

Provider initiated HIV testing and counseling, acceptance and disclosure of HIV status and factors related to them among outpatients in Debre Berhan Referral Hospital

Awraris Hailu¹, Ahmed Ali²

Abstract

Background: HIV counseling and testing is the critical entry-point for engagement into treatment and care as well as for primary and secondary HIV prevention efforts. Despite the importance of this step, most HIV infected patients globally, and particularly in resource-poor settings, are unaware of their HIV status and the uptake of voluntary counseling and testing (VCT) services is relatively limited.

Objectives: To assess the magnitude of Provider Initiated Testing and Counseling (PITC) acceptance and disclosure and factors related to them among outpatient department patients.

Methods: A facility-based cross-sectional quantitative survey was taken from December 1, 2010 to January 10, 2011 among 414 clients coming to the outpatient department in Debre Berhan Referral Hospital. Data were collected, entered into EPI info version 3.5.1 and analyzed using SPSS version 16. A logistic regression model was used to assess factors associated with PITC acceptance and disclosure of test results.

Results: A total of 414 study participants (with a response rate of 100 %) responded to the questionnaire. Acceptance of PITC among OPD patients was 83.6%. Adjusted correlates of PITC acceptance included female gender (AOR=2.27, 95% CI=1.16-4.42) and knowledge about HIV transmission (AOR=4.08, 95% CI=1.98-9.91). Key barriers to accepting PITC included being apparently healthy (25%), being tested before (22.1%) and fear of stigma and discrimination (19.1%). Of the 346 respondents who accepted PITC, 288 (83.2%) had a plan to disclose their results to any other person. Compared with the age group 45 and above, those 15-24 years old were less likely to disclose their HIV status (AOR=0.16, 95% CI=0.04-0.62). Disclosure of test result was associated with occupation (AOR=5.42, 95% CI=1.44-20.43) and negative test result (AOR=4.00, 95% CI=1.53-10.47).

Conclusion and recommendations: In this study, PITC acceptance was promising and should be expanded to other health facilities. Efforts should be strengthened to decrease factors which impede HIV test result disclosure. [*Ethiop. J. Health Dev.* 2012;26(3):176-185]

Introduction

The HIV pandemic created an enormous challenge to the survival of mankind worldwide (1). The number of people living with HIV worldwide continued to grow in 2008, reaching an estimated 33.4 million. In 2008, an estimated 2.7 million new HIV infections occurred. It was estimated that 2 million deaths occurred due to AIDS-related illnesses worldwide in 2008. An estimated 1.9 million people were newly infected with HIV in sub-Saharan Africa in 2008, bringing to 22.4 million the number of people living with HIV (2). With a projected national adult HIV prevalence of 2.4% in 2010, Ethiopia is one of the countries most severely hit by the epidemic (1, 3).

Data showed that the number of countries that have developed national policies on HIV testing and counseling has increased in recent years. HIV counseling and testing (HCT) is increasingly as well, shifting from the client-initiated model towards other modalities, especially provider-initiated testing and counseling (4). HCT has three approaches, including, client-initiated voluntary counseling and testing (VCT), provider-initiated testing and counseling (PITC) and mandatory and/or compulsory HIV testing. HCT is a key strategic entry point to prevention, treatment, care and support

services. This is critically important for individuals and couples to learn about their HIV status and make informed decisions about their future (5).

The current rapid development in HIV counseling and testing has necessitated reviewing and updating the guidelines for HCT, especially in the area of policy and implementation. Improved availability of antiretroviral medications and better treatment of opportunistic infections have created the opportunity to expand PITC in health facilities thereby increasing access (5, 6). Low uptake of HIV testing is one of the reasons for delayed access to antiretroviral therapy for people in need of and in high mortality in the months after ART initiation (4, 7).

According to WHO/UNAIDS guidance on PITC, countries are categorized according to the HIV epidemic types: When the recorded infection is largely confined to individuals with higher risk behaviors it is low-level HIV epidemic, if HIV has spread rapidly in a defined sub-population, but not in the general population it is designated as concentrated epidemic and if HIV is firmly established in the general population it is labeled as generalized epidemic (8).

