PREDICTORS OF REFUSAL OF PROVIDER INITIATED HIV TESTING (PIHT) AMONG CLIENTS VISITING OUTPATIENT DEPARTMENTS (OPDS) IN JIMMA TOWN: UNMATCHED CASE CONTROL STUDY.

BY

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Summary

Background: Provider initiated HIV testing and counselling (PIHTC) is one of the current strategies for prevention of HIV/AIDS. Though HIV testing is critical for behavior modification, getting support and entry point for engagement on treatment, the number of people knowing their status is still low and many HIV infected people are missing existing opportunities.

Objective: this study intends to identify predictors of refusal of PIHCT among clients visiting OPDs in public health facilities in Jimma town using modified health belief model.

Methods and materials: unmatched case control study was conducted as March 20 to April 29, 2011. Of a total sample of 304 clients (152 case and 152 controls) of age > 15 years who were initiated for HIV testing sought to be studied, 97% (296) clients were included in the study. Written informed consent were sought to recruit client participants' in the study. Both in-depth interview with health providers (qualitative) and face to face interview (quantitative) with pretested questionnaires adapted considering constructs of Health Belief Model (HBM) were considered in the study. Data was analyzed using SPSS v 16. Logistic and linear regressions were executed in which OR, β, mean difference, 95%CI and PV <5% were considered.

Result: In this study; perceived susceptibility to HIV/AIDS, perceived benefits of testing for planning future health care, perceiving early testing as opportunity, self efficacy to live with HIV, non disclosure concerned, perceived obedience to providers, perceived explicitness of opt-out right, perceived selectiveness of initiation to the suspected and being resident outside Jimma town had protective effect while perceived severity of HIV/AIDS, clients' perceived unmet preferred condition, perceived unpreparedness to test and recent testing had positive effect on odds of refusing PIHT in OPDs. There was existed client's acceptance of PIHT just with obedience to provider. Client's rights to opt-out were not fully kept and all clients were not being initiated.

Conclusion and recommendations: perceived unpreparedness, self efficacy to live with HIV were best predictors of clients' decision suggesting the need to work on ways that can improve clients' readiness for testing through health messages at health facilities and via mass media and the need of further study on nature of preparation for testing.

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Abbreviations

AIDS-Acquired Immune Deficiency Syndrome

ANC- Ante Natal Care

AOR- Adjusted Odds Ratio

ART- Anti Retroviral Therapy

BMC-Biomedical Center

CDC- Centers for Disease Control

COR- Crude Odds Ratio

CSA- Central Statistical Agency

DOTS-Directly Observed Treatment Short Course.

FHAPCO- Federal HIV/AIDS Prevention and Control Office

FGD-Focus Group Discussions

FMOH- Federal Ministry of Health

FSWs-Female Sex Workers

HAPCO- HIV/AIDS Prevention and Control Office

HBM- Health Belief Model

HCT-HIV Counselling and Testing

HIV- Human Immune Virus

JHC- Jimma Health Center

JUSH-Jimma University Specialized Hospitals

KHC-Kefitegnahulet Health Center

MD-Mean Difference

MKHC- Mendera Kochi Health Center

MOH- Ministry of Health

OPD-Out Patient Departments

PIHTC- Provider Initiated HIV Testing and Counselling

PLoS- Public Library of Science

PHCFs-Public Health Care Facilities

STI- Sexually Transmitted Infections

TB- Tuberculosis

URTI-Upper Respiratory Tract Infection

UNCF-United Nation Children Fund

UN/AIDS- United Nation Aids

VCT- Voluntary Counselling and Testing

WHO- World Health Organization

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Chapter One: Introduction

1.1 Background Information

Since its emergence Human Immunodeficiency Virus (HIV) Acquired Immunodeficiency Syndrome (AIDS) killed millions of people and still its epidemics continued to grow [1]. HIV/AIDS became a major public health problem in nowadays [2]. Accordingly, recently, many advances have been made in developing effective and affordable interventions to reduce transmission of HIV [3]. To halt the epidemics, the preventive efforts included education about safe sex, HIV surveillance, condom use and access to treatment. In addition, increasing HIV counselling and testing (HCT) is of paramount importance that it is an essential tool in the control of HIV/AIDS epidemics [1, 2].

HCT refers to the process by which an individual or couple receives an HIV test and counseling both pre- and post-test [4]. It is the most important service in HIV/AIDS prevention and care strategies [5] and is the critical entry-point for engagement into treatment and care; for primary and secondary prevention efforts [6].

As HIV epidemics control strategy, some of the key benefits of learning one's HIV status though HCT include: awareness of and knowledge about HIV, individual or couple-based HIV prevention counseling to identify and reduce risky behavior, education on HIV prevention strategies, access to and education on correctly and consistently using condoms, linkages to other relevant services such as STI treatment, family planning and prevention of mother-to-child-transmission programs; and planning for the future, linkage to HIV care and treatment that may enable them to live a longer and better quality of life with HIV especially if accessed early [4,5].

Till 2007, most HIV testing approach to know one's HIV status had been client-initiated, also known as Voluntary Counseling and Testing (VCT) in which individuals actively seek HIV testing at a facility offering HIV testing [7]. For over 20 years till 2007, it assisted millions of people learn their HIV status [3]. In spite of the fact that millions have accessed it, client initiated VCT testing offer has been unable to reach many people who need HIV testing [8].

Thus, with intention and efforts to increase the number of individuals who know their HIV status, decrease the prevalence of undiagnosed HIV infection, and to promote early diagnosis of and treatment for HIV infection, the WHO and CDC in 2007 have recommended HCT scale up to provider-initiated HIV Counselling testing (PIHTC) services in health care settings while strongly supported the continued existence of VCT [3]. Accordingly, PIHTC is now routinely offered by health care providers in outpatient, inpatient, antenatal, sexually transmitted infection, tuberculosis and emergency clinical settings as a standard component of medical care [7, 8].WHO, in addition specifically, recommended PIHTC to be offered to all clients in all health care facilities in countries with generalized HIV epidemics, including Ethiopia, irrespective of symptoms and signs that suggest HIV/AIDS. All patients presenting in the clinics are offered an HIV test if they have not tested recently [3, 8].

In Ethiopia HIV testing and counseling began in the late 1980s and expanded during the 1990s [9]. Since then, in 1998, national HIV/AIDS policy was issued giving attention to HIV testing as one of the services for HIV/AIDS [10] and in January 2005, a programme to provide access to antiretroviral therapy on free of charge was launched with commitment to expanding VCT services. In addition, as of 2007, VCT guideline was updated to include the PIHTC approach to increase uptake of HCT taking the 2007 WHO recommendation into consideration [9]. The aim of development of PIHTC guideline was routine clinical management of symptoms or signs possibly attributable to HIV and to identify unrecognized or unsuspected HIV infection in persons attending health facilities. Accordingly, being a basic responsibility of health care providers, HCT is recommended to all patients during all clinical interactions in the facility [11].

In spite of these arrangements, evidences suggest that many opportunities to diagnose and counsel individuals at health facilities are still being missed [3]. That challenged the achievement of the purpose of PIHTC program which may in turn be attributed to clients visiting health facility refuse the offer of counseling and testing for HIV [12], lack of active role of health care providers in promoting HIV testing [13] and or constraints of resources required for the program. Thus, considering the issue as one of the challenges to the purpose of PIHTC and even the source of reluctance to initiate HIV test by the health care providers even when resources are there, this study seeks to identify predictors of clients' refusal of HCT initiated by health providers.

1.2 Statement of the problem

Global burden of HIV/AIDS remain enormous. At the end of 2008, worldwide, 33.4 million people were estimated to live with HIV, of which 2.7 million were new infections and 2 million were AIDS-related deaths. Of this number, in sub-Saharan Africa, 22.4 million (67%) live with HIV, 1.9 million (70.4%) were new infections and 1.4 million (70%) were AIDS- related deaths [14]. The overall HIV prevalence estimate for Ethiopia in 2007 was 2.1% and is in increasing in trend [15].

