

HIV Positivity Disclosure Among Children Living with HIV/AIDS and Currently on HAART in Dessie, Northeast Ethiopia

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Background: Disclosure of HIV/AIDS positive test result to children is a continuing routine problem in the health care setting. Some of the families as well as the health care workers are negligent to inform children of their HIV status. This study was aimed at identifying the prevalence of HIV-positivity disclosure and the factors among 6–15-year-old children currently on HAART in Dessie, Ethiopia.

Methods: A facility based cross-sectional study design was performed in Dessie from January 21 to March 12, 2020 among 346 parents/caregivers with children living with HIV and currently on HAART. The data were collected using pre-tested, structured and self-administered questionnaires. The collected data were entered into Epi info v.7.1 and exported into SPSS version 23 for further analysis. Binary and multivariable logistic regression was employed and statistically significant factors were identified at 95% CI and at p-value <0.05.

Results: HIV positivity disclosure was found to be 29.2% (26.3–34.7%). Being widowed mothers/caregivers, 11–15-year-old children, child received support from NGOs and having a mother with a negative HIV test were found to be statistically significant factors for disclosure.

Conclusion: The overall HIV positivity disclosure to children living with HIV was found to be low in contrast to the WHO standard. In other ways, it was comparable with the Ethiopian figures. Health workers and managers need to focus on strengthening child support, make known the maternal/caregivers' HIV status, and child age specific effective interventions to improve disclosure of HIV positivity status for children living with HIV for better ART adherence and treatment outcomes.

Keywords: HIV positivity, disclosure, children living with HIV/AIDS, HAART, Dessie

Background

Worldwide, more than 76 million people have lived with HIV/AIDS, and it has resulted in over 35 million deaths since its emergence. Globally, by the end of 2018, out of 37.9 million people living with HIV/AIDS, approximately 3.4 million children under 15 years old were found to be living with HIV/AIDS.¹ Sub-Saharan Africa accounts to nearly 2/3 of the global HIV/AIDS cases. Around 90% of children living with HIV live in sub-Saharan Africa where, out of this, 2% are in Ethiopia.^{1,2}

In several highly burdened countries, HIV/AIDS is increasingly harming the health of children and negatively affecting hard-won gains in child life.³ The exact prevalence of HIV in children is not well known.^{4,5} Antiretroviral treatment (ART) was started in 2003 and as a free therapy in 2005. According to the WHO and UNICEF 2018 report, 613,000 Ethiopians were found to be HIV infected, however, only 436,000 were taking antiretroviral (ARV) drugs.⁶

Expanding access to HAART brought a rapid change in the global HIV/AIDS prevalence. As a result, HIV/AIDS associated deaths are declining. In LMICs from 2002 to 2012, HAART prevented an estimated 4.2 million deaths, and

the number of children (<15 years), taking ART had increased from 566,000 in 2011 to 630,000 in 2012.⁷ A survey conducted in many African countries indicated that more than 50% of the participants were found to be infected with HIV, however, they did not know their HIV status.^{8,9} HIV/AIDS positivity disclosure is a crucial issue for arguments because of its linkage to privacy and confidentiality of humanity. Therefore; ending discrimination and stigma against people living with HIV/AIDS is critical.¹⁰ Because of HAART, HIV infected children are surviving to adulthood. Although, the benefits of HIV/AIDS positivity disclosure, and understanding how parents and health care workers communicate with children to maximize the positive psychosocial and clinical benefits is emerging.^{10,11} In Africa, studies showed that the prevalence of children infected with HIV/AIDS positivity disclosure is low extending from 1.7% to 28%.^{6,9,11,12} A study in Ethiopia showed, HIV/AIDS positivity disclosures were heterogeneously displayed, varying from 16% to 60%.^{13–15} One of the biggest psychosocial challenges that families and/or health workers of children living with HIV/AIDS encounter is the disclosure of a HIV/AIDS positivity result to children.² Making disclosure demands action to whom, when, what, and how much to disclose.^{16,17} Child HIV/AIDS positivity disclosure is a more important and critical task because of its benefits for the child and their family.¹⁸ Disclosure is better for ART medication adherence and helps to involve children in their healthcare decision-making.¹⁹ Some of the benefits of HIV/AIDS positivity disclosure are higher self-esteem, high coping skills, lesser feelings of depression, better adherence, and increased CD4 cells among children.^{20,21} Making disclosure is a challenging task to physicians and/or families because of its potential blame, stigma, and fear linked with HIV infection and its social consequence; however, disclosure is important for long-term HIV/AIDS interventions.²² Studies showed that there are delayed disclosures and/or non-disclosures for HIV-positive children, in other words how and when parents and/or physicians need to disclose to the child is not well articulated.^{19,23,24} Even though studies are conducted in several countries and resulted in heterogeneous results, there are limited studies on HIV/AIDS positivity disclosure among children living with HIV/AIDS in this study area. Therefore, this study was aimed to determine the prevalence of HIV/AIDS positivity disclosure and to identify factors among 6–15-year-old children currently on HAART in Dessie, Ethiopia.

