ምላሽን ይስጡ። ስምዎ በዚህ ቅጽ ላይ የሚፃፍ አይሆንም እና ከሚነግሩን ማናቸውንም መረጃዎች ጋራ በተያያዘ ጥቅም ላይ አይውሉም።

በዚህ ጥናት ላይ መሳተፍዎ መጠየቁን ለመሙላት ከሚፈጀው ጊዜ ባሻገር ተጓዳኝ የሆኑ ምንም አይነት አደጋዎች የሉም። በእርሶ አማካኝነት የተሰጡ ሁሉም መረጃዎች በከፍተኛ ሚስጢር የሚያዙ ይሆናል። ተሳትፎዎ በበጎ ፍቃደኝነት ላይ የተመሰረተ ሲሆን ምንም አይነት ፍላጎት ያላደረግንን ጥያቄ ለመመለስ አይገደዱም። ጥያቄዎን በተመለከተ ምችሎች ካልተሰማዎት በማናቸውም ለመውጣት ባሰቡበት ጊዜ መውጣት ይችላሉ። ይህንን ጥናት በተመለከተ ጥያቄዎች ካሉት ወይም ከተጠናቀቀ በኋላ ስለ ውጤቶቹ መረጃ ለማግኘት ከፈለጉ ዋነኛውን ተመራማሪ ለማግኘት ነፃነት ይሰጣዎት።

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የዳታ ሰብሳቢው ስም _____ ፊርማ _____ ቀን _____

አባሪ ሁለት፡- የፈቃደኝነት መጠየቂያ ፎርም

ይህ የፈቃደኝነት መጠየቂያ ቅጽ የስነ ልቦናዊ እና ባህሪያዊ ችግር እና ተጓዳኝ ምክንያቶች በህጻናትና ወጣቶች ላይ ያለውን ሁኔታ ለማወቅ የሚረዳ ሲሆን

እኔ (ቃለ መጠይቁ የሚደረግልኝ) በዚህ ሆስፒታል/ጤና ጣቢያ ውስጥ የኤች.አይ.ቪ መድሃኒት የሚወስዱ እና በህክምና ክትትል ላይ ያለ/ች ልጄን በመንከባከብ ላይ የምገኝ ሲሆን ከዚህ ጋር በተያያዘ በልጆቼ ላይም ሆነ እኔን በተመለከተ ለጥናት የሚካሄደውን መጠይቆች ለመመለስ ሙሉ ፈቃደኝነቴን እየገለጽሁ የጥናትን ዋና አላማ እና የሚያስከትለውን ጉዳት ፣ ከእኔ የሚወጣውን መረጃ ከጥናቱ ባለቤቶች ውጪ ለማንም እንደማይተላለፍ፣ ጥናት ውስጥ በመሳተፍ ቀጥተኛ የሆነ ጥቅም ጥቅም የሌለው መሆኑን ፣ እኔ የምሰጠው መረጃ ለመንግስት፣ ለጤና ባለሙያዎች እና ለጤና ተቋማት አስፈላጊ መሆኑን ፣ እኔ የተመረጥኩት በዕጣ አማካኝነት መሆኑን ፣ ጥናት ውስጥ መሳተፍ ያለብኝ በእኔ ፈቃደኝነት ላይ ብቻ የተመሰረተ እንደሆነ ፣ ጥናት ውስጥ መግባት ባለመቻሌ ምንም አይነት ተጽዕኖ እንደሌለው፣ ከጥናቱ በማንኛውም ሰአት ማቋረጥ እንደምችል፣ መጠይቁን ለማጠናቀቅ ረዘም ያለ ጊዜ እንደማይወስድብኝ እና ማንኛውን አይነት ጥያቄ መጠየቅ እንደምችል በሚገባ ከተነገረኝ በኋላ በዚህ ጥናት ውስጥ በፈቃደኝነት መሳተፌን በፈረማዬ አረጋግጣለሁ

