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Assess The Level of Hiv Disclosure And its Associated Factor Among Children Age 5-14 Years in South Wollo Zone North East Ethiopia 2020.

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COLLEGE OF MEDICINE AND HEALTH SCIENCES

SCHOOL OF PUBLIC HEALTH DEPARTMENT OF EPIDEMIOLOGY

ASSESS THE LEVEL OF HIV DISCLOSURE AND ITS ASSOCIATED FACTOR AMONG CHILDREN AGE 5-14 YEARS IN SOUTH WOLLO ZONE NORTH EAST ETHIOPIA 2020.

BY ABEBE BIRHANE (BSC)

A THESIS SUBMITTED TO DEPARTMENT OF EPIDEMIOLOGY SCHOOL OF PUBLIC HEALTH, AS A PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF PUBLIC HEALTH IN FIELD EPIDEMIOLOGY.

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TITLE	ASSESS THE LEVEL OF HIV DISCLOSURE AND ITS ASSOCIATED FACTOR AMONG CHILDREN AGE 5-14 YEARS IN SOUTH WOLLO ZONE NORTH EAST ETHIOPIA 2020.
DURATION OF PROJECT	FROM MAY TO JUNE 2020
STUDY AREA	SOUTH WOLLO ZONE, NORTHEAST ETHIOPIA
TOTAL COST OF PROJECT	37,286.55 ETHIOPIAN BIRR
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Candidate's Declaration Form

Declaration

This is to certify that the thesis entitled "Assessment of the level of HIV/AIDS disclosure status and its associated factors among the age group of 5-14 years, South Wollo Zone, North East Ethiopia, 2020", submitted in partial fulfillment of the requirements for the degree of Master of public health in school of medicine department of epidemiology, Bahir Dar University, is a record of original work carried out by me and has never been submitted to this or any other institution to get any other degree or certificates. The assistance and help I received during the course of this investigation have been duly acknowledged.

Name of the candidate, Abebe Birhane Signature_____

Date 27/2/2013

Place Bahirdar

Advisor's Approval Form

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Approval of Thesis for Defense

I hereby certify that I have supervised, read, and evaluated this thesis

Titled "The assessment of the level and its associated factors of pediatrics HIV status disclosure in 5-14 years old children in South Wollo Zone"

by Abebe birhane prepared under my guidance. I recommend the thesis be submitted for oral defense.

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I. Acknowledgment

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II. Acronyms/Abbreviation

AIDS	Acquired Immune Deficiency Syndrome
ART	Anti-Retroviral Therapy
ARV	Anti-Retroviral
EFY	Ethiopian Financial Year
CDC	Communicable Disease Control
CI	Confidence Interval
COAP	Cooperative Agreement Program
FHABCO	Federal HIV/AIDS Biro of Prevention and Control Office
HAART	Highly Active Anti-retroviral Therapy
HC	Health Center
HIV	Human Immune Deficiency Virus
LMIC	Low- and Middle-Income Countries
OR	Odds Ratio
PEPFAR	President's Emergency Plan for AIDS Relief
PICT	Provider Initiative Counseling and Testing
PP	Priority Population
TO	Transferred Out
UNAIDS	United Nations joint program for HIV/AIDS
VCT	Voluntary Testing and Counseling
US	United States

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Abstract

Background: - Discloser of HIV-positive status to HIV-infected children is the most difficult issue for caregivers and healthcare providers. The levels of disclosure vary in developing and developed countries between 17% and 68%.

Objective: - This study aimed to assess the level of HIV/AIDS disclosure status and its associated factors among the children aged group of 5-14 years, South Wollo Zone, North East Ethiopia, 2020.

Method: - Institutional based cross-sectional study was conducted from May to June 2020. A total of 417 caregivers of children aged 5-14 years old were taken from selected health institution that provides ART service from the Zone. Data were collected with a structured questionnaire through face to face interview and chart review to obtain some clinical variable. The data entered into EPI INFO version 7.2.2.6 software and exported to SPSS version23 statistical software for analysis. Descriptive statistics such as simple frequencies, Analytic statistics such as bivariable identifying candidate variable and multivariable logistic -regression analysis based on AOR, with 95%CI and p-value<0.05 were used to identify associated factors. Model fitness was checked using the Hosmer and Lemeshow goodness of fit test.

Result:- The levels of HIV positive status disclosure found to be 50.1%(95% CI: 45.4-54.8) of the study participant. children aged >10 years [AOR = 6.27, (95% CI: 3.35, 11.73)], Psychosocial support [AOR = 6.98 (95% CI: 2.58, 18.94)], place of residence urban [AOR = 6.27 (95% CI: 3.35, 11.73)], health care provide start discussion about disclosure [AOR=4.37(95% CI: 1.88, 10.19)] schooling of child start education [AOR=3.30(95% CI: 1.11, 8.81)] and educational status of caregiver diploma and above [AOR = 0.25 (95% CI: 0.08,0.76)] were found to have a statistically significant association with HIV-positive children disclosure.

Conclusion and recommendation: - The level of disclosure in the study area was better than in other settings has done in Ethiopia. Addressing and scaling up effort on psychosocial support discussion on disclosure issues with caregivers in the study area context will increase the level of disclosure of children's HIV positive status.

Keywords:- Caregiver, HIV status disclosure, HAART

1. Introduction

1.1. Background

The human immune virus affects both adults and children in a pandemic way. According to the United Nations joint HIV/AIDS program (UNAIDS) 2018, HIV statistical report 1.8 million people became newly infected with HIV from those 180,000 were less than 15 years, 940,000 people died from AIDS-related illnesses. An estimated 1.8 million were less than fifteen years old children and were living with HIV where 66% were living in sub-Saharan Africa (1). Only 52 % of children aged 0-14 with HIV have access to lifesaving treatment, compared with 59 percent of adults with HIV at the end of 2018(2). In 2017/2009 EFY (Ethiopian Financial Year), the number of persons requiring ART stands at 718,498 (653,412 adults and 65,088 Children) out of which 426,472 (59%) are currently receiving treatment(3).

Accessing highly active antiretroviral therapy (HAART), there has been a significant reduction in morbidity and mortality of HIV-infected children and more of them are surviving through childhood and into adolescence with improved quality of life. Along with the increasing survival of HIV-infected children through adolescence and adulthood, disclosure of the diagnosis of HIV infection has become a more common difficult issue. One of the most challenges that families with HIV-infected children and their medical providers face is when and how to discussing HIV with infected children(4).

Disclosure of pediatrics HIV status to HIV-infected children is telling them about their diagnosis of being infected with HIV and the purpose of medication they take(5). It is not a one-time event, but rather a process, involving ongoing discussions about the disease as the child reach adolescent still matures as cognitively, socially, and emotionally (6). Those who know HIV status had a better psychosocial adjustment and increased adherence to treatment and shown to have higher self-esteem and better relationships with their caregivers than those who are unaware of their status. Likewise, those mothers disclose their HIV status to her child has also been associated with improved health outcomes for both mother and child but a delay in disclosure has implications in clinical outcome and transmission of the infection as children reach in the pubertal stage and practice sexual intercourse (7).

The American Academy of Pediatrics that strongly recommended disclosing HIV infection status to aged less than 12 years children and younger children should be informed incrementally to accommodate their cognitive skills and emotional maturity. New Horizons advance pediatric care, many countries have set a time when children should be told about their HIV status, for example, some countries start from 4 years old, but most are 7-9 years old and written with implemented in their guidelines(6,8). Although the Ethiopia comprehensive HIV national guideline for pediatric disclosure discusses the benefits of disclosure and the effects of non-disclosure about when the child not known their status but not recommend when to start disclosure or at what age disclosed to the pediatric child(5).

There are different reasons why their HIV status is not disclosed. Studies in both develop and developing have depicted to the many factors as barriers to disclosure, such as assume that the child to young; fear that the children might inappropriately disclose their HIV status to others, which would then lead to stigmatization and discrimination towards them and their families; concerns over the child's reactions and potential psychological impact on the child's life; and caregivers' lack of knowledge about the disclosure issue. But caregivers fear the effect of disclosure to the HIV infected children, disclosure occurs suddenly by health profession or neighbor unintentionally to the child leads to crisis /having experience of suicidal attempt or social withdraw from their parents or the population(9). The levels of disclosure vary within developing and developed countries between 23% and 68%. In West Africa 2/3 of HIV-infected child not disclose to their status but some African countries reached 66% and in Ethiopia, the level of disclosure status shows 17% from low to 49.4% high(10–13).

However, several authors about HIV disclosure status have documented that many caregivers and health professions that are done in pediatric care services are reluctant to inform HIV-infected children about their HIV diagnosis(6,10,14–18). To support the implementation of disclosure on health care services, we assessed the level of disclosure of children's HIV status to child age from 5-14 years. In another way, to better-known disclosure, we explored the association between disclosure and child, caregiver, clinical and socioeconomic characteristics.

1.2. Statement of the problem

AS HIV infected children grow up, they have additional health-care demands; namely: seeking and getting medical care, being aware of and attending to the effects of the HIV infection, taking prescribed medications effectively, accepting themselves as being in a different state of health, learning to live with the HIV infection, preventing themselves from re-infection and infecting others. HIV positive children may not be able to perform these additional health-care demands if their illness is not disclosed to them(6).

Many studies support the fact that children's awareness of their outcomes plays a significant role in health care and health services but data from several authors indicate that between 34% and 68% of children with HIV/AIDS infected have been not told(6,9,13,19). In Ethiopia proportion of disclosure varies across studies from 17% in Addis Ababa to 49.5% in Dire Dawa and Harar. Eastern Ethiopia(13,20). And another meta-analysis study conducted in Ethiopia disclosure status ranges from 1.7% to 41% and partial disclosure was reported in some studies and ranged from 7.0% to 38.0% (21), which is low and has a wide range between region. Recent data from Ethiopia show that HIV disclosure rates remain low (28.5 %)(22).

Poor disclosure causes an unwanted effect in children who do not know their HIV-positive status and results, children may be less likely to take their medication regularly, which can lead to drug resistance and death. Other than those, disclosure impacts on clinical outcome and mental health of children living with HIV. Literature reviews conducted Department of Health Policy and Management, The University of North Carolina at Chapel Hill, Chapel Hill, NC, United States, shows those who told their status and others who were not disclose shows a significant difference in disease progression as measure by decline CD4 count and death. As Kaplan–Meier survival analysis shows than non-disclosed children were more likely to die (23). A study in Rome on the influence of disclosure of HIV diagnosis on time to disease progression revealed that non-disclosed children were more likely to die and experienced CD4 decline (24). Furthermore, a study conducted in Nigeria reported that from19.4% of children with mental health problems 89% were not aware of their HIV status(25).