The epidemics of HIV/AIDS has often been also associated with social problems that peoples living with HIV/AIDS (PLWHA) and the social groups to which they belong too, have been stigmatized worldwide since the beginning of the epidemic[16]. In addition, HIV/AIDS results in economic problem as reduced productivity from death of productive age groups that means AIDS destroys human capital; peoples' accumulated life experiences, their human and job skills, and their knowledge and insights built up over a period of years as especially in Africa the most vulnerable people are the most economically active [17].

Throughout the world many services are being provided for HIV/AIDS these days including HCT in both client and provider initiated approaches as one component to timely diagnosis of HIV infection that serves to prevent HIV risk behaviors and as entry point for receiving ART and opportunistic disease prophylaxis and as a way to destigmatize HIV [18].

Despite the importance of HCT in getting the required benefits and given the high rates of incidence and transmission of the disease, and the startling number of people who are unknowingly infected, the number of people who seek testing on their own is unacceptably low [5, 19].WHO reported, Worldwide in 2004 only 5% of PLWHA were estimated to be aware of their sero status and also the use of HIV testing globally is still very low in 2007[5, 20]. In Asia and the Pacific region, by the end of 2006 around 0.1% of the adult population has received HIV testing, and less than 10% of PLWHA are aware of their status and only 19% those in need of ART were receiving it [7]. By 2006 in America 10% to 30% of PLWHA don't know their HIV status, of 1 million infected individuals in U.S, approximately one quarter (25%) are unaware of their HIV status, thus they are responsible for nearly 65% of all new HIV infections [21].

In Europeans union and neighboring countries in 2005 an estimated 30% of PLWHA are unaware of their infection [22]. The same thing exists in sub-Saharan Africa that in 2007, it was estimated that a median of 8–24% and 12–25% of men and women living with HIV have known their HIV status, estimate of fewer than 20% of people in Burundi and 17% in Kenya known their HIV status in 2007 [20,23-24]. By and large, many have denied knowing their HIV status by far than number expected to know their HIV status means missing existing service opportunities as ART and the risk of transmission continues to exist. Thus, undiagnosed HIV infection, beyond missing HCT, remains a significant public health problem for both transmission and loss of access to ART and other services as Family planning [25].

Many studies evidenced that missing of HCT and related services was not only attributed to low use of client initiated free VCT service but also to less than expected acceptance of PIHTC, initiation in health care and other settings being via various means as education and request, though among tested high positivity detection rate was being observed [1, 5, 7, 26-32]. Evidently, in South Africa by 2006 uptake of HTC after offering education among women attending an urban STI clinic was 43.5% with overall HIV prevalence of 56.5% [26]. In Tanzania by 2008, the overall HIV test positivity from VCT in general population but after campaign was 24.6% that rate was much higher than the national estimate of 5.7% [27]. In Uganda hospitals study from 2004 to 2006 indicated, the prevalence of HIV was 28% among had never been tested before and 9% among previously tested negative, 30% in medical outpatient wards and 35% in medical inpatients [28].

In Ethiopia in addition to only 7.6% of HIV infected had known their status in 2005 and the testing rate was 121 tests per 1000 population in 2009 [30, 33] the acceptance of PIHCT is less than expected. In Northern Ethiopia in 2008 the uptake and positivity rates of PIHTC among TB patients were 70.6% and 36.2% respectively [34]. And these similar rates in 2008 in Southern Ethiopia among TB patients were 35% and 20.6% respectively [35]. In southern Ethiopia, in wolaita, in 2009 among ANC attendees only the readiness to accept PIHTC was 74.5% [36]. In 2009, among clients visiting health facilities in Dessie town, Northern East Ethiopia, PIHCT acceptance and HIV positivity rates were 36.5% and 6.9% respectively [13].

Studies indicated high HIV positivity rate from PIHTC even greater by far than the national prevalence estimate of respective countries and less than expected acceptance rate of PIHTC implies many of HIV infected individuals have no self initiation to be tested, high transmission of HIV and loss of access to ART services and thus the need to strengthen and the hope laid on PIHTC to calm down transmission, access ART and other services and even to contribute for reliable estimate of the HIV infection rates by increasing testing [1,13,26,28,34-37].

In view of that, to achieve the hope of PIHTC, encouraging is the evidence from meta analysis and other studies in developing countries including Ethiopia that undergoing HCT contributes for reduction of transmission and benefit from HIV services that a single or repeated HCT significantly reduce engaging on unprotected, increase safe sexual behaviors when compared with one's pretest behavior or with participants who had not received HCT and previously untested men and women were more likely to be infected than their counterparts who had previously accessed testing services[18,38-39].

Thus, in order to achieve the purpose of PIHTC it is crucial that more people become aware of their HIV status early; tackling problem of low acceptance of PIHTC in health care and other settings [32]. Particularly, low acceptance of PIHTC in health care facilities means that there are determinants of whether clients accept HCT or not, indicating the need to investigate the predictors of acceptance. To date most studies related to acceptance of PIHTC, in Ethiopia and other countries, have mainly been done in suspected higher HIV prevalence wards as TB, ANC and STI clinics [13, 26, 34-36,40].And as the reviewed studies revealed few PIHTC related studies were conducted in OPDs. In turn, these wards mean each more or less comprises of a cohort of clients sharing common characteristics than clients visiting OPDs, HIV risk may vary between these clinics and OPDs and that all may make difference in predictors of whether clients' undergo test.

Therefore, it is timely and appropriate to undertake study to investigate factors that facilitate or hinder HIV testing in health care setting particularly in OPDs. Thus, this study seeks to identify predictors of refusal of PIHTC among clients visiting outpatient departments in public health facilities in Jimma town South Western Ethiopia.

Chapter Two: Literature Review

2.1 Literature Review

Literatures have identified factors associated with acceptance of HCT in others and health care settings like in TB,STI and ANC clinics and including where the HCT service is arranged for free of charge. There are various models and theories that help explain and predict health behaviors as undergoing HCT. This study seeks to use Health Belief Model (HBM) to predict state of acceptance of PIHTC and thus to guide review of the literatures.

The Health Belief Model (HBM)

The Health Belief Model (HBM) is a socio psychological model that attempts to explain and predict health behaviors in terms of certain belief patterns and by focusing on the attitudes and beliefs of individuals. It was developed in the 1950s as part of an effort by social psychologists in the United States Public Health Service to explain the lack of public participation in health screening and prevention programmes (which was a free and conveniently located health condition screening project). Since then, it has been adapted to explore a variety of long and short-term health behaviors, including sexual risk behaviors and the transmission of HIV/AIDS The originators of the HBM conducted major studies in the 1950's and 1960's meant to systematically explain preventive health behavior considering various perspectives such as the world of the perceiver, health motivation and the individual's current dynamics that can be influenced by prior experience as determinant to what an individual will and will not do [41].

The Health Belief Model (HBM) addresses the individual's perceptions of the threat posed by a health problem (susceptibility, severity), the benefits of avoiding the threat, and factors influencing the decision to act (barriers, cues to action, and self-efficacy). It states, in which perceptions general health values, specific health beliefs related with the health problem and recommended health actions influence likelihood of taking recommended health action [42-43].

The key constructs of the Health Belief Model

The basic constructs of HBM include;

(a) Perceived Susceptibility: one's subjective perception of the risk of contracting a health condition (b) Perceived Severity: feelings concerning the seriousness of contracting an illness or of leaving it untreated including evaluations of medical consequences and social consequences. Perceived susceptibility to and severity of a health condition both result to Perceived Threat from ill health condition (c) Perceived Benefits: the believed effectiveness of strategies designed to reduce the threat of illness and risk. (d) Perceived Barriers: psychological or concrete barrier someone feels to take or from taking particular health actions. (e) Cues to Action: events, either bodily (e.g., physical symptoms of a health condition) or environmental (e.g., media publicity) that motivate people to take action. (f) Self-Efficacy: the belief in being able to successfully execute the behavior required to produce the desired outcomes (This concept was introduced by Bandura in 1977) [41-42].