¹Debre Berhan Health Sciences College, Debre Berhan, Ethiopia, P.O. Box 37, awrarishailu@yahoo.com;

²School of Public Health, Addis Ababa, University, Addis Ababa, Ethiopia

In all types of HIV epidemics, health care providers should recommend HIV testing and counseling as part of the standard care to all patients who present themselves to health facilities with signs, symptoms or medical conditions that could indicate HIV infection (8). In generalized epidemics, where an enabling environment is in place and adequate resources are available, health care providers should recommend HIV testing and counseling to all adults and adolescents seen in all health facilities regardless of whether the patient shows signs and symptoms of underlying HIV infection (8).

Ethiopia is grouped among the generalized epidemic countries, where HIV testing is recommended for all out patient department patients (8). There are researches done on PITC acceptance and willingness with possible sign and symptoms including tuberculosis where PITC acceptance was found to be 68% (4, 9-11). But the WHO recommends provision of HIV test irrespective of the clinical signs for generalized epidemic countries, including Ethiopia (8).

Debre Berhan Referral Hospital has implemented routine HIV testing for all out patient department patients. Therefore, the aim of this study was to assess uptake of PITC among outpatient department (OPD) clients. After determining the prevalence of HIV among OPD clients, assessing PITC acceptability and disclosure of test results, the study would be used for future scale up of the strategy at all levels.

Methods

Study Area:

The study was carried out in Debre Berhan Referral Hospital which is located in North Shoa Administrative Zone, 695km away from Bahir Dar, the Capital City of the Amhara National Regional State, and 130 km north east of Addis Ababa.

Study Design and Period:

A facility-based cross-sectional quantitative survey was conducted among OPD clients from December 1, 2010 to January 10, 2011.

Study Population:

The study participants included all OPD clients of age ≥ 15 years attending Debre Berhan Hospital during the study period.

Sample Size and Selection Technique:

The sample size was determined using the following assumptions: level of confidence of 95%; $Z_{\alpha/2} = 1.96$. A 5% margin of error ($d = 0.05$) and a proportion of 43% PITC acceptance from a previous study in health facilities of Dessie Town (12). We had a sample size of 376 and, adding a non-response rate of 10%, the total sample size required for the study was 414 OPD clients who were provided with PITC to determine HIV status.

Among all OPD clients who fulfilled the inclusion criteria, every other client was selected as a participant in the study. There were four adult OPDs in the hospital. Each OPD treats medical, surgical and gynecology cases.

Data Collection Procedures:

A pre-tested, structured interviewer-administered questionnaire was used to collect data by data collectors who were general practitioners and health officers by profession. One supervisor was selected from the Debre Berhan Referral Hospital. The enumerators and the supervisor were given training for two days on the aim of the study, procedures, techniques and ways of collecting data. Fully completed questionnaires were coded and entered into EPI info version 3.5.1 statistical package. After data entry, cleanup was performed by running frequencies of each variable to check for accuracy, outliers, and consistencies.

Data Analysis:

Data were analyzed using SPSS version 16. To come up with a comprehensive knowledge of the study participants on HIV transmission and prevention, the correct response was given a score of one, while a zero was given to every wrong response. The scores were summed and the mean computed. Study participants, who scored above the mean score were considered as knowledgeable while those who scored less than or equal to the mean score were considered as not knowledgeable on the mode of HIV transmission and prevention, CI was used to see the strength of association. P values of less than 0.05 and a confidence level of 95% by a two-sided test were considered to indicate statistical significance. To describe the characteristics of the study population, means, SD, medians, and proportion were calculated.

Ethical Considerations:

Ethical clearance was obtained from the College of Health Sciences, Addis Ababa University. After getting ethical clearance, written permission was obtained from the Debre Berhan Referral Hospital Administration. Informed consent was obtained from study participants who were given PITC. Assent was obtained for those with ages of 15-18 years. To ensure confidentiality, nurses and physicians working in OPD of the Debre Berhan Referral Hospital interviewed patients.

Results

Socio-demographic Characteristics of Respondents:

A total of 414 respondents, who fulfilled the inclusion criteria (with 100% response rate) were included in the study. The age of the respondents ranged between 15 and 82 years, with the median age and inter-quartile ranges of 25 and 19 years, respectively. Regarding the age distribution of the participants, the majority 181 (43.7%) were within the age range of 15-24, followed by 108 (26.1%) between 25-34 age range. Two hundred fifty-five (54.3%) of the participants were male (Table 1).