ፊርማ -----

አባሪ 3: የአማርኛ ትርጉም መጠየቁን ምርጫዎን ያክብቡ

ክፍል 1: የማህበራዊ - የስነ ህዝብ መረጃ ባህሪያዊ መጠየቅ

1. እድሜ በአመት _____

2. ልጅ: ሀ. ወንድ ለ. ሴት

3. መኖሪያ: ሀ. ከተማ ለ. ገጠር

4. ሀይማኖት: ሀ. አርቶዶክስ ለ. ፕሮቴስታንት ሐ. ሙስሊም ሙ. ካቶሊክ
ሠ. ሌሎች
5. ትምህርት ይከታተላል/ትከታተላለች ሀ. አዎ ለ. የለም
6. የተንከባካቢው የትምህርት ደረጃ ሀ. 1-11ኛ ክፍል ድረስ ለ. 12 ያጠናቀቀ/ች
ሐ. ኮሌጅ/ ከዚያ በላይ ሙ. ያልተማረ/ች
7. የተንከባካቢው ግንኙነት ሀ. ወላጅ ለ. ዘመድ ሐ. ሌሎች
8. በህይወት የሌሉ ወላጆች ሀ. አንድ ለ. ሁለቱም ሐ. የለም (ሁለቱም በህይወት አሉ)
9. የቤተሰብ ቁጥር ሀ. 1-3 ለ. 4-6 ሐ. > 6 ሙ. ሌሎች
10. ወርሃዊ ገቢ (በኢት. ብር).....
11. የልጅዎ ለራሱ/ሷ የኤች አይ ቪ ሲሮ ደረጃ ይፋዊነት ሀ. አዎ ለ. የለም
12. የተንከባካቢው/ዋ የኤች አይ ቪ ሁኔታ ሀ. ፖስቲቭ ለ. ነጋቲቭ
ሐ. አይታወቅም
13. ልጅዎ ከዚህ ቀደም የአእምሮ ህመም ተገኝቶበታል/ባታል ሀ. አዎ ለ. የለም
14. ልጅዎ የኤች.አይ.ቪ መድሃኒት መውሰድ ከጀመረ/ች ምን ያህል ጊዜ ሆነው/ናት ሀ. 1- 6
ወራት ለ. 6≥ ወራት
15. የልጅዎ የቅርብ ጊዜ የሲዲ 4 ሴሎች (ሴሎች/ሚሜ³) በቁጥር-----

የራስ ሪፖርትን መጠየቅ (ኤስአርኪው - 20) (የጤና እንክብካቤ አቅራቢው የህመም ደረጃ)

| | አዎ | የለም |
|--|----|-----|
| 1. በአብዛኛው እራስ ምታት ያሞታል? | | |
| 2. የምግብ ፍላጎት ደካማ ነው? | | |
| 3. የእንቅልፎ ችግር ይገጥሞታል? | | |
| 4. በቀላሉ ይፈራሉ? | | |
| 5. እጅዎ ይንቀጠቀጣል? | | |
| 6. ይደነግጣሉ፣ ይበሳጩሉ፣ ይፈራሉ? | | |
| 7. የምግብ አፈጫጫትዎ ደካማ ነው? | | |
| 8. አጥርቶ የማሰብ ችግር አለብዎት? | | |
| 9. ደስታ አይሰማዎትም? | | |
| 10. ከተመለመደው በላይ ያለቅሳሉ? | | |
| 11. የእለት ተእለት ተግባሮችዎን በደስታ የማከናወን ችግር አለብዎት? | | |
| 12. ውሳኔዎችን ማሳለፍ አስቸጋሪ ይሆንበታል? | | |
| 13. የእለት ተእለት ስራዎ አስቸጋሪ ነው? | | |
| 14. በህይወት አስፈላጊ የሆኑ ሚናዎችን መጫወት አልቻሉም? | | |
| 15. በነገሮች ፍላጎትዎ ዝቅ ብለዋል? | | |
| 16. ዋጋ የሌለዎት ሰው እንደሆኑ ያስባሉ? | | |
| 17. እራስዎን የማጥፋት ሃሳብ በጭንቅላትዎ ይመጣብዎታል ? | | |
| 18. ሁልጊዜ የድካም ስሜት ይሰማዎታል? | | |
| 19. በቀላሉ ይደክማሉ ? | | |
| 20. ሆድዎ ውስጥ ምችት የማይሰጥ ስሜት ይሰማዎታል ? | | |
| ኤስአርኪው - 20 አጠቃላይ ውጤት (የአዎንታ ምላሽ ድምር) | | |

የህፃናት ሀክምና ችክ ሊስት (ፒ.ኤስ.ሲ)