In addition to the above basic constructs originators and researchers put some variables as modifying factors as they can influence individual perceptions and thus, indirectly health-related behaviors. These variables are of demographic, socio-psychological, health motivation and structural [41].

Core assumptions and prediction in HBM

The HBM is now used in explaining and predicting preventive health behavior, sick-role and illness behavior and has been applied to many studies of all types of health behavior based on the understanding that a person will take a health-related action (undergo HCT) if that person:

1. Feels that a negative health condition [HIV/AIDS] can be avoided/ progress can be reduced,
2. Has a positive expectation that by taking a recommended action, he/she will avoid a negative health condition (i.e., getting tested will be effective at preventing HIV or its progress to AIDS), and
3. Believes that he/she can successfully take a recommended health action (i.e., he/she can get tested and use health care services related to testing though barriers are there). [41]

However, the HBM has some limitations as; a) most HBM-based research to date has incorporated only selected components of the HBM, thereby not testing the usefulness of the model as a whole; b) as a psychological model it does not take into consideration other factors, such as environmental or economic factors, that may influence health behaviors indicating the need to fulfill enabling factors ; and c) the model does not incorporate the influence of social norms and peer influences on people's decisions regarding their health behaviors. [42]

Why health belief model in this study?

This study uses HBM because in health care setting after initiation clients are the decision makers as to whether they accept HCT or not. Therefore, how clients' perceive the benefits of HCT to one's health and barriers of undergoing HCT may determine the decision in which part perception of threat of HIV/AIDS and connotation of HIV/AIDS will hold place. Thus, undergoing HCT by clients may be determined by perception of risk of HIV/AIDS, health values, benefit of testing for one's health and barriers which are perceived in health care setting and socially constructed that HBM in this case relates beliefs about HIV/AIDS with PIHTC.

Strength, modification and conjectures while using HBM in this study;

At first, to overcome limitations of the model, a) the constructs of health belief model were considered in a way that social factors related to acceptance of PIHTC was contextually addressed b) HIV testing and access to HIV related services are given on free of charge in study setting that reduce the problem of enabling factors like economic factors. Secondly, HBM is a model that associates a certain health problem with its levels of prevention, of behavior change models, while the rest more or less just deal with preventive behaviors needed. Thirdly, to increase the variance HBM explains in healthcare setting additional constructs were incorporated as effect modifiers of main constructs and to help explain more the prediction of PIHTC acceptance in health setting particularly in OPDs. These constructs were; a) Past behavior related to HIV/AIDS and testing b) general Health motivation and c) perception of interaction with provider. Therefore, in this study HBM predicts acceptance of PIHTC through relationship between knowledge of HIV/AIDS, risk behaviors, clients' perception of risk, severity of HIV/AIDS, the benefit and barriers of testing, health motivation and self efficacy, prior experience of testing, and perception of provider interaction and initiation.

Accordingly, literatures that showed predictors of HCT in various settings including health care setting were reviewed based on concepts and constructs of the modified Health Belief Model.

Individual perceptions of HIV ill health condition;

Perceived susceptibility to HIV/AIDS

A systematic review of studies conducted in the United States on acceptability of HCT revealed that factors associated with high acceptance rates included the client's perception of HIV risk, acknowledging risk behaviors, confidentiality protections, presenting HCT as 'routine' rather than optional and the provider's belief that HCT will benefit the client and here factors associated with low acceptance rates included prior HIV testing, fears about coping with results, and explicit informed consent [44].

A study conducted on VCT seeking among youth in Mozambique in 2003 showed that, among those who sought VCT, the motivation to seek HCT was due to curiosity and perception of personal or one's partner susceptibility to be at risk of HIV/AIDS. In contrary, a descriptive study conducted on refusal of HCT in ANC in South Africa shows often those who perceived less at risk tend to be more interested in knowing their status. In addition, a cross-sectional study conducted on missed opportunities for earlier HIV testing and diagnosis in the health facilities of Dessie town, North East Ethiopia, shows 32.4% (33/102) of clients were not willing to have the HIV test that the major reasons were; 56.2% (18/32) perceived having no risk that they know they would be HIV negative, 31.3% (10/32) were not ready for the test and they wanted more time to discuss with their partners [13,26,45].

Perceived severity of HIV/AIDS, perceived threat from HIV/AIDS and cues to action

A Review of the social and behavioral evidences on the utilization HCT in America 2007 shows clients' attitudes and perceptions ; in particular the discrepancy between real and perceived risks, the emotional connotations of HIV tests, fears related to stigma and negative reactions to disclosure, providers interactions with clients, and the level of trust in the provider–client relationship also appear to influence the utilization of testing and in addition men were more likely to be tested because of symptoms that suggest HIV infection (37% versus 10%), while women were tested when their sexual partner become HIV positive (42% versus 11%) [32].

A systematic review of literatures on HIV testing barriers in Europe by 2008 shows many of the review indicated barriers at clients' level and some on providers and institution level. The barriers described are centralized around low-risk perception; fear and worries; accessibility of health services, reluctance to address HIV and to offer the test; and scarcity of financial and well trained human resources [46].

A retrospective study conducted in 2009 in Kisumu Kenya on the correlates of HIV testing and impacts on sexual behavior among youths aged 18-24 years showed, significant correlates of first HIV test included marital aspirations, unprotected sex in the previous six months among pregnant females, and concurrency in the previous six months among males [38].

Perceived benefit of accepting PIHTC

A cross sectional study on ten southern African countries on equity of HIV testing shows among those who had not gone for testing, none of the HIV risk factors examined (multiple partners, lack of condom use, intimate partner violence) was associated with intention to be tested for HIV, after taking other factors into account. Those who perceived themselves to be at risk of HIV, knew that ART can help a person live longer and talked to others about HIV/AIDS were more likely to intend to be tested [47].

Perceived barrier of accepting PIHTC and Self efficacy

In a comparative review of studies conducted up to 2006 on the utilization of HCT in Asia region; breaches of confidentiality by health care workers were reported by 34% of respondents. The perception of how confidentiality is handled influence clients' willingness to be tested [32].

In a cross sectional study conducted on attitude and perception on HCT in Botswana in 2006 , experience among those who had been previously tested shows; 1% reported that their test had resulted in violence, 2% in discrimination, and 5% a breach of healthcare worker confidentiality. However, 10% of the general respondent stated that their reason for not being tested was fear of partner violence, 11% feared discrimination by healthcare providers, and 18% feared rupture of confidentiality, 14% believed that routine testing would increase violence against women [1].

A study conducted in South Africa in 2006 on uptake of PIHTC among women attending an urban sexually transmitted disease clinic in South Africa after offering education shows uptake rate was 43.5% (2439/5612).Of the 56.5% refusing to test, the reasons for not testing were having already been tested for HIV (61.8%), being afraid to test or felt unready to test (32.5%), the need to consult with partner (0.9%), and refusing with no explanation (4.8%) [26].

A study conducted on factors affecting acceptance of HIV testing among Antenatal Attendees in southern Ethiopia in Wolaita Zone in 2008 shows, ANC attendees shows formal education, residing in urban, having open discussion about HIV/STI with partners were statistically associated with accepting the test while among those who were not willing to be tested stigma and discrimination by the community (81%), perception of husbands' reaction (75%) and fear of positive test result (73%) were reasons for refusal of the testing [36].

Modifying factors [effect modifiers]

1. Past behavior related to HIV/AIDS and experience of testing

A study conducted in America on routine Opt-Out HIV testing in urban community health centers shows; of 300 patients, 35% agreed to HIV testing, with no new HIV infections detected. Common reasons for declining testing were perceived low risk (54.4%) and self-reported HIV testing previously (45.1%) and being younger age, Hispanic ethnicity and having another blood test during the visit were independently associated with accepting HIV testing [48].