Disclosure decreases anxiety, improves self-esteem, does not negatively affect the child’s quality of life, and promotes independent medication practices. Pediatrics, whose HIV diagnosis is disclosed to them too late, for example, after they have reached puberty, may have already

engaged in risk behaviors. They may also be less likely to trust adults if they feel that caretakers have kept secret and not told them the truth (5).

The previous study has identified, age and developmental maturity of a child (10,26), caregivers wanting their child to improve or maintain a certain level of adherence (14,27), the caregiver's level of knowledge of HIV disclosure, and the child or adolescent's status on ART (28,29) are the most associated factor of the level of HIV disclosure among HIV infected child. The associated factors and levels of HIV discourse are not well described, particularly in resource-limited settings. The associated factors for HIV status disclosure vary from one setting to another setting. Therefore, a context-specific study in a low level of HIV disclosure area indicated, and on the other hand, most of the studies were conducted only in a hospital setting but we included primary health care units. The study aimed to assess the level of disclosure and factors affecting HIV status disclosure in children age 5-14 years, South Wollo Zone, North East Ethiopia, 2020.

1.3. **Significance of the study**

This study identifies the level of HIV/AIDS disclosure status and its associated factors among the children aged group of 5-14 years, South Wollo Zone. The study important for the community to prevent direct transmission of HIV/AIDS based on giving information to the child for their illness and the medication they took.

Additionally, this study is important for health care professionals to need to act on negative and positive associated factors to increase the level of pediatrics HIV status disclosure, get the foundation for interventions based on evidence to improve disclosure status, and for Psychosocial support program implementers to skill up the program. Despite the universal access to comprehensive ART, disclosure levels have found low, caregivers face challenges to disclosure they and the problem are highly prevalent in Sub-Sahara Africa regions, including Ethiopia. Per my knowledge, there is no published literature in the study area. Therefore, this study might be important for providing baseline information for further studies, and might be an entry point for large scale study/prospective Cohort studies/.

2. Literature review

2.1. The magnitude of disclosure among HIV infected children

Due to the recent improvements in access to antiretroviral therapy, the dramatic decline of mortality and morbidity of HIV-infected children has been observed. Despite the benefits of disclosure, the level is low which is indicated in many authors(12–14,22,30). Research done India February 2019 disclosure rate is 15.4% as well as 9.7% was partially disclosed(31). The Same developed country like the Chinese qualitative survey done in 2015 shows disclosure status 68%(9). but African country like South Nigeria 2018 research done shows 29% disclosure status(29), in Kenya, Malawi, West Africa, and South Africa disclosure status in pediatric were less than fifty percent, 26%,34%,33% and40% respectively,(8,12,32,33). In our country Ethiopia study conducted in Addis Ababa 17.4%(13), Earlier research is done in Bahirdar 2013 and bale 2018 with 31.5% and 28.5% disclosure level respectively(14)(22) And in Ethiopia higher level of disclosure was 49.4% that was done Ester Ethiopia in Dire Dawa and Harar 2017(20). But studies were done in central Africa countries like Rwanda and Uganda 52% and 64% respectively(26,34).

2.2. Factors affecting disclosure of HIV infected children

2.2.1. Adherence to treatment

A Meta-analysis study done at Oxford University in 2015, show that disclosure of HIV status was related to good adherence, (15). The same to these, A hospital-based unmatched case-control study done in Tanzania by 2018 showed that adherence showed a statistically significant relationship between HIV status disclosure(27). On the other hand, a qualitative study done in Uganda shows that drug adherence is not associated with HIV status disclosure, overall, 12 (29%) of the children and their caregivers reported excellent adherence (never missed any dose), 17 (40%) good adherence (occasionally missed doses) and 13 (31%) poor adherence (frequently missed doses)(26) on the other hand Systemic review done in the lower and middle-income country in 2016, indicate factors associated with full disclosure included antiretroviral treatment initiation and caregivers' felt need for maintaining optimal adherence.

A study was done in Fana Hiwot and dilchora hospital, Ethiopia shoed that adherence to ART in 313 HIV positive children during the past three and seven days was assessed and 310 (97.1%) of them took greater than 95% of the total prescribed doses, respectively(35) but A cross-sectional

study conducted in Mekele hospital in 2015 More than two-third, 79%, of caretakers of the well-adhering children were living in an urban area. Those children who had illiterate caregivers were more likely to adhere to their treatment than their counterparts. Those children below five years old were more likely to adhere to ART than above the age of five years(14)

2.2.2. Children factors

Different factors of the child affect disclosure in India describes factors influencing child HIV status like child characteristics considered important to disclosure included the child's age gender, education level, medication responsibilities, whether the child asks questions, and their perceived ability to understand their diagnosis. The child's clinical status also influenced disclosure(36). A hospital-based unmatched case-control study done in Tanzania by 2018 showed that compared to 6 to 9 years of age; the chance of HIV/AIDS status disclosure was 18.3 times higher among children between 10 and 13 years and 64.7 times higher in children between 14 and 17 years. (27). The same to this, 2019 systemic review done in south Africa indicate barrier to disclosure include, Age of the children and inability of children to keep a diagnosis to themselves(30). A facility-based cross-sectional study conducted in North Gondar Zone implies that the mean age at disclosure was 10.7 years. 40.8% of children were disclosed by their biological parents while 38.5% of children were disclosed by health care providers. The prominent reasons for disclosure as mentioned by caregivers were repeated questionings of "what happened to me" (27.2%) by the child and cross-sectional study conducted in Addis Ababa, Ethiopia a child diagnosed with HIV at age > 5 years and children on antiretroviral therapy (ART) with follow-up for > 5 years had significant association with HIV- positive status disclosure to infected children [19]

2.2.3. Caregiver/ parents factor

Identifying the reasons caregivers delay or do not disclose is important. Systemic review done in the lower and middle-income country in 2016, indicate factors associated with full disclosure included antiretroviral treatment initiation and caregivers' felt need for maintaining optimal child health care. Barriers to disclosure included fear of negative psychological reactions and inadvertent disclosure to others and caregivers perceived a strong need for active participation from health care providers to aid the process of disclosure(37). The same to this, 2019 systemic review done in south Africa indicate barrier to disclosure include, caregivers were reluctant to

reveal the child's HIV status; The inability of children to keep a diagnosis to themselves stigma; and insufficient Knowledge of the Caregivers (30). Caregivers were more likely to disclose if they had a higher level of education or were more open about their own HIV infection. Caregiver fear the child would disclose to others, and fear of subsequent stigma or negative effects from others knowing the diagnosis(36)

In a cross-sectional study conducted in Kigali, the teaching hospital reported that most of the parents or guardians whose children were not yet disclosed or 60%, was an account of fear to be challenged by children and 40% accounts of fear of bad reaction after disclosure(34). A similar study conducted in Nigeria in 2016 shows that the most common reason, 82.2%, for HIV non-disclosure was that the child was still too young. Another possible reason for the low disclosure rate due to fear of stigma and discrimination even if it is policing for them in Nigeria(29).

The facility-based cross-sectional study conducted in North Gondar Zone implies the prominent reasons for disclosure as mentioned by caregivers were "child thought to be matured" (44.4%) and repeated questionings of "what happened to me" (27.2%) by the child. The caregiver of the child still believes that the child is too young for disclosure (57.1%) and another 20% fear the negative emotional and health consequence of disclosure. The same study design but triangulated with qualitative method conducted in Addis Ababa shows the similar result with the above, that the reasons for disclosure as mentioned by the primary caregivers of the children were "child thought to be matured" 81.3%; the majority of the primary caregivers reported that reason for disclosure to share responsibility and get relief 77.7%, respectively(10).

Another facility-based cross-sectional study conducted in Addis Ababa, Ethiopia states that, most caregivers concerned that if they disclose, their child would not keep the diagnosis private, related family secrets might be disclosed outside the home or that children would be exposed to isolation, stigma, and negative reactions from peers, school community, and the community at all and family. Many HIV positive mothers have reported that their child will be angry with them for transmitting the virus(18). Similarly in a policy review conducted in Addis Ababa implies that 20% of children reported being discriminated against by their neighbors. Out of the (20%) children that reported discrimination, 13% were from the HIV disclosed group and 87% were from the HIV non-disclosed group (38). In contrast to this other cross-sectional study done in the Bale zone, Only 57 (28.5%) of the caregivers disclosed HIV-positive status to the child for

whom they were caring. The main reason for disclosure delay was due to fear of negative consequences, perception of maturity of the child, and fear of social rejection and stigma(22).

2.2.4. Health facility related

Psychosocial support group constituted a factor influencing children's disclosure by the parent. Most of the parents or guardians whose children were living with HIV or 67% attended a psychosocial support group and disclosure their status was highly associated with the psychosocial support group attendance(34). In Ethiopia, a cross-sectional study was done in Bale zone having social support caring for a child between 10 and 14 years with HIV, a child diagnosed with HIV at age > 5 years, and children on antiretroviral therapy (ART) with follow-up for > 5 years had significant association with HIV- positive status disclosure to infected children(22). and Another possible reason for the low disclosure rate found in the present study is poor implementation of WHO recommendations for disclosure to HIV-positive children in Nigeria(29)