Most of the respondents, 355 (85.7%), were Orthodox Christians, followed by Muslims, 39 (9.4%). The ethnic distribution of the participants constituted: Amhara 368 (88.9%) and Oromo 19 (4.6%). Regarding marital status, 194 (46.9%) were married, 177 (42.8%) were single and 21 (5.1%) divorced (Table1).

Regarding educational status, 34.5% were at secondary level education, 12.6% were at tertiary level, and 16.7% were illiterates. Regarding occupational status, 149 (36%) of the participants were students followed by housewives: 64 (15.5%) (Table1).

Table 1: Socio-demographic characteristics of OPD clients who were provided PITC in Debre Berhan Referral Hospital, 2010 (n=414)

Variable	Number	Percentage
Age group	181	43.7
15-24	108	26.1
25-34	55	13.3
35-44	70	16.9
≥45		
Sex		
Male	225	54.3
Female	189	45.7
Religion		
Orthodox	355	85.7
Muslim	39	9.4
Protestant	20	4.8
Ethnicity		
Amhara	368	88.9
Oromo	19	4.6
Gurage	11	2.7
Tigray	8	1.9
Other	8	1.9
Marital status		
Married	194	46.9
Single	177	42.8
Divorced	21	5.1
Widowed	15	3.6
Living together	7	1.7
Education		
Illiterate	69	16.7
Read and write	75	18.1
Primary	75	18.1
Secondary	143	34.5
Tertiary	52	12.6
Occupation		
Merchant	53	12.8
House wife	64	15.5
Student	149	36.0
Government	58	14.0
NGO employee	20	4.8
Un employed	28	6.8
Daily laborer	9	2.2
Farmer	24	5.8
Other	9	2.2

Provider-initiated HIV Testing and Counseling:

Out of the total (414) interviewed OPD patients, 353 (85.3%) knew about PITC and their main source of information were health workers 252 (71.4%), followed by mass media: 84 (23.8%) (Table 2).

Out of 345 (97.7%) participants who had a positive attitude towards PITC, 204 (57.8%) supported it very

much, 126 (35.7%) a great deal and 19 (5.4%) somewhat, while 4 (1.1%) of the study subjects did not support PITC at all. Almost all respondents (94.9%) agreed that anyone should check his/her HIV sero-status either at any time (75.8%), before marriage (35.7%), and during illness (22.7%). Two hundred twenty-nine (55.3%) of the participants had been tested for HIV, the reasons being personal-interest for 75.1%, while 21.8% were initiated by health worker and 2.2% were for ANC (Table 2).

Out of the 414 study subjects, 346 (83.6%) accepted PITC and tested. From the respondents who accepted PITC, 33 (9.5%) [95% CI (6.4%-12.6%)] were positive for HIV (Table 2).

Table 2: PITC knowledge and acceptability among OPD clients in Debre Berhan Referral Hospital 2010 (n=414)

Variables	No.	%
Have you ever heard of PITC (n=414)		
Yes	353	85.3
No	61	14.7
Source of information for PITC (n=353)		
Health workers	252	71.4
Mass media	84	23.8
Family member	2	0.6
Friends	15	4.2
Do you feel that PITC is important (n=353)		
Yes	345	97.7
No	6	1.7
I don't know	2	0.6
To what extent do you support PITC (n=353)		
Very much in favor	204	57.8
A great deal	126	35.7
Some what	19	5.4
Not at all	4	1.1
Do you feel that PITC has influence on follow up? (n=353)		
Yes	50	14.2
No	298	84.4
I don't know	5	1.4
Should any one check for HIV sero-status? (n=414)		
Yes	393	94.9
No	21	5.1
Timing for tested for HIV? (n=414)		
At any time	314	75.8
Before Marriage	147	35.5
When on is sick	94	22.7
If one has multiple sexual partners	48	11.6
Tested for HIV so far (n=414)		
Yes	229	55.3
No	185	44.7
Reason for having HIV test (n=229)		
Self interest	172	75.1
Initiated by health worker	50	21.8
During ANC	5	2.2
Form blood donation	2	0.9
Unless you decline we will conduct test for you (n=414)		
Yes	346	83.6
No	68	16.4
Test result (n=346)		
Positive	33	9.5
Negative	131	90.5

Out of the 414 study subjects, 346 (83.6%) accepted PITC and tested. From the respondents who accepted

PITC, 33 (9.5%) [95% CI (6.4%-12.6%)] were positive for HIV (Table 2).