A secondary study conducted in the United States on determinants of acceptability of HCT shows acceptance was generally higher among persons at high risk for acquiring or transmitting the infection than among low-risk persons [44].

A study conducted from 2004 to 2006 in two Uganda hospitals shows among 993(2% of all initiated) patients who declined testing; (25%) did not wish to be tested, (21%) would get tested after their current illness improved, (20%) had previously tested HIV-positive, (7%) had tested HIV-negative numerous times, (6%) testing offered no benefits and 30 (5%) wanted to consult their spouses before testing. Other reasons included not being emotionally prepared, fear of an HIV-positive result, being confident in not HIV-infected. There were no significant demographic differences between patients who declined and those who accepted testing [28].

A cross sectional study conducted on behavioral survey for HIV/AIDS infection in Asosa among the general population and commercial sex workers shows participants who never had sexual intercourse, those who didn't have adequate knowledge of HIV/AIDS transmission, considered themselves at low risk. From the FSW, 69.4% (145/209) perceived themselves as being at high-risk of acquiring the virus, those who were illiterate perceived two-times at risk to other category of education. Generally, a total of 47.6% (421) respondents were aware of being engaged in high risk practices which expose them to HIV in which females and individuals who had a positive attitude to take VCT felt themselves more at risk in multi vitiate analysis by controlling possible social demographic confounders [49].

According to HIV/AIDS behavioral surveillance second round survey conducted in 2005 in Ethiopia, about 85% of out of school youth of 15 to 24 years of age perceived the likelihood of them becoming HIV infected to be nil or low. The most common reasons given for this low risk perception was absence of previous sexual exposure (63.6%), no previous exposure to injection with unsafe needles (37.1%), and partner trust (14.5%). The commonest reasons for considering oneself to be at medium or high chance of infection were accidental cuts with sharps (47.2%), sex without a condom (34%) and condom breakage during sex (9.4%) [50].

A study conducted on factors contributing to VCT utilization among youth in Dire Dawa administrative Council Eastern Ethiopia in 2008 shows that 88.6% (273/308) had conducted sex in past one year before the study, of whom 37.7% (103/273) didn't use condom and even among condom users 28.2% (48/170) used condom inconsistently but only 5.1% (32/629) of participants perceived risk of HIV infection. Being in youth older age, male, sexually active, and knowing about transmission and prevention of HIV/AIDS were statistically associated with using VCT than their respective counterparts [51].

2. Socio psychological [Obedience to health provider/perception of impossibility to decline]

In a survey in general population based in Botswana regarding routine opt-out testing while the majority of respondents reported that routine testing was beneficial, 68% felt that they could not refuse a test offered by their provider [1]. Given the high social status of medical professionals, the scarcity of healthcare and the arguably universal psychological tendency to obey authority, patients may be unlikely to oppose the recommendation of physicians and healthcare institutions and in case PIHTC patients are either intentionally or unintentionally coerced at the point of testing and cannot really opt-out of PIHTC [22].

3. Socio demographic characteristics and general of knowledge of HIV/AIDS and PIHTC

A population-based study in 2006 in Botswana on attitudes, practices and human rights concerns of routine HIV testing shows adjusted correlates of testing included female gender, higher education, more frequent healthcare visits, perceived access to HIV testing, inconsistent condom use were positively correlated while holding stigmatizing attitudes toward PLWHA was less likely to have been tested for HIV/AIDS or to have heard of routine testing. Key barriers to testing included fear of learning one's status (49%), lack of perceived HIV risk (43%), and fear of having to change sexual practices with a positive HIV test (33%) [1].

A case control study conducted on predictors of accepting HIV counselling and testing among TB patients in TB clinics in north Ethiopia in 2008 showed that Knowledge on HIV/TB, ever heard of provider initiated HCT, perceived risk of HIV infection, attending formal education, high awareness about the benefits of HCT, low stigmatized attitude were strongly associated with uptake of HIV testing than their respective counterparts [34].

A study conducted on acceptability of HIV counselling and testing among 161 TB patients in south Ethiopia showed the overall acceptability rate was 35%. Fourteen (20.6%) were HIV positive. Unemployment and self-perceived high risk of HIV infection were associated with initial willingness. However, only being unemployed was associated with accepting the test [35].

A cross sectional study conducted in 2008 on uptake of PIHTC among outpatient department (OPD) clients with possible clinical signs of HIV infection in government health setting in Addis Ababa shows the overall acceptability rate of all study participants was 0.67. Compared with age group 15-24, subjects of 25-34 years old have higher rate of willingness and acceptability. On the other hand those who had "less" support for PIHTC were less likely to be willing and accept the test than who supported it "extremely" [52].

The above literatures are all either in TB, ANC, STI clinics or in general population but are lacking in the study area; Jimma town in particular and in OPDs of health facilities in Ethiopia in general. As to the review, literatures touching predictors of testing in outpatient departments or more specifically among all outpatient clients without selective attention to the symptoms that suggest HIV/AIDS were limited; that is needed in case of generalized epidemics. Thus, considering some questions to be answered, this study was conducted on predictors of refusal of PIHTC among outpatient clients in Jimma Town public health institutions using modified health belief model.

2.2 Conceptual frame work for the study

Clients HIV ill health perception Modifying factors Likelihood of accepting PIHTC