Methods

Study Design and Setting

A facility based cross-sectional study design was employed in Dessie, South Wollo, from January 21 to March 12, 2020. Dessie has eight sub-cities, with a total population of 301,204. Out of these, 29,854 are children and 1346 are children living with HIV/AIDS. Dessie has 54 registered health facilities ranging from health posts to referral hospitals. There are eight health centers; two government hospitals; three private hospitals, and two specialized clinics. Out of these, thirteen health facilities (HF) were ART centers, but PMTCT services were provided in all health facilities (Dessie health bureau report, 2019).

Population of the Study

The source population for the study included all parents/caregivers of children aged six to fifteen years who were HIV-positive and were receiving follow-up treatment and started HAART at health facilities in Dessie.

Eligibility Criteria

Parents/caregivers of children living with HIV/AIDS whose age is of 6–15 years old that were on follow-up in ART departments were included, while all parents/caregivers of those children who cannot communicate or were seriously ill because of their condition during data collection were excluded from the study.

Sampling and Its Procedures

Sample size was determined by applying the formula as shown below considering the following assumptions. These are $P = 29.8\%$,¹⁶ with 95% CI, degree of margin 5% and adding a 10% non-respondent rate.

$$n = \left(\frac{(Z_{\alpha/2})^2 p(1-p)}{(d)^2} \right) * 10\%$$

$$n = \left(\frac{(1.96)^2 0.298(1-0.298)}{(0.05)^2} \right) = 355$$

The final sample size used for this study was 355 participants.

Four pediatric HAART and child caring health facilities were selected. As a sampling procedure, first, four sites were selected using simple random sampling technique (lottery method). Second, the sampling frame (for those HFs included) was obtained from the registration book of the respective health facilities (HFs). Third, the sample size was proportionally allocated to the four HFs (Dessie Specialized Hospital 316 (89%), Ethio-General Hospital 19 (5.2%), Bambowuha 8 (2.3%), and Dessie HC 12 (3.5%)). Eventually, during data collection systematic random sampling (at $k=2$) study participants were selected and accessed in each health facility after proportional allocation of samples were done.

Tools, Procedures, and Quality Control

Tools were adapted based on an earlier related literature review. Three qualified BSc nurses with experience in data gathering who work out of the research sites were recruited, along with one health office supervisor who also had data collection experience. The supervisor and data collectors each received one day training on the objectives and quality data collection techniques. Daily checks for data quality, including consistency and completeness, for early corrections were performed. Data collection was done on the date of appointment of the respondents from the HFs.

To ensure the tool was clearly articulated, study objectives and the responses of the participants were relevant and comprehensive; a pre-test for 18 (5%) respondents was done in Selam and Bati hospitals before the data collection. Visual scanning was performed to check the completeness of the questionnaires before the data entry.

Operational Definition

Disclosure: refers to when the child is aware of his/her HIV/AIDS status regardless of who disclosed the result. Child disclosure: A process whereby a child gains awareness of his/her HIV status.²⁵

Study Variables

HIV/AIDS positivity disclosure was the outcome variable whereas; socio-demographic characteristics of the parents/caregivers; socio-cultural factors of the child; personal factors of the parent/caregiver (caregivers' relation to the child); clinical factors of the parent/caregivers and children were considered as the predictor variables of the study.