Almost one-fourth of the respondents agreed that the key reason for not accepting PITC was low perceived susceptibility for HIV. Only 22.1% were tested before and 25% reported fear of stigma and discrimination (Fig 1).

Attitude Towards Test Status Disclosure:

One hundred twenty (94.5%) of the respondents disclosed test results to their partners, reaction of being tested was 113 (94.2%) supported and 5 (4.2%) not supported (Table 3). Reasons for non-disclosure among those respondents who did not disclose their test results to their partners (n=7) were 4 fear of rejection by the

partner for 4 of them and conducting test without permission of partner for the rest. Of the 198 respondents, 96 (48.5%) knew that their partners have been tested for HIV. Ninety-five (99%) of those who knew that their partners have been tested for HIV knew about the test results of their partners (Table 3).

Of the 346 respondents, who accepted PITC, 288 (83.2%) had a plan to tell test results to any other person. For those not disclosing HIV test results, the reason included fear of stigma (62.7%) followed by fear of blame (13.6%). Two hundred eleven (61%) of the respondents expressed that it is easy to disclose their current test results to any other person while 135 (39%) replied that it is difficult to disclose (Table 3).

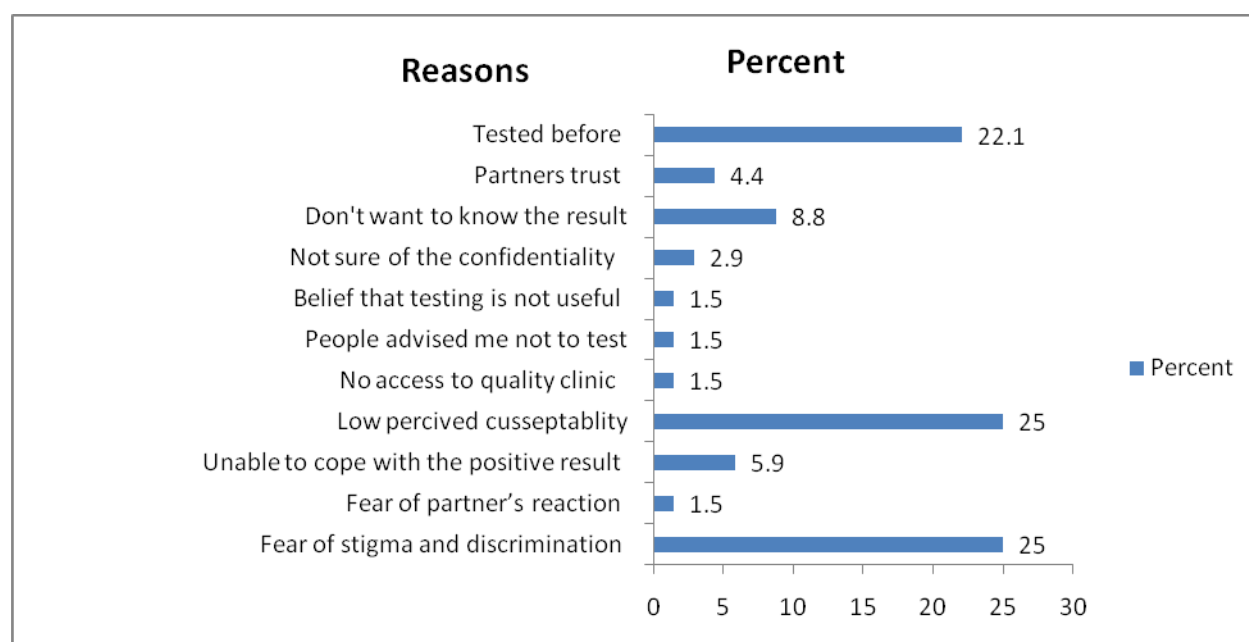


Figure 1: Reasons for not accepting PITC among OPD patients, in Debre Berhan Referral Hospital, 2010 (n=68)

Factors Affecting PITC Acceptance:

Age group, ethnicity, marital status and education showed no statistically significant association with PITC acceptance. Similarly, knowing a person infected with (died of) HIV and thinking that they can get the virus showed no association with PITC acceptance. Regarding religion as predictor of PITC acceptance, Protestants were 70% less likely to accept PITC compared to Orthodox Christians (COR=0.31, 95% CI=0.1-0.68). PITC acceptance was statistically significant among knowledgeable respondents on HIV transmission than those not knowledgeable about HIV transmission (Table 4).