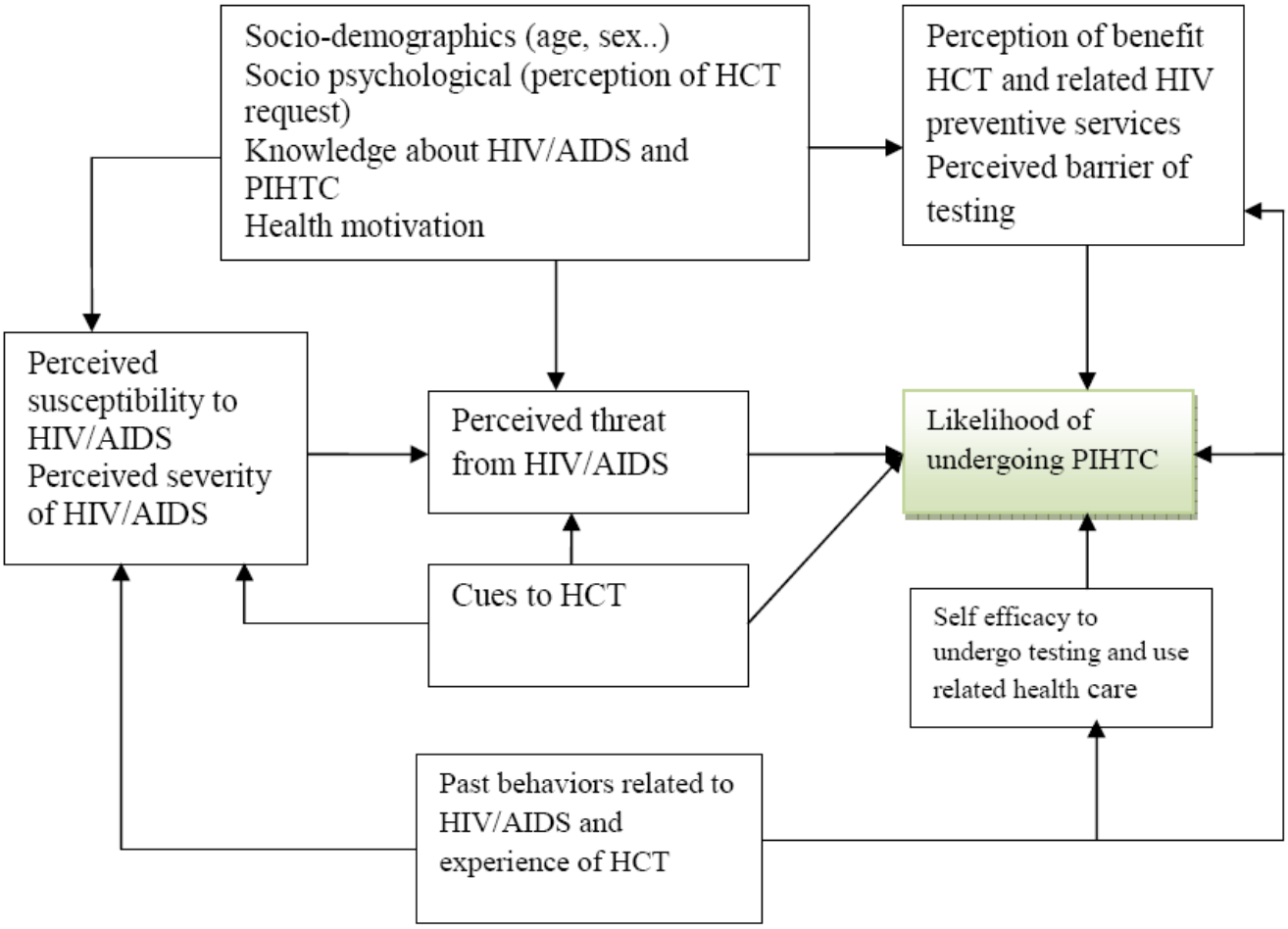


Figure 1: Conceptual frame work of the study adapted from literatures and Glanz, K, et.al (2002): A book of Health Behavior and Health Education; Theory, Research and Practice.

Chapter Three: Significance of the study

Studying the predictors of refusal of PIHTC in OPDs help pinpoint factors which facilitate and inhibit uptake of PIHTC, appraise the differences between those accepting and declining the test and in so doing provide to the health care facilities; the hospital and health facilities especially those working on health education and promotion activities, including to health care providers who initiate HCT, information that allow them target the decliners to become acceptors of the PIHTC, engaged on testing related changes and services that follows, contributing to the achievement of HIV preventive efforts.

In addition, since clients are coming out of the community for health services some of the predictors might have indicated things to be addressed to increase uptake of HTC in the community in case mobile and home to home testing services is ready about to be delivered.

Pinpointing the predictors help identify priority area of target among the constructs of health belief model for intervention and contribute to see the reliability of the model.

Furthermore, the finding might benefit researchers who apt in this area of study in providing baseline information for further investigation.

3.2 Research questions.

The following are research questions to be answered by this study:

1. Do perceived susceptibility to HIV/AIDS leads to testing?
2. Do perceived severity of HIV/AIDS and threat from HIV/AIDS affect testing decision in OPDs?
3. Does clients' perceived benefit from HIV testing facilitate testing?
4. Do perceived barriers to testing: perceptions of stigma, confidentiality of test result, fear of test result, knowing the provider and others affect testing?
5. Do those clients getting tested for HIV tested because they perceive benefit or just because they are obedient to health care provider? Or Do being unexpectedly asked to undergo HIV testing affect acceptance of testing?
6. What do perception of self efficacy to lead healthier life look like among those who get tested and declined?
7. Do cues to testing apart from test initiation in times around the testing facilitate testing?
8. What is the effect of previous HIV testing on the current Testing?
9. Generally, what variables predict HIV testing among OPD clients? Thus, this study expects answers to these questions.

Chapter Four: Objectives of the study

4.1. General Objective:

- To describe refusal of PIHTC and identify its predictors among clients visiting OPDs in public health facilities in Jimma town.

4.2 .Specific objectives:

- To determine clients' perceived susceptibility to HIV/AIDS in OPDs of public health care facilities in Jimma town.
- To elucidate clients' perceived severity of HIV/AIDS in OPDs of public health care facilities in Jimma town.
- To determine clients' perceived benefit of undergoing provider initiated HIV Testing in OPDs of public health care facilities in Jimma town.
- To determine clients' perceived barriers of undergoing provider initiated HIV Testing in OPDs of public health care facilities in Jimma town.
- To describe clients' self efficacy to productively live with HIV in OPDs of public health care facilities in Jimma town.
- To describe past behaviors related to HIV/AIDS and testing among clients attending OPDs of public health care facilities in Jimma town.
- To identify predictors of refusal of provider initiated HIV Testing among clients visiting OPDs of public health care facilities in Jimma town.

Chapter Five: Methods and Materials.

5.1 Study area and period:

The study was conducted in Jimma town. Jimma town is located about 356 Km Southwest of Addis Ababa the capital of Ethiopia, Oromia Region, Jimma Zone. In the town there are about 159,009 residents (CSA, 2005),and 4 public health care facilities providing HCT service; 3 health centers namely Jimma health center (JHC), kefitegnahulet health center (KHC) and Mendera Kochi health center (MKHC) and 1 Specialized teaching hospital found in Jimma University (JUSH). These health centers on average give services to a total of 38,325 per year. JUSH is the only teaching and referral hospital in the southwestern part of Ethiopia. It provides specialized health services through its 9 medical and other clinical and diagnostic departments for approximately 9000 inpatients and 80,000 outpatient clients each year with bed capacity of 450 and a total of more than 550 staffs of various categories of health profession ranging from health assistants, nurses, laboratory technicians, pharmacist, environmental health officer, general practitioner to senior specialist of pediatrics, surgical, gynecology and internal medicine while in health centers senior specialist and general practitioners are lacking.

Major Primary Health care activities that run in both the health centers and the hospitals including diagnosis and treatment of cases both at OPD and inpatients, Maternal and child health services including family planning**,** Immunization**,** Treatment of common chronic diseases and injuries (like DOTS/MDTs) and HIV testing and counselling both in VCT and PIHCT models. JUSH gives different specialized clinical services for about 10, 000, 000 people including referral cases from different regions and zones like Gambela region, Jimma zone, Illu-babor zone, some parts of south western Shoa zone. Top causes of outpatient visits, admissions, and deaths in Jimma town public health facilities were mainly communicable diseases such as; URTI, malaria, all diseases of the eye, all diseases of the skin, helmenthiasis, and others.

The study was conducted over a period of 30 days (March 20 to April 29, 2011) in Jimma town public health facilities providing PIHTC service.

5.2 Study design:

Unmatched case control quantitative study triangulated with qualitative study was conducted to identify predictors of refusal of PIHTC among outpatients visiting public health care facilities providing PIHTC service in Jimma town.

5.3 Population and sample :

For quantitative part of the study:

5.3.1 Source population: included all clients of age ≥ 15 years, visiting OPDs of public health care facilities providing HCT service in Jimma town during the study period.

5.3.2 Study population: were those clients, among attendants of OPDs in Jimma public health care facilities, initiated by health care providers to undergo HCT, who were sampled to be studied.

For qualitative part of the study:

- **Study population:** included focal person of PIHTC program and those health care providers working in OPDs of public health facilities in Jimma town during study period.

Inclusion criteria:

- **Case**: Outpatient clients of age greater than or equal to 15 years [FMOH, 2007][11] who were asked for and refused the test initiated by health care providers.
- **Control**: Outpatient clients of age greater than or equal to 15 years who were asked for and accepted the test initiated by health care providers.
- Staff health care providers; trained on PIHTC and or coordinated HCT, working in OPDs and ever initiated HCT.

Exclusion criteria:

Among those clients who were eligible to be included in sampling the following were excluded;

- Clients who were critically sick and unable to respond.
- Those clients who were included in the same study in one of the health facilities but may potentially be referred to Hospital to avoid double counting.
- Clients who were unable to hear and speak.

5.4 Sample size determination and sampling technique:

5.4.1 Sample size calculation.

Sample size was calculated by using Epi info version 3.03.17 for unmatched case control study. In calculation of sample size the following assumptions have been made. Level of significance (α=5%), power (1-β) of the test or ability detect difference in proportions or means among cases and controls is (80%), case to control ratio of 1:1 and proportion of HIV risk perception among cases/those who decline to accept PIHTC (P_1 =26.81%) and proportion of HIV risk perception among controls/accepted PIHTC (P_2=43.64%). For this study, the prevalence of self risk perception to HIV/AIDS among ANC attendants who accepted and declined PIHTC was taken from a study conducted in health care setting in Arbaminch [40]. Calculations resulted to 276 outpatients sample size but considering 10% non response rate a total of 304 out patients were required for the quantitative part of the study; 152 clients being for each sample of cases and controls.