Data Analysis

The collected data were entered into Epi info v.7.1 and exported into SPSS version 23 for further analysis. Findings like frequencies, mean (SD) were determined and presented in tables and figures. Binary analysis results with a p-value <0.25 were fitted to a multivariable logistic regression for identifying statistically significant factors at 95% CI and at a p-value <0.05.

Ethical Consideration

Ethical confirmation and clearance were gained from the Institutional Review Committee (IRC) of Wollo University, College of Medicine, and Health Sciences with a reference number CMHS 419/02/11 on 8 May 2011. Letter of offer to do the study was taken from the Amhara public health institute (Dessie Branch) after submitting the ethical clearance letter. Written informed consent was provided to parents/caregivers. Interviews were done in secured private rooms. It was a voluntary participation of participants. Withdrawing from the study was assured as a right at any time during the interview. Confidentiality and privacy were secured. All the procedures of the ethical evaluation of this study followed the Helsinki Declaration.

Results

Socio-Demographic Characteristics of Parents/Caregivers

Three hundred and forty six parents/caregivers of children living with HIV/AIDS completed the questionnaires, making a response rate of 97.5%. The mean (SD) age of parents/caregivers was 38 (± 7.4) years. Two hundred forty-five (70.8%) parents/caregivers were females; more than half of the parents/caregivers were Muslim by religion 179 (51.7%); the majority of the parents/caregivers were Amhara in ethnicity 266 (76.9%). Majority of parents/caregivers can read and write 321 (92.8%). More than half of the parents/caregivers were married 238 (68.8%). Among the participants the median monthly income was 1500 Ethiopian Birr (ETB)/month (Table 1).

Table 1 Socio-Demographic Characteristics of Parents/Caregivers in Dessie, Northeast Ethiopia, 2020 (n = 346)

Variables	Frequency	Percent	HIV+ Disclosure Status			
			Yes (n = 101)		No (n = 245)	
			n	%	n	%
Age of parent (346)						
18–30	53	15.3	12	22.6	41	77.4
31–40	115	33.2	50	43.5	65	56.5
41–50	97	28	22	22.7	75	77.3
51–60	61	17.6	10	16.4	51	83.6
60+	20	5.8	7	35	13	65
Sex of parent (346)						
Male	101	29.2	36	35.6	65	64.4
Female	245	70.8	65	26.5	180	73.5
Religion (346)						
Orthodox	134	38.7	40	29.9	94	70.1
Muslim	179	51.7	54	30.2	125	69.8
Catholic	21	6.1	6	28.6	15	71.4
Protestant	12	3.5	1	8.3	11	91.7
Read and write (346)						
Yes	321	92.8	99	30.8	222	69.2
No	25	7.2	2	8	23	92
The Maximum level of education (321)						
No formal education	37	11.5	4	10.8	33	89.2
Primary school (1–8)	71	22.1	9	12.7	62	87.3
Secondary school (9–12)	66	20.6	16	24.2	50	75.8
Diploma	82	25.5	33	40.2	49	59.8
Degree and above	65	20.3	34	52.3	31	47.7
Ethnicity (346)						
Amhara	266	76.9	74	27.8	192	72.2
Oromo	54	15.6	15	27.8	39	72.2
Tigray	26	7.5	12	46.2	14	53.8
Marital status (346)						
Married	238	68.8	43	18	195	82
Single	23	6.6	13	56.5	10	43.5
Widowed	71	20.5	38	53.5	33	46.5
Divorced	14	4	7	50	7	50
Occupation/Employment (346)						
Unemployed	24	6.9	0	0	24	100
Daily laborer	24	6.9	4	16.7	20	83.3

(Continued)

Table 1 (Continued).

Variables	Frequency	Percent	HIV+ Disclosure Status			
			Yes (n = 101)		No (n = 245)	
			n	%	n	%
Government employ	111	32.1	45	40.5	66	59.5
Private employ	65	18.8	27	41.5	38	58.5
Housewife	80	23.1	14	17.5	66	82.5
Merchant	42	12.1	11	26.2	31	73.8
Monthly income (ETB) (346)						
<1000 ETB	101	29.2	38	45.8	45	54.2
1000–2000 ETB	77	22.3	20	26	57	74
2001–3000 ETB	85	24.6	34	33.7	67	66.3
>3000 ETB	83	24	9	10.6	76	89.4
Family size (346)						
1–5	173	50	45	26	128	74
>5	173	50	56	32.4	117	67.6
Relationship to the child (346)						
Mother	199	57.5	41	20.6	158	79.4
Father	62	17.9	15	24.2	47	75.8
Grandparent	63	18.2	28	44.4	35	55.6
Relative	22	6.4	17	77.3	5	22.7

Socio-Demographic Profiles of Children

The majority of children were females. Almost half of the children's age was between 11–15 years. More than half had attended kindergarten (KG) while more than three-quarters of the children were living with biological parents (Table 2).