2.2.5. Conceptual framework

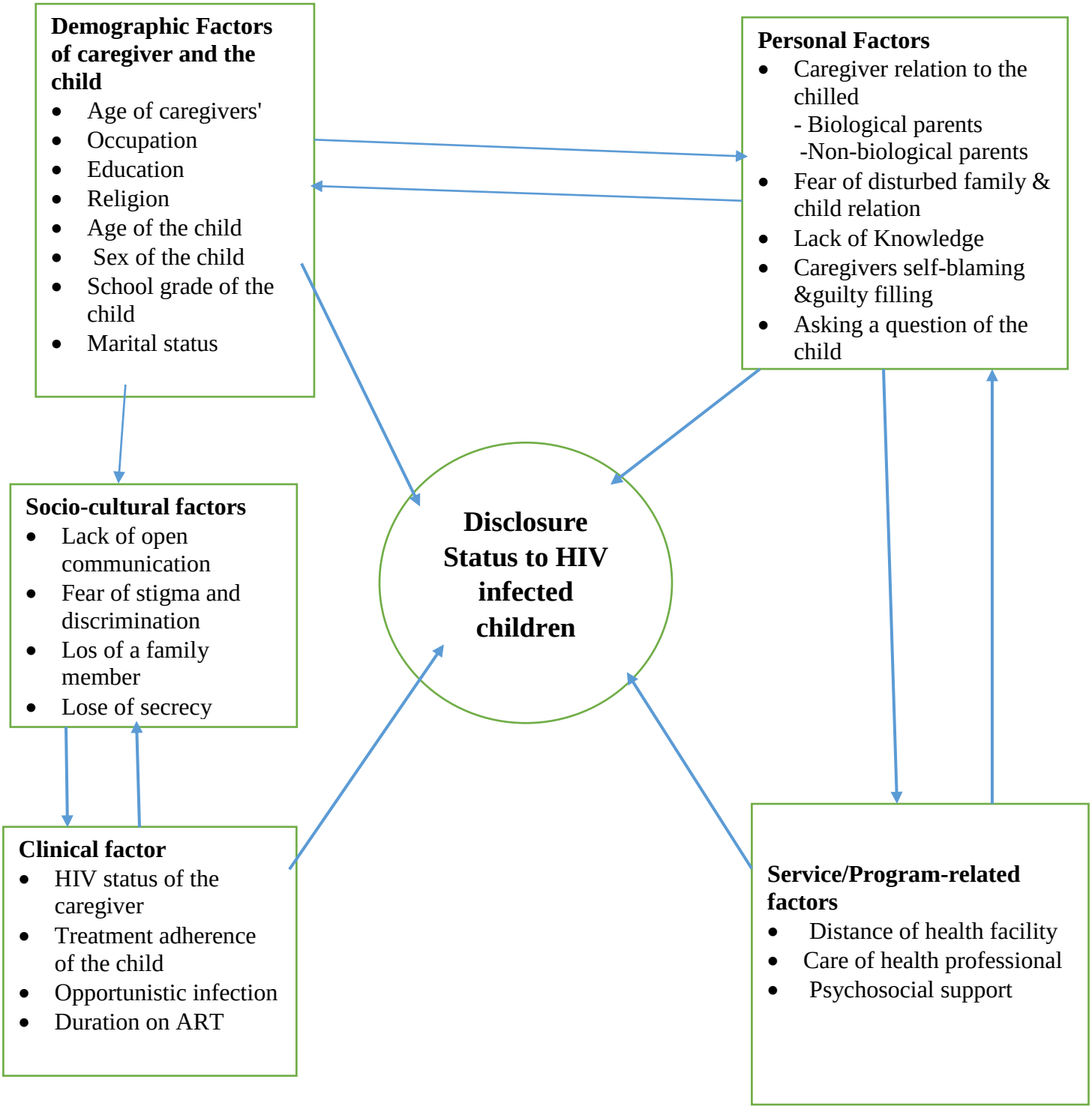

Figure1**.** The conceptual framework for studying pediatrics levels of HIV status disclosure and associated factors among children aged 5-14 years at South Wollo Zone, North East, Ethiopia, 2020(Source: Literature review).

3. Objective

3.1. General objective

To assess the level of HIV/AIDS disclosure status and its associated factors among the age group of 5-14 years, South Wollo Zone, North East Ethiopia, 2020

3.2. Specific objectives

- ✓ To determine the level of HIV/AIDS disclosure among HIV infected children.
- ✓ To identify factors associated with HIV status disclosure to infected children.

4. Methods and materials

4.1. Study design

An institution-based cross-sectional study was conducted on children aged 5 - 14 years who were on HAART.

4.2. Study area and period

The study was conducted in South Wollo Zone from May 1/2020 to June 30/2020. The capital city is Dessie which far 401 km away to the north of the capital of Addis Ababa and 462 km regional city Bahirdar. The zone is divided into 21 woredas and 4 city administration an estimated population size of 3,056,763, of whom 1,553,995(50.8%) are men. South Wollo zone has 128 public health centers and 9 public hospitals which of its 24 health centers and 3 public hospitals provide ART services that have 21,218 currently on ART and 674 under 15 years children. Kombolcha city administration contributes 4429 currently on ART and 126 under 15 years follow by Tewledere woreda which has 1571 current on ART and 60 pediatric(39).

4.3. Source population

The source population was all HIV infected children currently on ART care service age 5-14 years old in South Wollo zone health ART site facilities.

4.4. Study population

The study population was all caregivers of HIV infected children on ARV drugs age 5-14 years old and who are on follow up in South Wollo zone at selected health facilities.

4.5. Inclusion and exclusion criteria

4.5.1. Inclusion criteria

The caregiver must be the primary caretaker of the HIV-infected child or adolescent as well as the HIV- infected child must be residing in the same home as the caregiver in the study area and must be enrolled at the South Wollo Zone pediatric clinic

4.5.2. Exclusion criteria

- ✓ Caregiver accompanying children who are living in orphanages

4.6. Sample size and sampling procedure

4.6.1. Sample size determination

1. The sample size is determined by the single population proportion formula by considering the following assumption; 95 % confidence interval (CI) proportion=40% (from a study conducted in North Gonder) and 5% of marginal error as shown below.

n= (z α/2)2* p (1-p)/d2 = (1.96)2 (0.40) (0.60) / (0.05)2 = 369 By adding a non-response rate of 10%, the total calculated sample size of 406 caregivers were required.

Where:

n = the desired sample size for the cross-sectional survey

Z= percentiles of the standard normal distribution corresponding to 95% confidence level

P= the assumption of the prevalence of HIV/AIDS disclosure among children living with HIV/AID would be 40%.

d=the margin of error (precision) 5% and

2. Using the double population proportion formula sample size is determined using Epi. Info7 statistical software. Taking power 80 and odds ratio (OR), from a previous cross-sectional study in North Gondar, with the assumption of 95% CI and percent of control exposure 40%.

Table 1: sample size determination from the previous study

variable	percent exposed	OR	sample	Citation
Relation with the child	31	3.73	88	(10)
Age of caregiver	34.1	2.19	232	(10)
Age of child	34.4	11.87	34	‘’
Educational status of a child	31.9	7.51	44	
With whom currently living	31	2.07	276	
HIV-positive status of caregivers	29.4	2.76	146	
History of OIs exposed	42.7	2.1	257	

We took the final sample size with a 10% non-respondents rate is 406 this is a larger sample size than the doable population proportion as the table above but Total HIV positive children age from 5-14 years old in South Wollo zone selected health facility were 427 children on ART but only 21 children remained then the total population should be included to the study.

4.6.2. Sampling techniques

The study was conducted in a total of 9 health centers and 1 primary hospital in government pediatric ART and care providing facilities. To determine the study subjects to be included in the study, 9 health centers were selected by simple random sampling (lottery method) from 18 government health centers and 1 primary hospital from 3 district hospitals. The final sample size was 406. Since the calculated sample size approximately close to the source population, finally, all the subjects (427subjects) included in the study.

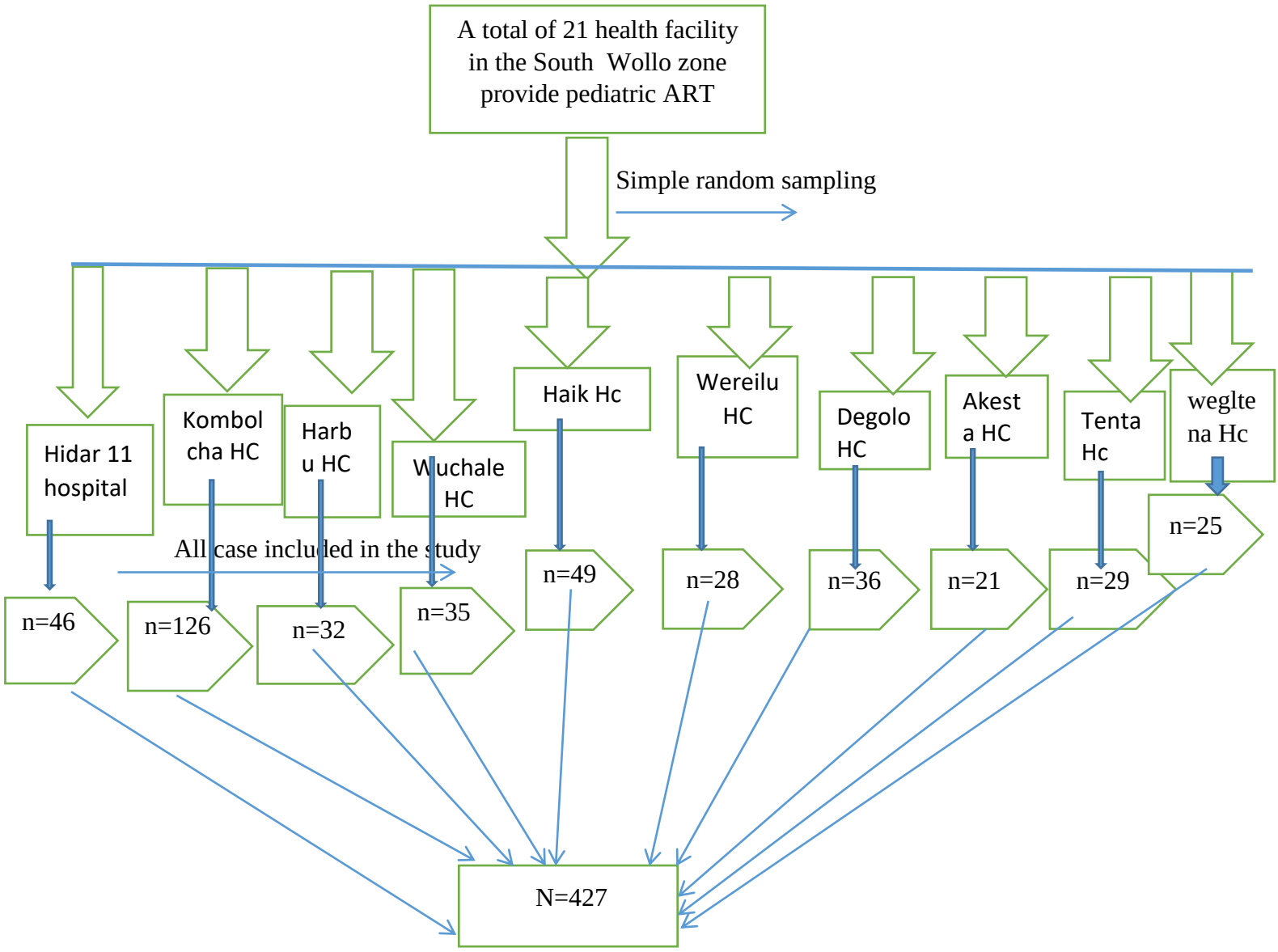

Figure 2. Schematic presentation of the sampling procedure for a sample selection of pediatric on ARV treatment from South Wollo Zone, North East Ethiopia, 2020