Males were 2.27 times more likely to accept PITC compared to females (AOR=2.27, 95% CI=1.16-4.42), Protestant religion followers were 0.21 times less likely to accept PITC compared to Orthodox (AOR=0.21, 95%

CI=0.06-0.72) and those with knowledge of HIV transmission were 4.08 times more likely to accept PITC compared with those having no knowledge for HIV transmission (AOR=4.08, 95% CI=1.98- 9.91) (Table 4).

Factors Associated with Test Result Disclosure:

Further analysis was done to detect any association between test result disclosure and socio-demographic variables, knowledge of HIV transmission and knowledge of HIV prevention and test result (Table 5).

The age group 15-24 years was not significantly associated with test result disclosure during the crude analysis. However, it turned to be statistically significantly associated with test result disclosure when adjusted for other covariates. Those in the age group 15-24 years were less likely to disclose their HIV status (AOR=0.16, 95% CI=0.04-0.62) (Table 5).

Table 3: Attitude towards HIV result disclosure and factors affecting it among OPD patients, Debre Berhan, 2010

Variables	No.	%
Ever tested for HIV (n=414)		
Yes	229	55.3
No	185	44.7
Did you tell your partner about your test result? (n=127)		
Yes	120	94.5
No	7	5.5
Reaction of being tested by partner (n=120)		
Approved/supported	113	94.2
Not supported	5	4.2
Not clear	2	1.6
Reason for non-disclosure (n=7)		
Tested without partner permission	3	42.9
Fear of rejection by the partner	4	57.1
Partner tested previously (n=198)		
Yes	96	48.5
No	67	33.8
I don't know	29	14.6
No response	6	3
Has/he/she ever told you about the test result? (n=96)		
Yes	95	99.0
No	1	1.0
Do you plan to tell your test result to any other person? (n=346)		
Yes	288	83.2
No	58	16.8
How do you see disclosing of your test result to other person? (n=346)		
Easy	211	61.0
Difficult	135	39.0
Would you tell your test result to any other person? (n=346)		
Yes	287	82.9
No	59	17.1
Reason for non-disclosure of test result? (n=59)		
Fear of divorce	5	8.5
Fear of blame	8	13.6
Fear of violence	6	10.2
Fear of rejection	3	5.1
Fear of stigma	37	62.7
Do you think your husband/partner/family would accept HIV test? (n=374)		
Yes	311	83.2
No	24	6.4
I don't know	39	10.4

Regarding occupational status, students were not significantly associated with test result disclosure compared to merchants, but turned to be significant when adjusted for the other variables compared to merchants (AOR=5.42, 95% CI=1.44-20.43). Daily laborers were 0.13 times less likely to disclose their test result compared to merchants (AOR=0.13, 95% CI=0.02-0.93) (Table 5).

Compared to illiterates those who were able to read and write were less likely to disclose their HIV result

(COR=0.28, 95% CI=0.1-0.76), however, it lost its statistical association after adjustment for the other covariates (AOR=0.39, 95% CI=0.12-1.3) (Table 5).

Those with negative HIV test results were 3.32 times more likely to disclose their results compared to those who had positive test results (COR=3.32, 95% CI=1.53-7.20). When adjusted for confounders, the strength of the association between HIV test result and test result disclosure increased from OR of 3.32 to 4 (AOR=4.00, 95% CI=1.53-10.47) (Table 5).