Clinical Characteristics of Participants

More than three-quarters of the parents/caregivers were HIV positive and were on HAART. More than half of the children were diagnosed at the age of 6–10 years, 213 (61.6%); the mean (SD) age at diagnosis was 5.7 (± 3.24) years. The mean (SD) age of children starting HAART was 6.7 (± 2.4) years. Of all the children currently on HAART, only 239 (69.1%) adhered to ART drugs. Two hundred eighty-five (82.4%) were hospitalized previously. Despite all parents/caregivers and their children who were counseled for HIV/AIDS disclosure was only made for 103 (29.8%) of the children (Table 3).

Prevalence of Children's HIV Positivity Disclosure

Based on parents/caregivers' responses, 101 (29.2%) of the children knew about their HIV positive diagnosis. The mean (SD) age at disclosure was 6.9 years (± 2.51); more than half of the disclosures were made accidentally, 57 (56.5%). The majority of parents/caregivers did not know the right age to disclose, 197 (56.9%) (Table 4).

Out of 245 (71%) parents/caregivers, the major reported reasons for not disclosing the child's HIV positive diagnosis were: 210 (85.7%) parents reported a lack of the required knowledge and skill; 192 (78.4%) said fear of self-discrimination; and 168 (68.6%) reported that the child is too young to disclose. About 25 (10.3%) parents/caregivers delayed disclosure because they believed s/he may feel hopelessness that was among one of the sensitive reasons.

Participant's replied that health workers have the major responsibility to do HIV/AIDS positivity disclosure for children living with HIV/AIDS (Figure 1).

Factors Associated with HIV+ Diagnosis Disclosure

In multivariable logistic regression, results indicated that four factors were statistically significant with HIV/AIDS positivity disclosure among children living with HIV/AIDS and on HAART. Being widowed parents/caregivers, 11–15

Table 2 Socio-Demographic Characteristics of Children in Dessie, Northeast Ethiopia, 2020 (n = 346)

Variables	Frequency	Percent	Disclosure Status			
			Yes (n = 101)		No (n = 245)	
			n	%	n	%
Age (in years)						
6–10	165	47.7	9	5.5	156	94.5
11–15	181	52.3	92	50.8	89	49.2
Sex						
Female	215	62.1	69	32	146	68
Male	131	37.9	32	24.4	99	75.6
Schooling						
Kindergarten	201	58.1	57	28.4	144	71.6
Primary school (1–8)	145	41.9	44	30.3	101	69.7
Currently, live with						
Biological parents	261	75.4	59	22.6	202	77.4
Grandparents	60	17.3	23	38.3	37	61.7
Sister/brother	8	2.3	5	62.5	3	37.5
Relatives	17	4.9	14	82.4	3	17.6
The first relative lost to HIV						
Yes	73	21.1	31	42.5	42	57.5
No	273	78.9	70	25.6	203	74.4
Who was lost (multiple answers are possible) (73)						
Mother only	13	17.8	6	46.2	7	53.8
Father only	21	28.8	9	42.9	12	57.1
Both mother and father	39	53.4	17	43.6	22	56.4

Table 3 Clinical Characteristics of Parents/Caregivers and Their Children in Dessie, Northeast Ethiopia, 2020 (n = 346)

Variables	Frequency	Percent	Disclosure Status			
			Yes (n = 101)		No (n = 245)	
			n	%	n	%
HIV status of parents/caregivers						
Positive	278	80.3	51	20	203	80
Negative	66	19.2	38	48.7	40	51.3
Not tested	2	0.5	12	85.7	2	14.3
Parents/caregivers start ART						
Yes	278	100	71	25.5	203	73
Diagnosis age (in years)						
1–5	207	59.8	54	26	153	74
6–10	118	34.1	40	33.9	78	66.1
11–15	21	6.1	7	33.3	14	66.7
Child start ART						
Yes	346	100	101	29.2	245	70.8
Age ART initiated						
1–5	198	57.2	52	26.3	146	73.7
6–10	125	36.1	43	34.4	82	65.6
11–15	23	6.6	6	26	17	74.2
ART adherence						
Yes	239	69.1	63	26.4	176	73.6
No	107	30.9	38	35.5	69	64.5

(Continued)

Table 3 (Continued).