For qualitative study: 4 health care providers (one from each health facilities) were included in the study.

5.4.2.1 Sampling technique for quantitative

For the study all the four public health care facilities currently functional for undergoing provider initiated HIV testing were considered. The sampling technique of the study considered outpatient flow rates, in December, 2010 month before the study period, of the study public health care facilities as estimate of the study period outpatient flow rate. Accordingly, outpatient clients' one month flow rate in JUSH was 6,700 per month.

In each of the health center the corresponding flow rates of outpatient clients' were 1200, 1050 and 900 per month. Thus, the total outpatient clients flow rate one December, 2010 in Jimma town public health care facilities was 9850 per month. Thus, the total sample size of the study was proportionally allocated to OPDs in the public health care facilities using contribution of each facility for the total flow rate. Accordingly:

Proportion of total outpatient clients in JUSH per month was 6700/9850=68.02%,

Proportion of total outpatient clients in JHC per month was 1200/9850= 12.18%,

Proportion of total outpatient clients in KHC per month was 1050/9850=10.66%,

Proportion of total outpatient clients in MKHC per month was 900/9850= 9.14%

Using each facility percentage contributions, proportional allocation of the total sample size (304) were given to the health facilities. Thus, a total of samples taken from:

JUSH was 304*68.02%=207, JHC was 304*12.18%=38,

KHC was 304*10.66%=32 and MKHC was 304*9.14%=28

Finally, 207 outpatient clients (104 cases and 103 controls), 38 outpatient clients (19 cases and 19 controls), 32 outpatient clients (16 of each cases and controls) and 28 outpatient clients (14 each of cases and controls) were allocated for JUSH, JHC, KHC and MKHC respectively. Among the allocated samples a total of 296 of which 202, 37, 29, and 28 clients were included in the study from JUSH, JHC, KHC and MKHC respectively. (See figure 2).

To select the final study units and get the required sample consecutive sampling was employed that all initiated eligible clients during the study period were included in the study either as case or control until the allocated sample size was filled from the respective health care facilities. Recruitment of cases and controls was made in each study facility till respective allocated sample size was filled including clients withdrawn from the study into consideration of the sample.

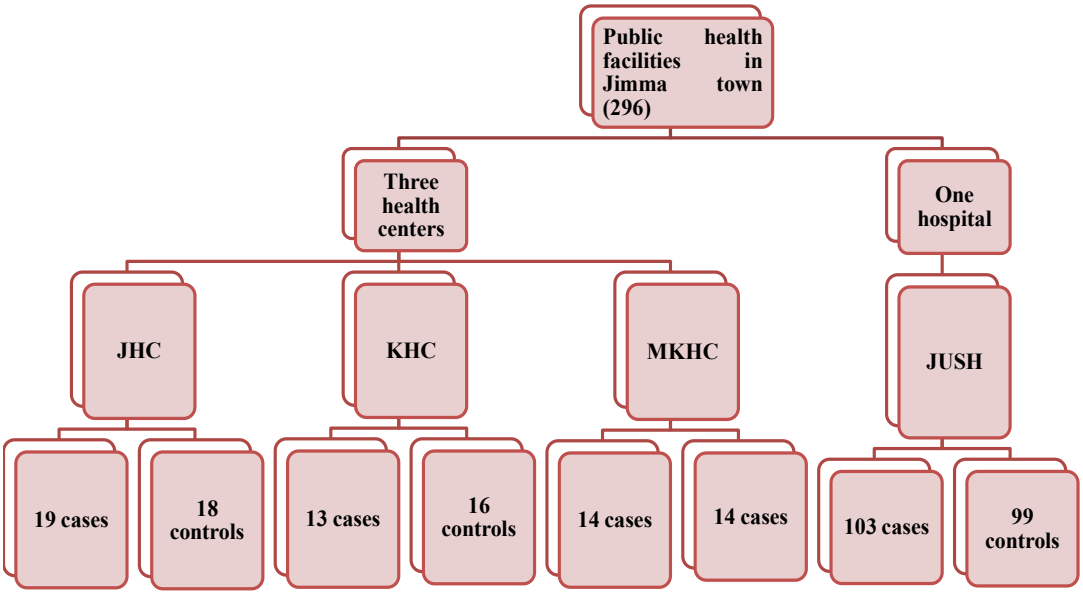


Figure 2: Samples included in the study from each facility

5.4.2.2 Sampling technique for qualitative.

In depth interview was conducted for qualitative study. To recruit health care providers purposive/judgmental sampling was used that one focal person delivering PIHTC was selected from JUSH while health care providers working in OPDs were recruited from the rest health care facilities.

5.5 Measurement and Variables:

5.5.1. Outcome variable (dependent)

- ✓ Accepting/refusing PIHCT

5.5.2. Exposure variables (modifying factors, experience and perceptions)

- **Socio demographic**, socio psychological and structural characteristics(age, gender, marital status, religion etc, perception of providers interaction, general knowledge about HIV/AIDS and PIHTC, health motivation/values)
- **Past behaviors related to HIV/AIDS and experience of testing (**sexual behaviors, unsafe sex, knowing status of partner, multiple partners, testing experience).
- **Perceived susceptibility** to HIV/AIDS(perception of exposure to HIV/AIDS in relation to HIV risky behaviors)
- **Perceived severity** of HIV/AIDS
- **Perceived benefit** of testing in relation to attitude towards ART, the importance of early knowing ones status, belief for b modification.
- **Perceived barrier** of accepting PIHCT (fear of being positive, fear of discrimination and stigma, perception of confidentiality, previously knowing the provider, time to think over for readiness, priority to immediate complain of OPD visit, perception about non acceptance of accompany)
- **Self efficacy** to live with HIV.
- **Cues triggering a client to accept PIHCT** (exposure to discussion with others about testing, media few days before visiting OPDs)

Constructs for qualitative study:

- Nature and reason of client selection for PIHCT in relation to guideline.
- Clients' explicit consent versus nature of request.
- Clients' rational decision in undergoing test.
- Perceived difference of acceptors and decliners of PIHTC.

5.6 . Data collection instrument and procedures.

5.6.1. Data collection instrument:

A pretested, semi-structured and translated questionnaire adapted, from various HIV testing related studies [53-62], based on modified constructs of health belief model was used as instrument for quantitative study. The translation was made from English language into two local languages; Afan Oromo and Amharic and back translated to English version by different individuals who were blind to the original version of the questionnaires (English version) in order to facilitate reliable responses to underlying questions and keep the original meaning of the instrument. The instrument comprised of socio-demographics characteristics (age, sex etc), knowledge about HIV/AIDS and PIHCT constituting 10 items with response format of 'yes', 'no' and 'don't know' assuming score of 'Yes'=1, either of 'don't know' or 'No'=0 for every correct item and was reversed for incorrect items, Cues to HIV testing with 5 dichotomized 'yes', 'no' items and past behavior related with risk of HIV/AIDS and experience of testing with 16 items with a mix of nominal and scale measurements. Clients' health value and perceptions like; Health motivation with 5 items, perception of provider testing request with 5 items, perception of susceptibility with 7 items, perception of severity of HIV/AIDS with 7 items, perceived benefit with 16 items, perceived barrier of testing with 17 items and self efficacy to accept testing and related health care with 6 items all of which eliciting responses on a five-point Likert scale format, ranging from `strongly disagree' to `strongly agree' were incorporated. Each of the responses was scored as: `strongly disagree' = 1, `disagree' = 2, `undecided/not sure' = 3, `agree' = 4 and `strongly agree' = 5. After reversing for negatively worded items, scores were summed for each respective concept.