Table 4: Factors associated with PITC acceptance of OPD patients in Debre Berhan Referral Hospital, 2010

	PITC accepted		COR (95% CI)	Adjusted OR (95%CI)
	Yes	No		
Age group				
15-24	149	32	0.95 (0.32-2.89)	0.96 (0.32-2.89)
25-34	94	14	1.39 (0.6-3.21)	1.49 (0.53-4.17)
35-44	45	10	0.93 (0.36-2.35)	0.78 (0.27-2.28)
≥45	58	12	1.0*	1.0*
Sex				
Male	194	31	1.51 (0.98-1.01)	2.27 (1.16-4.42)
Female	152	37	1.0*	1.0*
Religion				
Orthodox	301	53	1.0*	1.0*
Muslim	32	7	0.82 (0.34-1.91)	0.71 (0.25-2.0)
Protestant	12	8	0.31 (0.1-0.68)	0.21 (0.06-0.72)
Ethnicity				
Amhara	311	57	1.0*	1.0*
Oromo	15	4	0.69 (0.22-2.15)	1.09 (0.28-4.33)
Gurage	9	2	0.83 (0.17-3.92)	1.11 (0.19-6.62)
Tigray	6	2	0.55 (0.11-2.79)	0.42 (0.07-2.47)
Other	5	3	0.31 (0.07-1.31)	0.87 (0.14-5.44)
Marital status				
Married	166	28	1.0*	1.0*
Single	144	33	0.74 (0.43-1.28)	0.5 (0.19-1.26)
Divorced	17	4	0.72 (0.23-2.29)	1.72 (0.42-7.05)
Widowed	12	3	0.78 (0.18-2.54)	1.10 (0.23-5.28)
Education				
Illiterate	58	11	1.0*	1.0*
Read and write	61	14	0.83 (0.35-1.970)	0.79 (0.28-2.26)
Primary	64	11	1.11 (0.45-2.74)	1.18 (0.38-3.64)
Secondary	120	23	0.99 (0.45-2.17)	0.96 (0.27-3.37)
Tertiary	43	9	0.91 (0.35-2.38)	0.61 (0.14-2.68)
Occupation				
Merchant	43	10	1.0*	1.0*
House wife	54	10	1.25 (0.48-3.29)	1.36 (0.42-4.42)
Student	124	25	1.15 (0.51-2.6)	1.79 (0.51-6.32)
Government	52	6	2.02 (0.68-5.99)	2.29 (0.59-8.79)
NGO employee	16	4	0.93 (0.26-3.30)	1.44 (0.32-5.57)
Un employed	23	5	1.07 (0.33-3.51)	1.01 (0.25-4.08)
Daily laborer	7	2	0.81 (0.15-4.56)	0.29 (0.05-1.78)
Farmer	21	3	1.63 (0.41-6.55)	1.19 (0.25-5.64)
Other	6	3	0.47 (0.10-2.19)	4.08 (1.68-9.91)
HIV transmission knowledge				
Knowledgeable	101	8	3.10 (1.43-6.69)	4.08 (1.98-9.91)
Not knowledgeable	245	60	1.0*	1.0*
HIV prevention knowledge				
Knowledgeable	95	16	1.23 (0.67-2.26)	0.79 (0.38-1.66)
Not knowledgeable	251	52	1.0*	1.0*
Know a person infected/died of HIV				
Yes	236	110	0.77 (0.43-1.39)	0.65 (0.33-1.29)
No	50	18	1.0*	1.0*
Healthy looking person can be positive for HIV				
Yes	308	63	1.0*	1.0*
No	38	5	1.56 (0.59-4.11)	1.39 (0.46-4.20)
Do you think you can get the virus?				
Yes	126	29	1.0*	1.0*
No	220	39	1.29 (0.77-2.20)	1.48 (0.81-2.71)

Table 5: Factors associated with attitudes (willingness) of test result disclosure of OPD patients in Debre Berhan Referral Hospital, 2010