Variables	Frequency	Percent	Disclosure Status			
			Yes (n = 101)		No (n = 245)	
			n	%	n	%
Ever admitted to the Hospital						
Yes	285	82.4	78	27.4	207	72.6
No	61	17.6	23	37.7	38	62.3
HIV Counselling						
Yes	346	100	101	29.2	245	70.8
Disclosure issue addressed						
Yes	103	29.8	74	72	29	28
No	243	70.2	27	11	216	89
Support from organizations						
Yes	312	90.2	83	26.6	229	73.4
No	34	9.8	18	53	16	47
Supported by NGOs	312	100	83	27.8	299	73.4
Kind of support (multiple answers possible) (312)						
Counseling	7	2.2	3	42.9	4	57.1
Money	5	1.6	1	20	4	80
Food	300	96.2	81	27	219	73

Table 4 Information on HIV Diagnostic Disclosure Among Children Living with HIV in Dessie, Northeast Ethiopia, 2020 (n = 346)

	Variables	Category	Frequency	Percent
1	Disclosure (101)	Yes	101	29.2
		No	245	70.8
2	Age at disclosure (years) (101)	1–5	34	33.7
		6–15	67	66.3
3	Who disclose (Multiple answers possible)	Mother	40	39.6
		Father	26	25.7
		Grandparents	19	18.8
		Relatives	3	3
		Health care workers	6	6
		Heard from friends/neighbors	7	6.9
4	Type of disclosure	Unprepared Disclosure	37	36.6
		Involuntary Disclosure	7	6.9
		Accidental Disclosure	57	56.5

years age of the child, child received support from NGOs, and parents/caregivers negative for HIV/AIDS were the factors that affect HIV/AIDS positivity disclosure among children (Table 5).

Discussion

Ethiopia has seen a dramatic decrease in the mortality and morbidity of people living with HIV/AIDS as a result of recent advances in high coverage with ART therapy.¹⁷ The prospect of children living with HIV/AIDS introduces disclosure challenges on physical and psychological health.²⁶

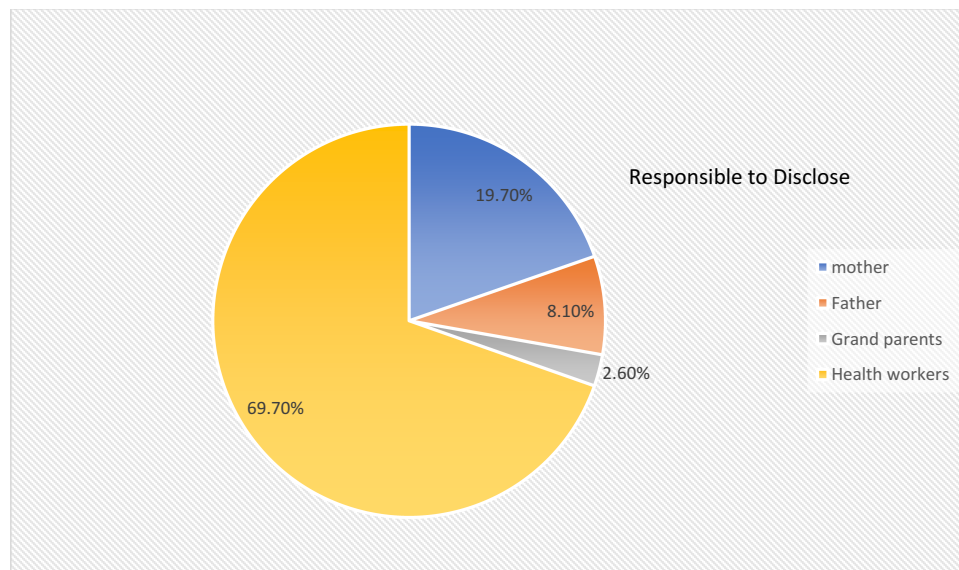


Figure 1 Responsible person to disclose to the child about their HIV+ diagnosis in Dessie, Northeast Ethiopia, 2020 (n = 346).