For validation of the instrument factor analysis was executed that Eigen value of > 1 was considered for construct validity and confirming constructs of the model, of items included in the instrument. Factor loading score of ≥ 40% and rotation with varimax method was considered to identify to which construct each item belongs that items with factor loading score of less than 40% were discarded. After constructs were decided on those constructs previously lacking names were named according to the concept the loaded items inferred of the constructs. To ensure reliability of the scales, internal consistency of items were seen separately for each construct identified using cronbanch's alpha score of ≥ 70% as cut of point.

Items correlation with total correlation of score ≥ 30% was used as acceptable cutoff point while items with score of less than 30% were discarded from the construct because of its least correlation with rest of the items and to increase reliability.

Accordingly, data were reduced and named with the items concept each put as follow. Health motivation was measured by 2 items with reliability of α =0.891 explaining a variance of 90.16%, cues to testing by 2 items with reliability of α=0.76 explaining a variance of 80.9%, clients' perceived compliance/obedience to provider by 3 items with reliability of α=0.729 explaining a variance of 66.1%, perceived susceptibility with 4 items with reliability of α=0.795 explaining a variance of 62.55%, perceived severity with two subscales of clinical severity and social severity each with 2 items and respective reliability of α=0.81 explaining a variance of 83.9% and α=0.72 explaining a variance of 78%, perceived benefit with 3 subscales named as perceived importance of testing for planning future health care by 4 items, perceived early testing as opportunity by 3 items, weighted attitude towards ART by 4 items each with respective reliability of α=0.925 explaining a variance of 82% , α=0.73 explaining a variance of 78% and α=0.83 explaining a variance of 86%, perceived barriers with 5 five subscales named as perceived stigma by 4 items, non-disclosure concern by 2 items, perceived unpreparedness for testing by 2 items, perceived unmet preferred condition for testing by 2 items and perceived level of fear by 2 items each with respective reliability of α=0.87 explaining a variance of 69.5% , α=0.9 explaining a variance of 91%, α=0.81 explaining a variance of 84%, α=0.8 explaining a variance of 83.4% and α=0.68 explaining a variance of 76% and self efficacy to live with HIV by 3 items with reliability of α=0.83 explaining a variance of 75% were used in the study. In addition clients perceived selectiveness of initiation to clinically suspected and perceived explicitness of right to decline testing were measured by one belief item each. The items put on the questionnaire under each construct but were not loaded on constructs were dropped and were not used in analysis. In this study weighted attitude towards ART was a multiplicative output of 2 belief items and 2 evaluations of beliefs items.

For qualitative part of the study, health providers in-depth interview guide comprising: health providers experience regarding PIHCT focusing on areas as: providers' nature of selection and reason for initiation in relation to PIHTC guide, clients' nature of explicit informed consent during request, perceived effect of nature of their request on accepting, perception of clients' rational decision/based on critical thinking/ whenever undergoing test, perceived difference between self and provider initiation on acceptance of testing and perceived difference between acceptors and decliners of PIHTC were used.

5.6.2. Data collection procedures:

Both qualitative and quantitative methods of data collection were considered in this study. For quantitative study face to face questionnaires interview was conducted with clients visiting OPDs. In each of the health centers PIHT is delivered just in OPDs by one assigned provider that data collectors stayed in OPD and conducted the interview in separate room as acceptance status of the clients were notified by the initiator as data collectors and initiators worked together. In JUSH, currently two styles of initiation are working. One is initiation in PIHT room as clients were sent from card room or from OPDs by health providers. The other is clients are initiated in OPDs but sent to PIHT room for testing. But still the testing room was confined only to PIHT room not in OPDs. Thus, data collectors have stayed in PIHT rooms and adult OPDs and identify cases and controls by means of health care providers' reference in the corresponding sites using a secret red and green cards to refer to case and control respectively, and then ask for consent for recruitment. For those who accepted the test the data collection was conducted before the test result was disclosed. Data collection was held in PIHTC room dividend and OPD rooms after the consent was secured. For qualitative study in-depth interviews were conducted with health care providers using voice recorder.

5.6.3 Data collectors.

Trained health professionals were recruited for data collection. Each data collector holds a minimum of diploma in health discipline as qualification. Training was conducted for 2 days covering topics about the purpose of the study, data collection instrument, procedure of recruitment of study subjects, ethical issues to be considered in continuum of data collection to ensure common understanding among data collectors about data collection procedures and instrument that in turn ensures quality of data. To undergo data collection in JUSH five (5) data collectors while in each of the health center one (1) data collector were assigned. To manage any difficulty, incompleteness of data and ensure quality, supervisors were assigned at each study health facility. The data collector for qualitative study was conducted by the principal investigator.

5.7. Operational definitions

Acceptance of HIV test: Clients' reception status of rapid HIV test initiated by health care providers in outpatient departments of the public health facilities in Jimma Town.

Cases: Clients who decline rapid HIV test initiated by health care providers in outpatient departments of the public health facilities in Jimma Town.

Controls: Clients who undergo rapid HIV test initiated by health care providers in outpatient departments of the public health facilities in Jimma Town.

Knowledge about HIV/AIDS and PIHCT: client's awareness of HIV/AIDS transmission, prevention methods, existence of PIHTC strategy and right to make decision in HCT as measured by score of the awareness questions.

Negatively worded item: is an item phrased in way that agreement or positive responses to it is assumed to discourage happening of health behavior and is asked in an opposite way in comparison to other items.

Perception/belief score: score of belief items, used to measure perception constructs, on 5 point Likert scale.

Perceived susceptibility to HIV/AIDS: client's self perception of vulnerability to HIV/AIDS measured by summed score of related belief items on 5-point Likert scale.

Perceived severity of HIV/AIDS: client's perception of severity of HIV/AIDS, in terms of clinical and social consequences, measured by summed score of related belief items on 5-point Likert scale.

Perceived threat from HIV/AIDS: client's perception (current thought) of one's health threat from HIV/AIDS or a product of self perception of susceptibility to HIV/AIDS and perception of severity of HIV/AIDS.

Perceived benefit of HIV testing: client's perception of benefit of undergoing HIV Testing and using ART service related to testing in terms of reduction of HIV risky behaviors and clinical progression of HIV/AIDS infection measured by summed score of related belief items on 5-point Likert scale.

Perceived importance of testing for planning health care: clients' perception of benefit of testing to plan primary risk prevention health care or secondary prevention health care.

Perceived early testing as opportunity: Clients' perception of how much HIV testing should made as early as possible, for sake of one's health.

Perceived barrier of testing: client's perception of personal, health care setting and social environments' barriers to undergoing HIV testing as measured by summed score of related belief items on 5-point Likert scale.

Perceived unmet preferred condition to test: clients' personal preferences of conditions to undergo testing and how much it was met.

Perceived unpreparedness to testing: clients feeling of readiness to undergo testing at the time of initiation for testing.

Self efficacy to live with HIV: client's self confidence to lead productive healthy life with HIV as measured by summed score of related belief items on 5-point Likert scale.

Health motivation: client's motivation to keep and restore one's health in terms of undertaking prevention efforts related ill health condition as measured by summed score of related belief items on 5-point Likert scale.

Perceived compliance/obedience: Clients' perception of how much he/she wants to obey providers request or initiation in general and for HIV testing in particular.

Perceived selectiveness of initiation: clients' perception of nature of selectiveness of provider initiation to clinically suspected clients during actual initiation for testing.

Perceived explicitness of opt-out: Client's perception that how much providers made clear the decision to test or decline belongs to clients during initiation.

Past HIV/AIDS risky behaviors: those clients' who had even a single exposure to unprotected sex, shared sharp material with others, had multiple sexual partner and etc.

Causal partner: kind of sex partner labeled when sex is conducted with someone accidentally faced irrespective one's own marital status.

Sexual partner: Kind of sex partner labeled when sex is conducted with someone with whom sexual contact was previously experienced (but not with married spouse or premarital spouse) or more specifically meeting just for the sake of sex irrespective of one's own marital status.