	Willingness		COR (95% CI)	Adjusted OR (95%CI)
	Yes	No		
Age group				
15-24	118	31	0.52 (0.22-1.26)	0.16 (0.04-0.62)
25-34	81	13	0.86 (0.32-2.29)	0.67 (0.19-2.30)
35-44	38	7	0.75 (0.24-2.30)	0.47 (0.13-1.77)
≥45	51	7	1.0*	1.0*
Sex				
Male	157	37	0.68 (0.38-1.22)	0.71 (0.31-1.61)
Female	131	21	1.0*	1.0*
Religion				
Orthodox	252	49	1.0*	1.0*
Muslim	25	7	0.69 (0.29-1.69)	0.78 (0.25-2.46)
Protestant	10	2	0.97 (0.21-4.58)	0.73 (0.12-4.49)
Ethnicity				
Amhara	259	52	1.0*	1.0*
Oromo	11	4	0.55 (0.17-1.80)	0.46 (0.11-1.87)
Tigray	5	1	1.0 (0.12-8.78)	1.09 (0.10-11.93)
Other	4	1	0.83 (0.88-7.33)	2.36 (0.16-35.81)
Marital status				
Married	143	23	1.0*	1.0*
Single	115	29	0.64 (0.35-1.16)	0.47 (0.17-1.33)
Divorced	12	5	0.34 (0.12-1.19)	0.32 (0.98-1.35)
Widowed	11	1	1.77 (0.22-14.36)	0.87 (0.08-9.40)
Education				
Illiterate	52	6	1.0*	1.0*
Read and write	43	18	0.28 (0.10-0.76)	0.39 (0.12-1.30)
Primary	56	8	0.81 (0.28-2.49)	1.38 (0.35-5.55)
Secondary	100	20	0.58 (0.22-1.53)	0.64 (0.16-2.63)
Tertiary	37	6	0.71 (0.21-2.38)	0.56 (0.11-2.98)
Occupation				
Merchant	33	10	1.0*	1.0*
House wife	47	7	2.04 (0.70-5.89)	1.01 (0.26-4.02)
Student	105	19	1.68 (0.71-3.96)	5.42 (1.44-20.43)
Government	46	6	2.32 (0.77-7.03)	2.51 (0.63-9.94)
NGO employee	14	2	2.12 (0.41-10.96)	2.31 (0.34-15.75)
Un employed	19	4	1.44 (0.39-5.23)	1.28 (0.27-6.04)
Daily laborer	3	4	0.23 (0.43-1.19)	0.13 (0.02-0.93)
Farmer	16	5	0.97 (0.28-3.31)	0.62 (0.14-2.77)
Other	5	1	1.52 (0.16-14.53)	0.83 (0.14-24.81)
HIV transmission knowledge				
Knowledgeable	84	17	0.99 (0.53-1.85)	1.62 (0.57-2.80)
Not knowledgeable	204	41	1.0*	1.0*
HIV prevention knowledge				
Knowledgeable	78	17	0.89 (0.49-1.67)	0.78 (0.34-1.76)
Not knowledgeable	210	41	1.0*	1.0*
HIV test result				
Positive	21	12	1.0*	1.0*
Negative	267	46	3.32 (1.53-7.20)	4.00 (1.53-10.47)

Discussion

Ethiopia is one of the countries most severely hit by the HIV/AIDS epidemic, with a projected national adult prevalence of 2.4% in 2010 (1, 3). HIV counseling and testing (HCT) is a key strategic entry point to prevention, treatment, care and support services (5). Low uptake of HIV testing is one of the reasons for delayed access to antiretroviral therapy for people in need and in high mortality in the months after treatment is initiated (4, 7).

In the present study the PITC acceptance among OPD patients was found to be 83.6%, and it was significantly

influenced by sex. The key reasons for not accepting PITC were: not considering being at risk for HIV, having tested before and fear of stigma and discrimination. Majority of the participants had positive attitudes towards HIV test result disclosure. Fear of stigma, fear of blame and fear of violence were the main reasons that impede HIV test result disclosure.

In line with previous research on knowledge about HIV/AIDS (13), it was found that knowledge about HIV prevention and transmission methods was low which is also comparable with the findings of the EDHS 2005 (14). Only one hundred fifty-five (37.4%) of the

participants perceived themselves as having risk for HIV. In this study, knowing a person infected/died with HIV and thinking that they can get the virus showed no statistically significant association with PITC acceptance which is consistent with a study done in Addis Ababa (11).

In the present study, PITC acceptance among OPD patients was found to be 83.6%, which was higher than an earlier result (68%) reported in Addis Ababa (11), 43% in health facilities of Dessie Town (12) and 35% in south Ethiopia (15), but lower than findings in Uganda (98%) (16) and Kenya (97.7%) (17) the discrepancy could be due to service quality difference, knowledge about ART, knowledge about HIV transmission and study time difference in the respective studies.