4.7. Study variable

4.7.1. Dependent Variables

HIV disclosure status of age 5-14(yes/no)

4.7.2. Independent variables

- Socio-demographic variables such as age, sex, religion, education status of child and family or caregiver.
- Personal Factors like caregiver relation to the chilled (biological parents or non-biological parents), fear of disturbed family & child relation, lack of Knowledge, caregivers self-blaming &guilty filling, and asking the question of the child.
- Clinical variables like HIV status of caregivers, OI (opportunistic infection) of child, treatment Adherence of child, age at diagnosis, duration on medication will be included.
- Health facility and health professional focused variables like distance of home from a health facility, care of health professional, and psychosocial.
- Socio-cultural factors:- Lack of open communication, Stigma, and discrimination, Los of a family member, Lose of secrecy

4.7.3. Operational definition

HIV Status Disclosure: - is when caregivers said that the child knows his/her HIV/AIDS diagnosis regardless of who told the child of HIV status (18)

Non-disclosure:- Where the caregiver said that the child does not know his/her infection or where the caregiver and health professionals did not disclosure them.

Primary caregiver:- A person, who lives with the child, participates in the child's daily care and who knows most about the child's health.

4.8. Data collection tools and procedures (instrument, personnel)

The questionnaires were prepared by reviewing previous studies and carefully adapted to local contexts and first prepare in English then translate to the local language Amharic after that back to English to ensure consistency. The training was given for data collectors and supervisors at two sites before the actual data collected. A pretest was done at Dessie referral hospital by taking 5% of the population to assess clarity, flow, and consistency, and revision was done before data collection. Then Data were collected from pediatric ART clinics by using structured questionnaires through face-to-face interviews and supplemented by chart review.

4.9. Data quality control

To ensure the quality of data, questionnaires were checked for completeness and consistency by the principal investigators. The questionnaire was assessed for its clarity, consistency, completeness, and skip patterns, also, the principal investigator and supervisor conducted, monitoring for completeness, correcting mistakes, and checking errors. The collected data was cleaned before the analysis. The questionnaires were classified as unfilled, partially incomplete, item missed, and completed. Incomplete and partially completed formats were excluded from the analysis.

4.10. Data processing and analysis

The data was checked and entered into EPI INFO version 7.2.2.6 software, and exported to SPSS version23 statistical software to analyze. Frequencies and proportions were computed for the description of the study population to socio-demographic and other relevant variables. Variables with p-value <0.20 in binary logistic regression were entered into multiple logistic regression models which were constructed using the backup like hood selection procedure. This method considered all predictors of disclosure by adding the predictor with the lowest p-value under binary logistic regression to the crude odds; multiple logistic regressions were used to control the possible effect of confounders. Finally, the variables which have an association with disclosure were identified based on AOR, with 95%CI and p-value ≤0.05. Model fitness was checked using the Hosmer and Lemeshow goodness of fit test.

4.11. Ethical considerations

A formal letter was obtained after the approval of the proposal by the institution Review Board of, Bahirdar University College of Health Science School of Public Health to South Wollo Zone. The zonal health office was also reviewing the plan and wrote a formal letter for the health institutions to have appropriate support during the data collection period. After obtaining the consent of heads of study health facilities via a request made by a support letter of the zonal health office and introduction of the objectives of the study, appropriate support was obtained to conduct the study in the facilities. The study participants were briefed about the aim of the study, the confidentiality of their responses, and the importance of providing the right information. Written consent was obtained before a participant interview from each individual. Also, participants were informed about the purpose of the study and the study was based on their willingness to participate in it. Participants were fully informed that if they are not willing to participate they have the full right not to be involved in the study and ensured that their choice not to participate in the study might not affect their medical treatment. There was no identifying name on the questionnaire and interviews were carried out privately in a separate room. The information gathered during this study was remaining confidential and ensured that it was handled exclusively by the investigators and no one could recognize them in the report.

5. Results

5.1. Socio-demographic characteristics of caregivers

A total of 417 primary caregivers of children aged 5-14 years living with HIV had provided information, making a response rate of 417(97.7%). Three-handed sixty-seven (88%) of the primary caregivers were biological parents, followed by grandparents, 33 (7.9%). The majority of 281 (75.5%) of the study participants were females. The mean age of caregivers was 38.6 years (s.d.=9). Regarding educational level, 105 (25.2%) of caregivers attended primary school while 169(40.5%) were able to read and write. More than half, 292(70.0%) of the respondents were Muslim and 252(60.4%) participants were married. Concerning caregiver's residence, 257 (61.6%) were urban having a monthly income of 2000 Ethiopian birr per month. The findings of the selected socio-demographic characteristics of the respondents' primary caregivers are depicted in Table1**.**

Table 2**:** Socio-demographic characteristics of the caregiver of HIV positive children who attend ART clinic in South Wollo Zone, public health facilities, North East Ethiopia, 2020.

Variable (n=417)	**Category**	**Frequency**	**Percent (%)**
Age	<30	97	23.3
	31-40	196	47
	41-50	80	19.2
	51-60	36	8.6
	>60+	8	1.9
Sex	Male	121	29
	Female	296	71
Religion	Orthodox	116	27.8
	Muslim	292	70
	Others	9	2.2
Educational status	Cannot read and write	166	39.8

	Primary (1-8)	105	25.2
	Secondary (9-12)	91	21.8
	Diploma and above	13	3.1
	Informal	39	9.4
Marital status	Married	252	60.4
	Single	14	4.1
	Divorced	118	28.3
	Widowed	30	7.2
Occupation	Unplowed	14	3.4
	Daily laborer	102	24.5
	Government employ	32	7.7
	Privet employ	44	10.6
	Housewife	111	26.6
	Merchant	35	8.4
	Farmer	74	17.7
	others	5	1.2
Place of residence	urban	257	61.6
	rural	160	38.4
Relationship to the child	Mother	269	64.5
	Father	94	22.5
	Grandparent	32	7.7
	Sibling	9	2.2
	Relatives	6	1.4
	Other	7	1.7

5.2. Socio-demographic characteristics of HIV positive children

A total of 417 caregivers had information about their children under care. Boys 235(56.4%) were slightly higher than girls. Their mean age was 10.9 years (s.d. = 2.7) and the majority of the 367(88%) were living with their biological parents and had been attending their education. Caregivers were also asked to indicate whether the biological mother of the child in their care was alive; 40 (9.6%) and 65 (15.6%) of the children were maternal and father orphans respectively and less than five percent of 13 (3.6%) of the children were double orphans (Table 2).

Table 3: Socio-demographic and clinical characteristics of the child who attends ART follow up at South Wollo Zone public health facilities, North East Ethiopia, 2020.

Variable (n=417)	**Category**	**Frequency**	**Percent (%)**
Age	5-9	118	28.3
	10-14	299	71.7
Sex	Boy	235	56.4
	Girl	182	43.6
Schooling status	Not start	56	13.5
	Primary(1-4)	209	50.1
	Primary(5-8)	152	36.5
With whom the child lives	Biological parents	367	88
	Grandparent	33	7.9
	Sibling	8	1.9
	Relative and other	9	2.1
The child lost any of his/her nucleus family members with HIV	No	288	69.1
	Mother	40	9.6
	Father	65	15.6
	Both mother &father	15	3.6
	Sibling	9	2.1

5.3. Clinical characteristics of the primary caregivers and children age 5-14 years.

Most of the caregivers, 360(86.3%) were HIV-positive and had been on HAART. Among caregivers, 269 (100%) and 83(86%) were biological mothers and fathers respectively. Nearly two-thirds of the children, 251 (60.2%), were diagnosed while they were at the mean age of 4.3 years (SD = 3); All children had already started HAART at their mean age of 4.5 years (SD = 2.95). Of the study participants, 338(81%), had good treatment adherence and 221(53%) of the children had a WHO clinical stage I disease. Three fourth of 258 (61.9%) had a history of opportunistic infections (OIs) and 250(60%) of children had got a variety of aid or support from different charity organizations; including psychosocial support, money, material, and food. details of the pertinent findings are depicted in table 3.

Table 4: Distribution of clinical characteristics of caregivers and children age 5-14 years who attends ART follow up at South Wollo Zone public health facilities, North East, Ethiopia, 2020.

Variable (n=417)	**Category**	**Frequency**	**Percent (%)**
HIV status of the caregiver	Positive	360	86.3
	Negative	54	12.9
	Not tested	3	0.7
Age at diagnosis	<5 years	289	69.3
	>5years	128	30.7
WHO clinical stage of the child	Stage I	221	53
	Stage II	113	27.1
	Stage III	76	18.2
	Stage IV	7	1.7
Age when ART was initiated	<5 years	275	65.9
	>5 years	142	34.1
Duration of ART	1-5	166	39.8
	6-10	214	51.3
	11-15	37	8.9
Other medication	Bactrim	126	30.2
	TB	10	2.4

	Multivitamins	5	1.2
	RUTF	32	7.7
Treatment adherence of the child	Good	339	81.3
	Faire	63	15.1
	Poor	15	3.6
Healthcare provider discuses about disclosure issue with caregivers of children	Yes	336	80.6
	No	81	19.4
Health care provider adequately cover the disclosure of the issue	Yes	268	64.27
	No	149	35.73
Child get support aid from other organizations	No	250	60
	Psychological	110	26.4
	Money	71	17
	materials	9	2.2
	Food	11	11

5.4. HIV status disclosure level of children

In this study, 209 (50.1%, 95% CI: 45.4-54.8) of children living with HIV know their HIV status. The mean age at disclosure was 12.2 (SD = 2) years. Among them, 134 (32.1%) were disclosed by health care providers, 108(51.5%) by their mothers, 49(23.4%) by their fathers, 11(5.3%) by their grand-parents, relatives and others 3(2.5%) other relatives' were older siblings, aunts, and uncles who played the role of informal foster parents.