ስነ ልቦናዊ እና ባህሪያዊ ጤና በህፃናት ላይ አብሮ ይሄዳሉ። ወላጆች ወይም እንክብካቤ አቅራቢዎች በልጃቸው ባህሪ እና ስነ ልቦና ነፃነቶች ላይ የሚስተዋሉ ችግሮች ለመመልከት የመጀመሪያዎቹ በመሆናቸው ልጅዎ እነዚህን ጥያቄዎች በመመለስ የተሻለ እንክብካቤ እንዲያገኙ መርዳት ይችላሉ። የትኛው መግለጫ ልጅዎን በተሻለ ሁኔታ እንደሚገልጽ ያመልክቱ።

ልጁን/ቶዋን በተሻለ ሁኔታ የሚገልፁ ሀሳቦች ስር ምልክት ይደረግ

| መግለጫ | ፈጽሞ (0) | አልፎ አልፎ (1) | ሁልጊዜ (2) |
|------------------------------|---------|-------------|----------|
| 1. የህመም እና የበሽታ ሀሳብ ማቅረብ | | | |
| 2. ለብቻ ብዙ ጊዜ ማሳለፍ | | | |
| 3. በቀላሉ መድከም፣ አቅም ማጣት | | | |
| 4. ያለመረጋጋት፣ ተረጋግቶ መቀመጥ አለመቻል | | | |
| 5. ከመምህራን ጋር ችግር መፍጠር | | | |
| 6. ትምህርት ቤት የመሄድ ፍላጎት ማጣት | | | |
| 7. በሞተር የሚገፈተር መምሰል | | | |
| 8. የቀን ቅዠት | | | |
| 9. በቀላሉ መረበሽ | | | |
| 10. አዳዲስ ሁኔታዎችን መፍራት | | | |
| 11. የሀዘን፣ ደስተኛ አለመሆን ስሜት | | | |
| 12. መቆጣት፣ መበሳጨት | | | |
| 13. ተስፋ የማጣት ስሜት | | | |
| 14. የማተኮር ችግር | | | |
| 15. በጓደኞች አለመደሰት | | | |
| 16. ከሌሎች ህፃናት ጋር መደባደብ | | | |
| 17. ከትምህርት ቤት መቅረት | | | |

| | | | |
|--|--|--|--|
| 18. የትምህርት ክፍሎችን መድገም | | | |
| 19. በራስ መሰሪያ | | | |
| 20. ምርመራ ተደርጎለት/ለት ምንም አይነት ችግር አለመገኘት | | | |
| 21. የመተኛት ችግር | | | |
| 22. ከፍተኛ ጭንቀት | | | |
| 23. ከቀደመው ይልቅ ከእርስ ጋራ ብዙ ጊዜ የማሳለፍ ፍላጎት | | | |
| 24. መጥፎ/ጥሩ ያልሆነ ስሜት ይስማማል/ታል | | | |
| 25. አላስፈላጊ ዉሳኔዎችን/አዳጋዎችን መውሰድ | | | |
| 26. በተደጋጋሚ መጎዳት | | | |
| 27. ደስታ ያጣ መምሰል | | | |
| 28. በእርሱ/ሷ እድሜ ካሉ ልጆች አንሶ መታየት | | | |
| 29. ደንቦችን አለማዳመጥ | | | |
| 30. ስሜቶችን አለማንጸባረቅ | | | |
| 31. የሌሎችን ሰዎች ስሜቶች አለመረዳት | | | |
| 32. በሌሎች ላይ ማፈዝ ወይም ማብሸቅ | | | |
| 33. በራሱ/ሷ ችግር ሌሎችን መውቀስ | | | |
| 34. የእርሱ/ሷ ያልሆኑ ነገሮችን መውሰድ | | | |
| 35. ለማጋራት እምቢተኛ መሆን | | | |
| ድምር | | | |

ለትብብርዎ በእጅጉ እናመሰግናለን!!

APPROVAL SHEET

I, the undersigned MSc student, declare that I have submitted my original work on a title assessment of emotional and behavioral problems and its associated factors among children and adolescents on highly active antiretroviral therapy in governmental public health institutions in west Gojjam zone, Amhara regional state, Ethiopia, 2018 for ethical review.

Submitted by:

| | | |
|-----------------|-----------|------|
| | | |
| Name of student | Signature | Date |

This proposal work has been submitted for ethical review with my approval as an advisor.

Approved by:

| | | |
|-----------------------|-----------|------|
| 1. _____ | | |
| Name of Major Advisor | Signature | Date |
| 2. _____ | | |
| Name of Co-Advisor | Signature | Date |
| 3. _____ | | |
| Name of reviewer | Signature | Date |