According to the findings of this study, 29.2% of children on HAART had been disclosed their HIV/AIDS positive result. In comparison to studies conducted in Europe, this finding was low (75–82%).¹⁰ The possible reason is attributed to an insufficient knowledge and skill to approach their HIV-positive children, as well as fear of discrimination and stigma, by families, friends and neighbors.²⁷ It is possible that health care providers are unsure of how to handle disclosure.

This finding was lower than a study finding conducted in East Arsi zone, Oromia region (59.9%), Dire Dawa, Eastern Ethiopia (60.6%).^{28,29} The possible reason might be if there is a lot of limitation of the guideline; however, it shows that there was good adherence of healthcare workers with the national guideline.

This finding was consistent with the findings of United States and Canada, where the disclosure rate was 25% to 75%,^{8,30} Uganda (29%),³¹ Addis Ababa, Ethiopia (29.8%),¹⁴ Southeast Ethiopia (28.5%),³² Debre Markos (33.3%)³³ and Bahir Dar (30.1%).³⁴

The prevalence of HIV/AIDS positivity disclosure among children was higher as compared to studies conducted in Ghana (23.3%),¹² Nigeria (13.5%),²⁴ Kenya (19%)³⁰ and Addis Ababa, Ethiopia (17.4%).¹¹ Differences in the period could be a factor, and over time caregivers' awareness to disclosure benefits will be improved. Furthermore, while this study examined disclosure status in children aged 6–15; the Addis Ababa study included all pediatric age groups. The possible justification might be caregivers' belief that their children are not mentally capable to understand the issue. In this study, a question “who should be responsible for disclosing HIV status to children” was provided to mothers and approximately 69.7% said health care providers and 19.7% said biological mother but, in practice, only 6% of the children were disclosed by health workers, and 39% by mothers, which is lower than the study results in Debre Markos, East Gojjam, and Addis Ababa, Ethiopia, where 21% and 41.4% were disclosed by health workers respectively.^{15,33}

Widowed mothers were twice as likely as married ones to disclose HIV/AIDS positivity results. The possible reason is the mother's impending mortality. Parents disclosing the child's HIV result was to ensure that the child would be cared for in the event of the parent's death.¹⁹ The caregivers also revealed since children inquired about the loss of their bloodline mothers/fathers.²³

Older children (11–15 years) were 2.8 times more likely to be disclosed about their HIV/AIDS positivity result than younger children (6–10 years). This finding is in line with the study findings in developing countries.^{12,14,16,34}

HIV/AIDS negative parents/caregivers were six times more likely to disclose than HIV positive caregivers. This is because HIV/AIDS is a sensitive issue by nature and challenging to disclose as it is linked with stigma and blame, as well as the parent-child relationship issues.^{23,30}

Children who received support from organizations (NGOs) were twice as likely to be informed of their HIV-positive diagnosis as compared to children who did not receive support. This might be because of information accessed from the supporting organizations. This finding was consistent with the findings of the South African study.²³

Table 5 A Multivariable Analysis of Factors That Affect the Disclosure of HIV Diagnosis Among Children Living with HIV in Dessie, Northeast Ethiopia, 2020 (n = 346)