Table 5: Distribution of HIV positive status disclosure among children age 5-14 years at pediatric ART clinics in South Wollo Zone, North East, Ethiopia, 2020.

Variable (n=417)		**Frequency**	**Percent (%)**
The child knows his/her HIV status	Yes	209	50.1
	No	208	49.9
At which age did you disclose	<10	136	60.07
	> and equal 10	73	39.93
Who disclosed HIV	Mother	108	25.9

status to the child	Father	49	11.8
	Grandparent	11	2.6
	Health worker	134	32.1
	Friend neighbor	1	0.2

5.5. Caregivers' reasons for disclosure

Caregivers who disclosed the HIV status to the children were asked their reasons for informing their child about the HIV diagnosis. The most common response was the show (Figure 3).

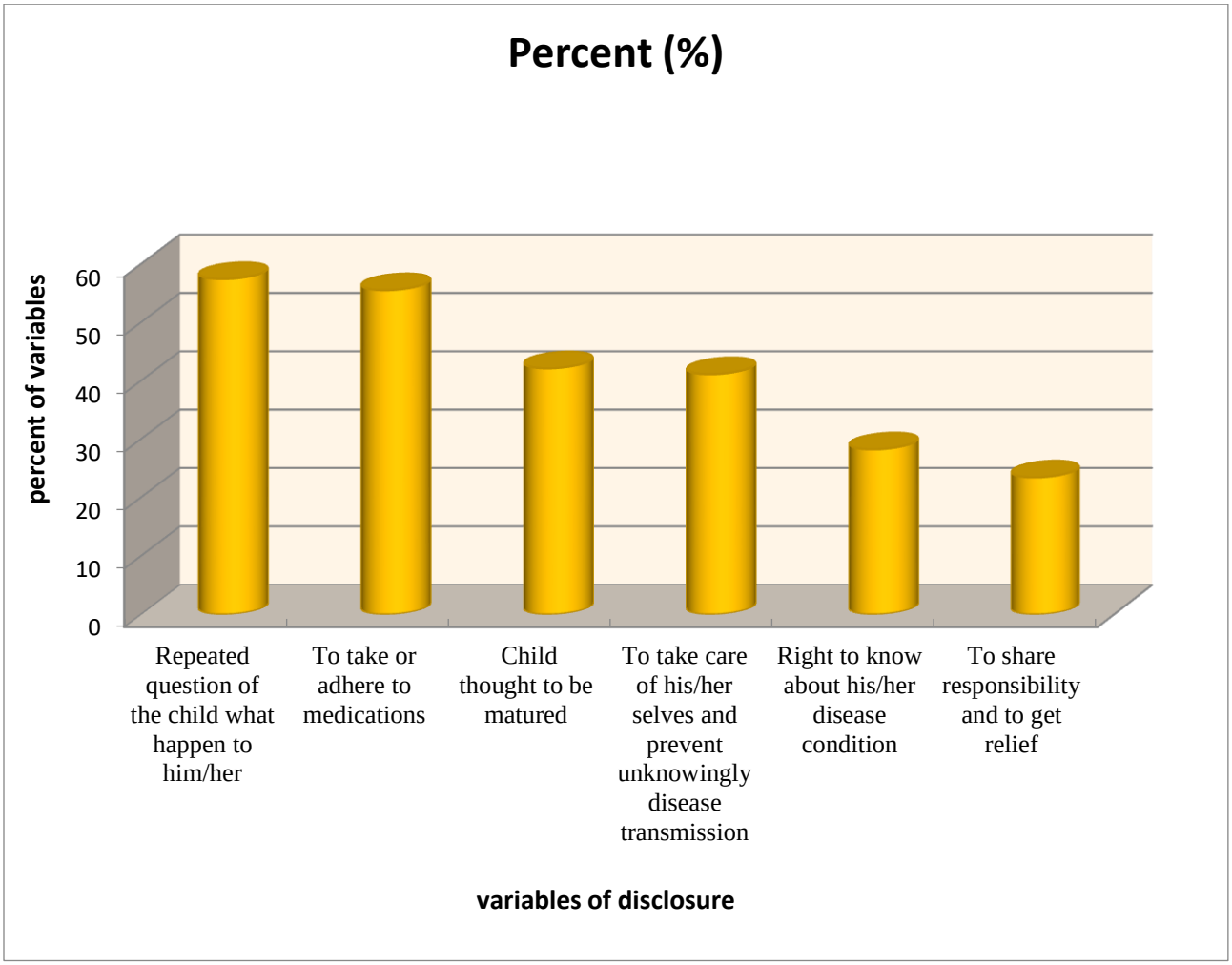

Figure 3: Reported reasons for disclosure amongst caregivers of children of ART age 5-14 years who attend ART follow up at South Wollo Zone public health facilities, North East Ethiopia, 2020.

5.6. Caregivers' reasons for non-disclosure

Caregivers who had not informed their children about their HIV diagnosis also responded to their reasons for not disclosing the show Figure 4.

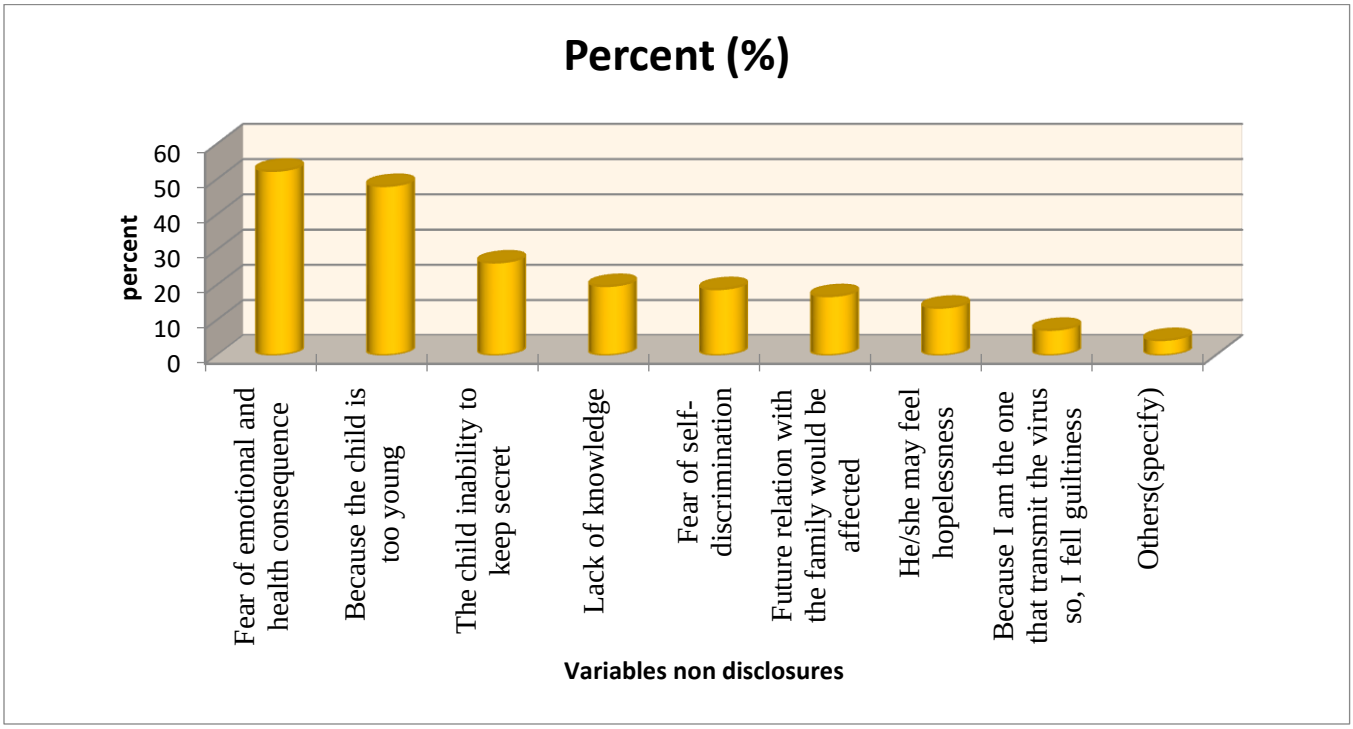

Figure 4: Reported reasons for non-disclosure amongst caregivers of children on ART age 5-14 years who attend ART follow up at South Wollo Zone public health facilities, North East, Ethiopia, 2020.

For children's who did not disclose, caregivers told other reasons to visit a clinic like TB 30(14.4%), cardiac follow-up 24 (11.5%), to prevent illness and body allergy 99(47.6%) and 55 (26.4%) others like have an appointment, medication, no information about gave to the drug. All the caregivers of children who were not disclosed had a plan to disclose the HIV status of their children. Also, all caregivers believe that disclosing HIV positive status to the children have an advantage. The majority of caregivers believed that 266 (63.8%) biological parents should be responsible to disclose the HIV status of the children. About 327(78.4%) of caregivers of children who were not disclosed believed that the preferred of disclosing to the child by health professionals.

5.7. Factors associated with HIV positive status disclosure.

Factors associated with HIV positive status disclosure In the bi-variable analysis, thirteen factors were associated with HIV positive status disclosure of children but after controlling confounding in multivariable logistic regression place of residency, educational level of the caregivers, the age and educational level of a child, psychosocial support and health professionals start disclosure counseling about disclosures were significantly associated with disclosure.

We observed that the Educational status of the caregivers was statistically significantly associated with disclosure. Children with caregivers that have education diploma and above are statistically significant more likely to be informed of their result than those with illiterate caregivers (AOR = 3.891; 95% CI: 28-11.80) and those caregivers residency to urban 6.27(AOR = 6.273; 95% CI:.35-11.73) were more likely to be informed about their children HIV test results. Age of the child was one of the factors significantly associated with disclosure of HIV-positive status in which children older than 10 years of age were 3.71(AOR=3.71;95%CI:1.30-5.63) times more likely to be disclosed as compared their counterparts than less than 10 years. Other factors of children significantly associated with disclosure were starts schooling most likely disclosed than not start schooling (AOR=3.13;95% CI: 1.11-8.81) and child on psychological support more likely disclosure than non-support at (AOR = 6.98; 95% CI: 2.58-18.94). The same truth that Healthcare provider discusses disclosure issue with to caregiver was also found to be associated with disclosure status. Health providers start a discussion about disclosure and were statistically significantly more likely to be informed about their HIV status than their counterparts (AOR = 4.37; 95% CI: 1.88-10.19) that shown in table 7.