Only 68 (16.4%) of the respondents did not accept PITC. The key reasons for not accepting PITC were: considering that they are at risk for HIV, having tested before and fear of stigma and discrimination. Such reasons were also mentioned in studies done among TB patients in Addis Ababa (10), among OPD patients with clinical signs of HIV infection in Addis Ababa (11), among participants in a case control study in northwest Ethiopia (19) and among participants in a cross-sectional study in Botswana (18). Out of the respondents who accepted PITC, 33 (9.5%) were positive for HIV. This was higher than the finding of a similar study (3.1%) in rural Haiti (20), but lower than findings in south Ethiopia (20.6%) (15), Addis Ababa (37.6%) and Kenya (22.7%) (17). This discrepancy could be because of the fact that PITC was provided for patients with sign and symptoms of HIV in the studies in Addis Ababa and south Ethiopia.

This study revealed that PITC acceptance was significantly influenced by sex. Men were 2.27 times more likely to accept PITC than women. The finding in the EDHS 2005 also showed that men were more likely to be tested than women (14), but another study showed that there was no statistical association (12). People who were knowledgeable about HIV transmission were more likely to accept PITC compared to those who did not have knowledge about HIV transmission. The finding was similar to findings in study done in northwest Ethiopia (19), but the study done in Addis Ababa (11) does not support it. This could be due to differences in operational definitions.

Though it was not significant, individuals who could read and write were more likely to accept PITC than illiterates and this was in line with a case control study conducted in northwest Ethiopia (19). The study finding showed that the most common reasons for refusing PITC were that participants felt that they were not at risk for HIV and had fear of HIV positive test results. This finding is supported by previous studies in Ethiopia (10, 11).

Majority of the respondents who accepted PITC (83.2%) reflected about their planning to share test results to any other person. Studies conducted in health facilities of Dessie Town, northeast Ethiopia and southwest Ethiopia on HIV positive clients revealed disclosure rates of 60% and 94.5%, respectively (27, 28). Other studies done in Zambia and Kenya on mothers attending ANC have shown rates of partner disclosure of HIV status amongst study participants as ranging from 58 % to 72 % (21).

Only 58 participants (16.6%) who accepted PITC did not plan to disclose their results. Consistent with other findings, reasons for not disclosing were: fear of stigma, followed by fear of blame, fear of violence and fear of divorce (22-24).

Out of the 127 married respondents who had ever been tested for HIV, 120 (94.5%) disclosed test results to their partners. Regarding reactions of those for whom disclosures were made, 113 (94.2%) were supportive, which was similar to findings reported elsewhere (22, 23). In line with another study in Ethiopia, only seven did not disclose their test results (22). Regarding the reasons for non-disclosure among these seven participants, four feared rejection by partners and the rest three conducted the test without the permission of their partners. This was also supported by studies done among mothers attending ANC in Africa and Ireland (21, 25).

Similar to other findings (2), 60% of respondents in the present study felt that disclosing their test results to their spouses was easy. In addition, similar to other findings (21, 23, 24), study participants with negative HIV test results were four times more likely to disclose their HIV test results compared to those with positive test results.

In this study, PITC was highly accepted (83.6%) and multiple factors were identified that influenced acceptance of provider initiated HIV testing and counseling. Key among these factors was having heard of media (TV/radio) information about PITC. On the other hand, thinking that one is not at risk for HIV was a key barrier against accepting PITC.

The prevalence of HIV among the participants was 9.5% which was lower than what other studies reported (9, 11). Sex, religion and knowledge about HIV transmission were found to be statistically associated with PITC acceptance.

It is evident from the present study that the majority of the participants had positive attitudes towards HIV test result disclosure. Fear of stigma, fear of blame and fear of violence were the main reasons that impeded HIV test result disclosure. Study subjects with ages of 15-24 years, students and those with negative test results were more likely to disclose their test results.

From the results of the present study, it can be concluded that PITC is acceptable and the level of disclosure of test results to partners is also encouraging. On the other hand, the prevalence of HIV among the participants (all OPD attendants) seems to be relatively high.

As per the findings of the study, the authors recommend that IEC/BCC should target change of public perception about: the means of HIV transmission and prevention as well as about HIV test result disclosure. Further studies should be conducted on factors that influence HIV test result disclosure and PITC acceptance. Organizations working on HCT program should give emphasis on the benefits of test result disclosure and on expansion of the service to other health facilities. Stigma and discrimination should be addressed through strong information, education and communication (IEC) activities at all levels.

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