Variables	Disclosure Status				COR (95% CI)	AOR (95% CI)	P-value
	Yes (n = 101)		No (n = 245)				
	n	%	n	%			
Marital status (n = 346)							
Married	43	18	195	82	1	1	
Single	20	54	17	46	4.535 (1.512–13.602)	1.7 (1.412–3.542)	0.521
Widowed	38	53.5	33	46.5	3.86 (1.264–4.02)	2.10 (1.35–12.7)	0.007
Age (in years)							
6–10	76	32.9	155	67.1	1	1	
11–15	25	21.7	90	78.3	3.23 (0.027–0.116)	2.83 (1.036–6.148)	0.000
Monthly income (ETB) (n = 346)							
<1000	38	45.8	45	54.2	0.547 (0.433–0.691)	0.621 (0.055–0.901)	0.150
1000–2000	20	26	57	74	0.712 (0.231–0.8125)	0.436 (0.224–0.851)	0.515
2001–3000	34	33.7	67	66.3	2.14 (1.536–5.471)	4.12 (3.852–6.458)	0.082
>3000	9	10.6	76	89.4	1	1	
Child support/aid from organizations (n = 346)							
Yes	83	26.6	229	73.4	3.55 (1.725–7.316)	2.6 (1.122–4.560)	0.001
No	18	53	16	47	1	1	
Disclosure with counseling (n = 346)							
Yes	74	72	29	28	8 (0.027–0.088)	20.41 (11.351–36.712)	0.051
No	27	11	216	89	1	1	
Relationship to the child (n = 346)							
Mother	41	20.6	158	79.4	1	1	
Father	15	24.2	47	75.8	13.1 (4.564–37.616)	0.076 (0.027–0.219)	0.824
Grandparent	28	44.4	35	55.6	10.65 (3.359–33.786)	1.67 (1.03–4.298)	0.603
Relative	17	77.3	5	22.7	4.25 (1.395–12.949)	0.235 (0.077–0.717)	0.071
Currently living with (n = 346)							
Biological parents	59	22.6	202	77.4	1	1	
Grandparents	42	49.4	43	50.6	15.9 (4.441–57.478)	1.2 (1.017–5.225)	0.0710
HIV status of caregiver (n = 346)							
Positive	51	20	203	80	1	1	
Negative	38	41.3	54	58.7	9.88 (5.181–18.08)	6.205 (3.009–11.19)	0.000
ART adherence (n = 346)							
Yes	63	26.4	176	73.6	1.357 (1.05–2.22)	1.10 (1.2–3.261)	0.922
No	38	35.5	69	64.5	1	1	

Parents/caregivers who disclosed the HIV-positive result to their children were asked to explain the reason for disclosing, the most frequently given response was that their children were thought to be mature enough 54 (53.4%). Studies conducted in South Africa, Ghana, Kenya, and Uganda backed up this finding.^{18,23,30,31}

Two hundred and forty five (70.8%) parents/caregivers had not informed their children on their HIV/AIDS positivity status. Most of the caregivers 210 (85.7%) responded that they had neither the knowledge and/or the skills on how to disclose, and 192 (78.4%) reported fear of self-discrimination. This result was supported by other study findings in Nigeria, Kenya, and Ethiopia.^{16,24,30}

Limitation of the Study

Because of its cross-sectional study design, the cause effect relationship was not identified. Another limitation worth noting is the inclusion of parent/caregiver/child pairs who were engaged in their pediatric HIV/AIDS care and whose

child was well enough to meet the eligibility criteria, as those less engaged in care and who may have different disclosure patterns are not represented in these results.

Conclusion and Recommendation

According to the findings of this study, the rate of HIV/AIDS positivity disclosure to children living with HIV/AIDS was lower when compared to WHO standards. Being widowed parents/caregivers, being an 11–15 year old child, receiving child support from organizations, and having HIV negative parents/caregivers were found to be statistically significant as a factor for disclosure. Managers and health workers need to focus on linking children to supporting organizations, working on parents/caregivers' to know their HIV/AIDS status and child age specific interventions to improve disclosure practice of parents/caregivers and health workers for a better ART adherence and treatment outcome among children.

Abbreviations

AIDS, acquired immune- deficiency syndrome; ART, anti-retroviral therapy; CLHIV, children living with HIV; DHS, demographic and health survey; ETB, Ethiopian birr; HIV, human immune deficiency virus; HART, highly active antiretroviral therapy; UNAIDS, United Nations Program on HIV/AIDS; HC, health center; HCW, health care worker; HCP, health care provider; PLWA, people living with AIDS; PI, principal investigator; WHO, World Health Organization.

Data Sharing Statement

All the data supporting the findings are within the manuscript.

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Author Contributions

All authors made a significant contribution to the work reported in all areas such as the conception, study design, execution, acquisition of data, analysis and interpretation, and took part in drafting, critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

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Disclosure

The authors have approved and declared that no competing interests exist in the publication of this paper.

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