Table 6: Bivariable and multivariable logistic regression analysis of factors associated with HIV positive status disclosure South Wollo Zone, North East, Ethiopia 2020.

Variable		**Disclosure status**		**COR(95% CI)**	**AOR(95% CI)**	**p-value**
		Yes =209	No =208			
Educational Level	Primary	42	63	0.84(0.5-1.40)	1.71(0.83-3.60)	0.14
	Secondary	49	42	1.5(0.88-2.44)	1.11(0.53-2.34)	0.79
	Diploma and above	43	9	5.99(2.75-13.06)	3.89(1.28-11.80)	**0.015***

Not educated	75	94	1	1	
Place of residence Urban	174	83	7.49(4.7-11.8)	6.27(3.35-11.73)	<0.001*
Rural	35	125	1	1	
Age of child ≥ 10 years	171	82	6.9(4.4-10.8)	3.71(1.30-5.63)	<0.001*
<10 years	38	126	1	1	
ART Duration <5 years	62	104	0.25(0.15-0.410	0.65(0.38-1.09)	0.102
6-9 Years	58	67	0.36(0.21-0.61)	0.38(0.14-1.06)	0.06
≥10 years	89	37	1	1	
Age of diagnosis <5 years	133	156	0.33(0.16-0.66)	0.98(0.70-5.90)	0.194
6-9 years	45	40	0.44(0.20-0.96)	0.84(0.50-1.40)	0.089
≥10 years	31	12	1	1	
Schooling status of child					
Started	201	160	7.5(3.5-16.4)	3.13(1.11-8.81)	0.03*
Not started	8	48	1	1	
Medication other than ART					
Bactrim Yes	52	74	0.6(0.39-0.92)	1.17(0.61-2.24)	0.65
No	157	134	1	1	
HP & caregivers discuses about disclosure issue Yes	199	137	10(5.14-20.7)	4.37(1.88-10.19)	0.001*
No	10	71	1	1	
Supported by organization Yes	121	46	4.84(3.16-7.42)	0.83(0.45-2.17)	0.96
No	88	162	1	1	
Psychosocial support Yes	96	14	11.77(6.4-21.6)	6.98(2.58-18.94)	<0.001*
No	113	194	1	1	
Adherence for treatment Good	194	145	2.00(0.69-5.77	1.5(0.28-8.5)	0.62
Faire	9	54	0.25(0.7-0.87)	0.31(0.06-1.60)	0.162
Poor	6	9	1	1	
Current Viral load <1000 copy	198	180	2.8(1.36-5.79)	1.34(0.42-4.26)	0.621
>and equals 1000 copy	11	28	1	1	

*Factors less than P-value 0.05 significant association to outcome variable

6. Discussion

This study tried to assess the level of disclosure and associated factors among children aged 5–14 years. The study revealed that 51% (95% CI: 45.4-54.8) of HIV positive children know their sero-status. The finding of this study is in line with the study which was conducted in Dire Dawa and Harar 49.5% and so far in Uganda 52% (20,26). The possible justification of this similarity with this study in Dire Dawa, the health structure and the population may be the same but in Uganda might be similar to supported or caregivers follow psychosocial support.

But the finding of this study, higher as compared to other studies which were conducted in Bahir Dar, North Gonder, Addis Ababa, Kenya, Tanzania, Nigeria, and South Africa 31.5%, 39.9, 29.8%, 11.1%, 33%, 29%, and 36%, respectively(10,14,15,18,27,29). The higher level observed in our study might be attributed to the increased number of older children (mean age of 12.2, range 5–14 years). Besides, most of the caregivers in the current study that they attended psychosocial support (26%) and almost >50% of children and caregivers supported by a different type of supported organization to increase adherence and also health professional have a session of disclosure status to the child. For the study in Kenya(33), HIV positive status disclosure in children measured based on both caregivers and children report. As opposed to the current study which was based on the only caregiver's report which might affect the level of disclosure. The possible justification for the study which was studied in South Africa might have an age group difference which was 4–17 years. Because the study involved young children, the family believed that the child was a young person who understood the illness. For other studies, there may be differences in socio-cultural and health services.

However, lower as compared to studies conducted in Zimbabwe, Rwanda, and chines which were 56%, 64%, and 68% respectively(11,34)(9). This could be due to socio-cultural differences, good child-parent interaction, and the presence of better health care services that promote disclosure, and in Rwanda included the study follow psychosocial support 67% higher to this study 26% only of caregivers and child follow psychological support in our study. The possible explanation for the study was conducted in Zimbabwe is that the children learn 12 months and the age included was 9-15 of above about HIV status greater possibility to be disclosed. They are matured and eager to ask questions frequently to know about their illness, as a result, the caregivers in this study disclosed so that the children should adhere to medication. This is in line

with the findings of both developing and developed countries, where respect for treatment in developing and developed countries is very common.

Disclosure has been reported to positively influence adherence to ART for some HIV-positive children(27). In a Ugandan study, the introduction of HIV testing was necessary to defeat the opposition to adhere to HIV treatment for children and to fully explain HIV testing to children. was related to good ART adherence to increase adherence child and caregivers were supported by psychosocially. Similarly, in South Africa, study caregivers and young people acknowledged that their access to treatment had improved with HIV disclosure. (15).

In our study, the age of the child, place residence, psychosocial support, and educational status of the caregivers and the child and health professional start session of disclosure were identified as significant factors. Disclosed of HIV positive status with age greater than 10 years were more likely 3.7 times higher as compared to children lesser than 10 years of age children. This study is consistent with the study that was conducted in Gondar, South Africa, Nigeria, and Uganda (10,15,26,29). This might be due to the caregivers' belief that the child is matured to understand the illness and they may have less fear of having to disclose family secrets.

The disclosure of HIV positive status among caregivers of positive children who are taking session of disclosure issue by health profession 4.7 times more likely as compared to not taking. This finding is consistent with studies that were conducted in the Bale zone and Zimbabwe (11,22). They contact health care professionals regularly; as a result, the caregivers and the children get ongoing counseling which helps to facilitate disclosure. Another possible justification could be children stay on session for a long period knowing about the diseases and the benefits of medication they took. And this is a direct guide to asking why they are taking medication when they are well. This may lead to increased adherence; therefore, the caregivers and professional’s last option become disclosing HIV status to the child. On the other hand disclosure association to a psychosocial support 6.98-time child on psychosocial support than not supported, this is constant the study conducted in Bale zone, Uganda, and Rwanda(22,26,34) this might be due to the same to health professional start sessions discus above and Caregivers are less likely to rely on their ability to disclose properly that previous studies have been reported HIV. caregivers have confidence in their ability to disclose appropriately is to decrease the major barrier to HIV disclosure that has been reported in previous studies. This study also found that

the educational level of caregivers is significantly associated with disclosure. Disclosure among children whose caregivers' had secondary education was 3 times more likely disclosed as compared to illiterate caregivers. This finding is similar to a study conducted in India [20]. This awareness may increase the disclosure and awareness of information gained by obtaining information in a variety of ways. Place of residency is also another factor that was significantly associated with disclosure. Those caregivers who live in urban were 6.27 times more likely disclosed as compared to those who live in rural. This finding consistent with a study conducted in Bahirdar and Malawi. This might be due to the presence of more knowledgeable of caregivers that who assist in disclosure through counseling children and caregivers who live urban have including in psychosocial support and health professional adherent session that facilitate the level of disclosure in pediatric population on HAART.

7. Limitation of the study

All information provided about children's HIV diagnosis disclosure was from caregivers' reports which could not describe the child disclosure status which might leads to social desirability.

8. Conclusion

This study revealed that the level of disclosure of HIV positive status to HIV infected children was better as compared to other settings done in Ethiopia.

Age of child greater than 10 years, place of residency, psychosocial support, health profession start counseling about disclosure issue and educational level of the caregiver and child were associated factors with disclosure. Addressing and scaling up effort on psychosocial support discussion on disclosure issues with caregivers in the study area context will increase the level of disclosure of children's HIV positive status.

8. Recommendation

Based on the findings of the study, the following areas were identified and specific recommendations were made.

- **Regional health Bureau and CDC Ethiopia (that support psychosocial)**

Regional health bureau and non-governmental organizations should strengthen psychosocial support for the caregivers on the care of children.

- **To health care providers**

The care provider should give age-appropriate counseling, by considering the educational level of the caregiver, offer social support, and work together with caregivers on the progressions of disclosing children's HIV status. Must ensure continuous psychosocial support even if not supported by CDC Ethiopia.

- **Researchers**

Further research should be conducted to explore the benefits of disclosure of HIV-positive status to HIV-infected.

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Annex I

Bahirdar University College of Health Science School of public health, individual information sheet to study the level and its associated factors that affect caregivers"‘ decision towards disclosure of HIV diagnosis to HIV-infected children in South Wollo zone North-East Ethiopia.

Informed consent

Good morning/afternoon, my name is_____ and I am health professional working in_____ I am also apart of team carrying out this study. The purpose of this study is to measure the level and its associated factors that affect caregiver’s decision to disclose their children's HIV/AIDS status. We believe that the study findings will help to improve health care service and full fill the HIV/AIDS disclosure issue of children in the South Wollo zone. Your name will not be written on this form Interviews will be carried out privately in a separate room. I will use a questionnaire document to ensure the accuracy of data collection but the information that you will give us will be kept confidential and will be used only for research purposes. You have the full right to take part or to interrupt the interview at any time if you are not comfortable with the questionnaire. But the information that you will give us during the discussion is quite useful to achieve the objective of the study and to bring change in the chilled HIV/AIDS disclosure issue. Do you have any questions?

If you have any question you can contact the principal investigator at any time convenient for you using the following address:

Name of the principal investigator: - Abebe Birhane Phone +251913744656

E-mail:- birhaneabebe404@gmail.come

Co-investigators: Kebadnew Mulatu Phone +251924491976

E-mail- kebadmulatu@gmail.com

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E-mail- fwudie@gmail.com

Annex II

Bahirdar University College of Health Science School of public health, an individual consent form to study the level and its associated factors that affect caregivers‟ decision towards disclosure of HIV diagnosis to HIV infected children in South Wollo zone North East Ethiopia

Written Consent Form

You have been already briefly informed about the study and clearly understand the objective. Now please tell me if you agree to participate in the study?

1. Agreed, Thanks! Conduct the interview

2. Did not agree, Thanks! Proceed to the next eligible participant

The selected participant heard the information in the study information sheet & understood the purpose and benefit of the study. I understood that all the information regarding me like name and all answers given by me must not be transferred to a third party. I also understand that I can decide whether or not to take part in the study or even withdraw from the study at any time.

Your signature below indicates that you agree to participate in this study.

Participant's signature----------

Interviewer name: _____ signature_____

Supervisor Name: _____Signiture_____

1. Completed 2. Partially responded 3. Refused 4. Other, specify ___

Name of the principal investigator: - Abebe Birhane Phone +251913744656

e-mail:- birhaneabebe404@gmail.come

Annex III

Bahirdar University College of Health Science School of public health, structural questionnaire form to study the level and its associated factors that affect caregivers‟ decision towards disclosure of HIV diagnosis to HIV infected children in South Wollo zone North East Ethiopia

PART I - Information on socio-demographic characteristics of caregivers.

S.No	Question	Coding categories	code	skip
101	How old are you (caregiver completed age in years)?		____	
102	Sex of the respondent?	Female	1	
		Male	2	
103	What is your religion?	Orthodox	1	
		Muslim	2	
		Catholic	3	
		Protestant	4	
		Other specify	5	
104	A) Do you read and write a simple sentence in any language you speak?	Yes	1	
		No	2	
	B) What is the maximum level of education you attained?	Informal_____		
		Grade_____		
105	Marital status?	Married	1	
		Single	2	
		Widowed	3	
		Divorce	4	
106	What is your current occupation /employment?	Unemployed	1	
		Daily labor	2	
		Government employ	3	
		Private employ	4	
		Housewife	5	
		Merchant	6	
		Other	7	
107	Total family size?	----------		
108	What is your relationship with the child?	Mother	1	
		Father	2	
		Grandparents	3	
		Sibling	4	
		Relative	5	
		Other	6	
109	How far is the health facility from your home (in kilometer)	----------		

PART II- Information on socio-demographic characteristics of the child.

S.No	Question	Coding category	code	skip
201	Age of the child? (age incomplete year in a year)	----------		
202	What is the sex of the child	Girl	1	
		Boy	2	
203	School grade of the child	Not start education	1	
		Primary (1-8)	2	
		Secondary (9-12)	3	
204	With whom the child is currently living	Biological parent	1	
		Grandparent	2	
		Sibling	3	
		Relatives	4	
		Other	5	
205	Has the chilled lost any of his/her nucleus family members with HIV?	Yes	1	If the answer is no skip to Q No 301
		No	2	
206	If the answer is yes lost whom? (multiple answers is possible)	Mother	1	
		Father	2	
		Sibling	3	
		Both mother and father	4	

PART III- Information on clinical characteristics of caregivers and children.

S.No	Question	Coding category	coding	Skip
301	HIV status of the caregiver?	Positive	1	If the answer is 2or3 skip to Q No 304
		Negative	2	
		Not tested	3	
302	If the answer is 1 for Ques No 301 to whom did you disclose your positive status? (Multiple answers possible)	To my partner	1	
		To my child	2	
		To my relative	3	
		To my friend	4	
		No one knows	5	
		Religious father	6	
303	Did the caregiver start ART?	Yes	1	
		No	2	
304	Age at diagnosis of HIV positive status of the child?	----------		
305	WHO clinical stage of the child?	Stage 1	1	Skip from chart review
		Stage 2	2	
		Stage 3	3	
		Stage 4	4	
306	Age when ART was initiated	----------		
307	Duration on ART Taken?	----------		
308	What other medication took the child other than ART?	Bacterium	1	Skip from chart review
		Anti-TB	2	
		Multivitamin	3	
		RUTF	4	
309	Has the child ever been affected with opportunistic disease previously?	Yes	1	
		No	2	
310	Did you discuss the disclosure issue with your child's health care provider?	Yes	1	If the answer is No skip to Q No 312
		No	2	

311	If the answer for Ques 310 was yes, did the health care provider starts the issues of disclosure?	Yes	1	
		No	2	
312	Did the child have support from other Organization	Yes	1	
		No	2	
313	If yes, what kind of support did he/she get? (Multiple answers possible)	Psychosocial support	1	
		Money	2	
		Material	3	
		Food	4	
		Other	5	
314	How is treatment adherence to the child?	Good	1	See from follow up chart
		Faire	2	
		poor	3	

PART IV- Information on HIV positive status disclosure among HIV positive children.

S No	Question	Code category	code	skip
401	Did the child know his/her HIV status?	Yes	1	If No skip to Q no 406
		No	2	
402	If yes, at what age disclosure started?	----------		
403	At what age the child fully disclosed			
404	Who disclosed about his/her HIV status to the child? (Multiple answers possible)	Mother	1	
		Father	2	
		Grandparents	3	
		Relatives	4	
		Health care workers	5	
		Friends /Neighbors	6	
		Other specify	7	
405	Why did you decide to disclose for your child about his/her HIV status?	because child thought to be matured	1	
		Because of the repeated question of the child what happened to	2	

	(Multiple answers possible)	him/her		
		To take or adhere to medications	3	
		Right to know about his/her disease condition	4	
		to take care of his/her selves and prevent unknowingly disease transmission	5	
		To share responsibility and to get relief	6	
406	If you didn't disclose, why you didn't decide to disclose the child about his/her HIV status? (Multiple answers possible)	Fear of emotional and health consequence	1	
		Lack of knowledge	2	
		Because the child is too young	3	
		Fear of self-discrimination	4	
		The child inability to keep a secret	5	
		Future relation with the family would be affected	6	
		He/she may feel hopelessness	7	
		Because I am the one that transmits the virus so, I fell guiltiness	8	
		Others(specify)	9	
407	If you didn't disclose, what you told the child the reason for visiting the health facility?	For TB follow up	1	
		For cardiac follow up	2	
		For allergic follow up	3	
		Others(specify)	4	
408	Who should have the responsibility of disclosing HIV status to the child? (Multiple answers possible)	Mother	1	
		Father	2	
		Grandparent	3	
		Health worker	4	
		Other specify	5	
409	Do you think the child gets stigmatized due to his/her HIV positive status?	Yes	1	
		No	2	

በአጥኝውና በጥናቱ መልስ ሰጭዎች መካከል ስለሚካሄድ የቃል መጠይቅ መተማመኛ ቅፅ

ጤና ይስጥልኝ;ስሜ_____ነው እናም በ_____የምሰራው የጤና ባለሙያ ነኝ ።የዚህ ጥናት ዓላማ የልጆቻቸውን የኤች አይ ቪ ዉጤት ለመግለጥ በሚወስነው ውሳኔ ላይ ተጽዕኖ የሚያሳድሩትን ምክንያቶች ለመለየት እና ምን ያክሉ ዉጤታቸዉ እንደተንገራቸዉ ለማወቅ ነዉ ። የጥናቱ ግኝቶች በደቡብ ወሎ ዞን የህፃናትን የኤችአይቪ / ኤድስ የጤና እንክብካቤ አገልግሎትን ለማሻሻል እና ዉጤታቸዉን በመንግር ጤናቸዉን እንዲያገኙ ሙሉ በሙሉ ለመሙላት ይረዳሉ ብለን እናምናለን ። ስምዎ በዚህ ቅጽ ላይ አይጻፍም ቃለ-መጠይቆች በግል ክፍል ውስጥ በግል ይካሄዳሉ። የመረጃ መሰብሰብን ትክክለኛነት ለማረጋገጥ መዝገብ እጠቀማለሁ ግን እርስዎ የሚሰጡን መረጃ በምስጢር የሚጠበቅ እና ለምርምር ዓላማ ብቻ ጥቅም ላይ ይውላል ። ስለ መጠይቁ የማይመቹ ከሆኑ ቃለ-መጠይቁን ለመሳተፍ ወይም በማንኛውም ጊዜ ለማቋረጥ ሙሉ መብት አልዎት ። ነገር ግን በውይይት ወቅት የሚሰጡን መረጃ የጥናቱን ዓላማ ለማሳካት እና በተቀዘቀዘ የኤች አይ ቪ / ኤድስን ዉጤት አለመነገር ጉዳይ ላይ ለውጥ ለማምጣት በጣም ጠቃሚ ነው ። ጥያቄ አልዎት?

ማንኛውንም ጥያቄ ካልዎት የሚከተሉትን አድራሻዎች በመጠቀም ለእርስዎ ተገቢነት ያለውን ዋና ተመራማሪ ማነጋገር ይችላሉ።ዋና ተምራማሪ አበበ ብርሀኔ Phone +251913744656

ተባባሪ ተምራማሪ: ከባድነዉ ሙላቱ Phone +251924491976 E-mail-kebadmulatu@gmail.com

ገበያዉ ዉዱ phone +25199200545 E-mail- fwudie@gmail.com

የጽሑፍ ስምምነት ቅጽ

ስለ ጥናቱ ቀደም ሲል በአጭሩ ተነግሮዎታል እናም ዓላማውን በግልጽ ተረድተዋል ። አሁን በጥናቱ ለመሳተፍ ከተስማሙ እባክዎን ይንገሩኝ?

1. ተስማምቷል ፣ አመሰግናለሁ! ቃለመጠይቁን ያካሂዱ

2. አልተስማሙም ፣ አመሰግናለሁ! ወደሚቀጥለው ብቁ ተሳታፊ ይሂዱ

እኔ የተመረጠው ተሳታፊ በጥናቱ የመረጃ ወረቀት ውስጥ ያለውን መረጃ ሰማሁ እና የጥናቱን ዓላማ እና ጥቅም ተረድቼያለሁ። ስለ እኔ የሚመለከቱ መረጃዎች ሁሉ እንደ እኔ ስም እና ሁሉም የተሰጡ መልሶች ወደ ሶስተኛ ወገን ሊተላለፉ እንደማይችሉ ተረዳሁ። በጥናቱ ላይ ለመሳተፍም ሆነ በማንኛውም ጊዜ ከጥናቱ ለመልቀቅ መወሰን የምችል መሆኔን ተረድቻለሁ ።

ከዚህ በታች የእርስዎ ፊርማ በዚህ ጥናት ውስጥ ለመሳተፍ መስማማቱን ያሳያል ።

የተሳታፊ ፊርማ ---------- ----------

የቃለ መጠይቅ ስም: - _____ ፊርማ_____

የተቆጣጣሪ ስም: - _____Signrency_____

1. ተሟልቷል 2. በከፊል ምላሽ ሰጠ 3. ውድቅ ተደርጓል 4. ሌላ ፣ ይግለጹ ___

ክፍል አንድ፡- የአሳዳጊ የስነ ገለሰብ መርጃ

ተ	ጥያቄ	የመለያ ክፍልፍል	መለያ	እለፍ
101	የወላጅ ወይም ያሳዳጊው እድሜ		_____	
102	ፆታ	ሴት	1	
		ወንድ	2	
103	ሀይማኖት	ኦርቶዶክስ	1	
		ሙስሊም	2	
		ካቶሊክ	3	
		ፕሮቴስታንት	4	
		ሌላ ካለ ይጠቀስ	5	
104	A) ማንበብና መጻፍ ትችላለህ/ሽ?	እችላለሁ	1	
		እችልም	2	
	B) እስከ ስንተኛ ክፍል ተምረሀል /ተምረሻል?	መደበኛያልሆነ_____		
		ክፍል _____		
105	የትዳር ሁኔታ?	ያገባ/ች	1	
		ያላገብ/ች	2	
		የተለያየ/ች(የተፋታ/ች)	3	
		የሞተበት/ች	4	
106	ሥራህ/ሽ ምንድን ነው?	ስራ ፈላጊ	1	
		የቀን ስራ	2	
		የመንግስት ሰራተኛ	3	
		የግል ሰራተኛ	4	
		የቤት እመቤት	5	
		ነጋዴ	6	
		ሌላ ይጠቀስ	7	
107	የቤተሰብ ብዛት ስንት ነው?	----------		
108	ከልጁ ጋር ያለሽ/ህ ዝምድና ምንድን ነው?	እናት	1	

		አባት	2	
		አያት	3	
		ልጅ	4	
		ዘመድ	5	
		ሌላ ጥተቀስ	6	
109	ከቤት እስከ ጤና ተቋም ያለው እርቀት ምን ያክል ነው(በኪሎ ሜትር)	----------		
110	የመኖሪያ ቦታ	ከተማ	1	
		ገጠር	2	

ክፍል ሁለት፡- የልጁ የስነ ገለሰብ ምርጃ

ተ.ቁ	ጥያቄ	የመለያ ክፍልፍል	መለያ	እለፍ
201	የልጅሽ እድሜ ስንት ነዉ? (በአመት ይሞላ)	----------		
202	ጾታ	ሴት	1	
		ወንድ	2	
203	ልጂሽ ስንተኛ ክፍል ተማሪ ነዉ?	ትምህረት ያልጀመረ	1	
		የመጀመሪያ ሣይክል(1-8)	2	
		ሁለተኛ ደርጃ(9-12)	3	
204	ልጁ አሁን የሚኖርዉ ከማን ጋር ነዉ?	ከወላጅ ቤተሰቡ ጋር	1	
		ከአያቶቹ ጋር	2	
		ከወንድም/እህቶች ጋር	3	
		ከዘመድ ጋር	4	
		ሌሎች ጋር	5	
205	ልጁ ከቤተሰቦቹ በሞት አጥታል ወይ?	አወ	1	ካልሞተበት ወደ301ይሂዱ
		አይደለም	2	
206	በተራ ቁጥር 205 መልሱ አወ ከሆነ የመተዉ ምኑ ነዉ?	እናት	1	
		አባት	2	
		ወንድም/እህት	3	
		እናትና አባት	4	

ክፍል ሶስት፡- የአሳዳጊ እና የልጁ የህክምና መረጃ

S.No	ጥያቄ	የመለያ ክፍልፍል	መለያ	እለፍ
301	የወላጅ ወይም ያሳዳጊ የአች.አይ.ቪ ምርመራ	ተመርምሮ ያለበት	1	መልሰሱ 2(3)

	ዉጤት	ተመርምሮ የሌለበት	2	ከሆነ ወደ 304 ይለፉ
		ያልተመረመረ	3	
302	በተራ ቁጥር 302 መልሱ አንድ ከሆነ የምርመራ ዉጤቱን ለማን ተናግረዋል?(ከአንድ በላይ መልስ መስጠት ይቻላል)	ለትዳር አጋር	1	
		ለልጅ	2	
		ለአሳዳጊ	3	
		ለባልንጀራ	4	
		ማንም አያቅም	5	
		ለሀይማኖት አባት	6	
303	ወላጂ ወይም ሳዳጊዉ መድሀኒት ጀምረል	አወ	1	
		አልጀመረም	2	
304	ልጁ ተመርምሮ በደሙ ዉስጥ ኤች አይ ቪ ሲገኝበት እድሜዉ ስንት ነበር?	----------		
305	በአለም አቀፍ ጤን ድርጅት የጤና ደረጃ ስንት ነበር?	ደረጃ 1	1	ህክምና ካርድ ላይ ተመልከት
		ደረጃ 2	2	
		ደረጃ3	3	
		ደረጃ 4	4	
306	ኤች አይ ቪ መድሀኒት በስንት እድሜዉ ነዉ የጀመረዉ?	----------		
307	መድሀነት ስንት አመት ወሰደ	----------		
308	ከኤች አይ ቪ መድሀኒት ዉጭ ምን ምን መድሀኒት እየወሰደ ነዉ ?	ባክትሪም	1	ህክምና ካርድ ላይ ተመልከት
		የቲቢ መድሀኒት	2	
		ቫይታሚን	3	
		ፕላምፕኔት	4	
309	ልጂሽ ካሁን በፊት በተጓዳኝ በሽታ ታሞ ያቃለ ?	አወ	1	
		አናዉቅም	2	
310	ለልጅሽ የምርመራ ዉጤቱን ለማሳወቅ ከሀኪሞች ጋር ምክክር አርጋችሁ ታዉቃላችሁ?	አወ	1	መልሱ አወ ካልሆን ወደ 312 ይለፉ
		አናዉቅም	2	
311	310 መልሱ አወ ከሆን ጤና ባለሞያዉ ለልጁ ለመንገር ምክክር ጀምሮ ያዉቃል ወይ?	አወ	1	
		አያዉቅም	2	
312	ሌላ ድርጅት ድጋፍ ያደረጋል ወይ?	አወ	1	

		አያደርግም	2	
313	መልሱ አወ ከሆነ ምን አይነት ድጋፍ ያደርግል	የማህበራዊ ስነ አይምሮ ምክር	1	
		ገንዘብ	2	
		ቁሣቁስ	3	
		ምግብ	4	
		ሌላ	5	
314	ልጁ መድሀኒት ቁረኝት (adherence) ምን ይመስላል	ጥሩ	1	መረጃዉ ከቻርት ይወሰድ
		በቂ	2	
		ደካማ	3	
315	የልጁ የviral laod መጠን ስንት ነዉ	1000 ኮፒ በላይ	1	መረጃዉ ከቻርት ይወሰድ
		1000 ኮፒ በታች	2	

ክፍል አራት፡- የልጁ የአች አይ ቪ ዉጤት መነገር አለመነገሩን መሰበሰበያ

ተ.ቁ	ጥያቄ	የመለያ ክፍልፍል	መለያ	እለፍ
401	ልጁ ኤች. አይ ቪ እዳልበት ተነገሮታለ ወይ?	አወ	1	መልሱ አወ ካልሆነ ወደ ጥያቄ 206 ይለፉ
		አይደለም	2	
402	መልሱ አወ ከሆነ በስነት እድሜዉ ንዉ መንግር የተጀመርለት	----		
403	ሙሉ በሙሉ የተነገርዉ እድሜዉ ስንት? ነበር			
404	ስለ አች. አይ ቪ ዉጤቱ ማን ነገርዉ?	እናት	1	
		አባት	2	
		አያት	3	
		ቤተሰብ	4	
		የጤና ባለሞያ	5	
		ጓደኛ/ጎረበት	6	
		ሌላ/ይጻፍ	7	
405	ለምንድን ነዉ ዉጤቱን ለመንግር ያስፈለገዉ(ከአንድ በላይ መልስ ሊኖርወ ይችላል)	ምክንያቱም ልጁ ስላደገ	1	
		ምክንያቱም ልጁ ተደጋጋሚ ስለሚጠይቅ	2	
		መድሀኒቱን እንዲወስድና የመድሀነት ክትትሉ እንዲጠነክር	3	
		ስለዉጤቱ ማወቅ መብቱ ስለሆነ	4	

		ለራሱ ጥንቃቄ እንዲያደርግና ለልሎች እነዳስተላለፍ በማሰብ	5	
		አላፊነትን ለመወጣትና የኤምሮ እርካታ ለማገኘት	6	
406	ዉጤቱ ካልተነገረ ይህን የወሰኑበት ምክንያት ምንድን ንዉ(ከአንድ በላ መልስ ሊኖርወ ይችላል)	ስሜቱ እንዳይነካና የጤና ጭግር እንዳይገጥመዉ በመፍራት	1	
		የዉቀት ማነስ	2	
		ዕድሜዉ ስላልደርስ	3	
		ልጁ እራሱን እንዳያገል ፍራቻ	4	
		ሚስጥሩን መደበቅ ስለማይችል	5	
		የልጁን የበተሰብ የወደፊት ግንኙነት እንዳይሻክር	6	
		ልጁ ተስፋ ዕንዳይቆርጥ	7	
		ባይረሱን ያስተላለፍኩበት ሰለሚመስለኝ ስለማፍር	8	
		ሌላ ካለ ይገለጹ	9	
407	ዉጤቱን ካልሰማ ምን እያሉ ነዉ ሕክምና የሚወስዱት	ለትቢ ህክምና ክትትል	1	
		ለልብ ህክምና ክትትል	2	
		የሰዉነት አንዳነድ ንገሮች ሣይቀበል ሲቀር ለሚመጣ ችግር ክትት ለማድረግ	3	
		ሌላ ካለ ይግለጸ	4	
208	ዉጤቱን መንገር የማን አለፊነት ሊሆን ይገባል(ከአንድ በላ መልስ ሊኖርወ ይችላል)	የእናት	1	
		የአባት	2	
		የአያት	3	
		የጤና ባለሞያ	4	
		ልላ ካሉ ይገለፁ	5	
409	ልጁ ኤች. ኤይ. ቪ ስላለበት መገለልና መድሎ ይደርስበታለ ብለዉ ያስባሉ	አወ	1	
		አደለም	2	