Concurrent/Multiple partner: labeled when someone engaged on sex with more than one number of sex partner including polygamy, engagement on casual sex but being married or having more than one sexual partner.

Experience of HIV testing: a client ever had HIV testing behavior before the current provider's initiation of HCT.

Recent testing: testing within last 3 months before study.

Modifying factors: factors that modify the predictive effect of HBM, as the situation in which a behavior happens vary; a behavior in this case is refusal of PIHT.

5.8. Data quality management and assurance:

To keep quality of data at first pretested and partly validated questionnaires were used. The Pretest was conducted on 5% of clients visiting OPDs in Dedo Health center; a health center located 20 KMs away to the South of Jimma town. For data collection trained health professionals were recruited. Translation of instrument in to local languages was undertaken to improve uniform understandability of instrument. During data collection supervision were undertaken in order to solve any problem that may rise during data collection, check for incompleteness of data. For quantitative study, after data collection, data were seen for completeness and edited before it is entered into SPSS version 16.0 for further analysis. In qualitative study voice recording was used and the recorded voice was transcribed first by local language and translated to English to keep consistency of the original meaning.

5.9. Data analysis procedure:

Data was analyzed using SPSS version 16.0. Data cleaning and assumption checking were executed before proceeding to analysis of the study findings. For uniform scoring of items on the five point Likert scale response format; negatively worded items were reversed as higher score were given to agreement with positive statements and disagreement with negative statements. After uniform scoring throughout the items was complete, the data was subjected to execution of a principal components factor analysis with a varimax rotation in order to identify underlying principal concepts. The scores of items loaded on each factor identified were summed up and used for further execution of prediction analysis. To see correlation, association and effect between socio demographic, perception of providers request of HCT, health motivation, past behaviors, knowledge about HIV/AIDS and PIHTC, cues to testing and clients' perception of susceptibility to HIV/AIDS, severity of HIV/AIDS, benefit of testing, barrier of testing, self efficacy and refusing PIHTC bivariate and multivariate analysis were executed. To see prediction effect stepwise linear and forward likelihood logistic regression analysis were used during which crude and adjusted effects were considered for each variable and or concept. Parsimonious prediction model was fitted for refusal of testing from the regression analysis in which odd ratio or beta coefficient (β), 95% confidence interval (CI) of OR excluding 1 and P-value of <5% were considered to claim statistically significant effect of the variables/concepts. Chi square (χ^2) for goodness of fit was considered for the prediction modeling. The ratio of χ^2 for goodness of fit to degree of freedom between 0 -3 was considered; the score nearer to zero indicating good fit. For each of modifying factors, past behaviors, HBM constructs and the parsimonious model case sensitivity of the models were seen with 95% CI and PV< 5%. Qualitative data was analyzed into thematic areas of determinants of refusal of testing by undergoing coding and recoding of transcribed ideas of the interview and triangulated with quantitative findings.

5.10. Ethical consideration of the study:

This study, to proceed, was first reviewed and approved by ethical committee of college of public health and medical sciences of Jimma University. For legality of the study to the study setting, official letters clarifying the purpose of the study to the health care facilities' administrators were secured from the research ethical committee. Information sheet and consent form that introduce about the study, respondents' rights, autonomy and willingness to participate in the study were prepared and given or read to participants. Clients' written informed consent was sought before they were recruited to participate in the study. Names and other personal information which can violate the confidentiality of respondents were not taken or recorded as data. Any clients information were kept confidential and only used for research purpose and not exposed to third party for any other reason. During data collection privacy of respondents were kept as separate room were used for interview. For those clients accepting the test data collection was undergone before the test result was disclosed in order to insure the problem of skeptism and may be being upset for positive results.

5.11. Finding dissemination plan:

The finding of the study will be disseminated to Jimma University and health institutions participated in the study. In addition, the finding of the study may also be presented on scientific meetings and conferences related to HIV/AIDS and testing. Publication of the study on journals will also be attempted.

5.12. Limitation of the study:

During the study period how much providers were engaged in initiating clients for PIHCT service will determine the study. If in case providers' initiation is selective based on symptoms that infer HIV/AIDS the selection may affect acceptance of PIHTC. Recall bias on past behaviors may contribute for bias in estimation of effects in the prediction. The content validity of instruments was not ensured even though reliability and construct validity were ensured.

Chapter six: Result

A total of two hundred ninety six (296) clients were participated in this study producing a total response rate of 97.05%. Of which respondents, 149 were cases and 147 were controls with corresponding response rates of 98% and 96.07% respectively. According to the qualitative study the rate of test acceptance PIHT was higher than refusal in OPDs .The main reason of visit of the health care facilities for majority 281(94.5%) of the respondents was to seek first treatment for their illness while the rest 15(5.1%) came for the same reason but referred from other health care centers.

Socio-demographic characteristics of the respondents

Majority, 162 (54.9%) of the respondents were males. The median age of the respondents was 30 years. Regarding place of residence, majority 146 (49.3%) of the respondents resides in Jimma town while the remaining came to OPDs either from rural or other towns. Regarding with whom the respondents currently reside majority, 212(71.6%) live with their own family or parents, while 20(6.8%) live with their friends. Concerning religion 152(51.4%) respondents were Muslim and 39 (13.2%) were protestant. Ethnically, more than half 171(57.8%) of the respondents were Oromo and the least were Tigre accounting for 6(2%). As far as marital status is concerned nearly three fifth 173(58.4%) of the interviewee were married and only 4(1.4%) were widowed. Regarding Educational status, attendants of senior elementary school (5-8 grade) took the larger account; 70 (23.6%) followed by attendants of 9-10th grade accounting for 51(17.2%). Of the total respondents the occupational status of the larger share 72(24.3%) and 62(20.9%) were farmers and government employed respectively while the least 21(7.1%) were housewife. Regarding monthly income secured only 219(74%) responded and the respondents' median income was 500 birr (but the average income of 737.33 ±690.29birr). (See table 1)

As far as the backgrounds of participants of the in depth interview was concerned, four interviewees from each health facility were approached 3 of them were nurses and 1 health officer holding positions of focal persons (PIHT), OPDs coordinator and care providers with service years ranging from 4 to about 25 years and with 3 months to about 6 years of experience in initiating PIHT. Three of them were males and with age ranging from 23 to 55 years.

Table 1: Showing the socio demographic characteristics of clients by PIHT acceptance status, among clients visiting OPDs in Jimma town, April,2011 (N=296).

Socio demographic variable		case control status					
		controls		cases		Total	%
		N	%	N	%		
age group (in years)	15-24	38	47.5	42	52.5	80	27.0
	25-34	48	47.1	54	52.9	102	34.5
	35-44	35	57.4	26	42.6	61	20.6
	45-54	18	51.4	17	48.6	35	11.8
	>=55	8	47.1	9	52.9	17	5.7
sex	male	81	50.0	81	50.0	162	54.9
	female	66	49.6	67	50.4	133	45.1
religion	Muslim	81	53.3	71	46.7	152	51.4
	orthodox	45	45.0	55	55.0	100	33.9
	protestant	18	46.2	21	53.8	39	13.2
	other	3	60.0	2	40.0	5	1.7
place of residence	Jimma urban	96	46.6	110	53.4	206	69.6
	Jimma rural	43	63.2	25	36.8	68	23.0
	out of Jimma zone	8	36.4	14	63.6	22	7.4
marital status	single	52	48.1	56	51.9	108	36.5
	married	92	53.2	81	46.8	173	58.4
	others	3	20.0	12	80.0	15	5.1
Educational level	illiterate	27	60.0	18	40.0	45	15.2
	read and write	11	52.4	10	47.6	21	7.1
	1-4 grade	14	51.9	13	48.1	27	9.1
	5-8 grade	39	55.7	31	44.3	70	23.7
	9-10 grade	21	41.2	30	58.8	51	17.2
	11-12 grade	14	42.4	19	57.6	33	11.1
	>12 grade	21	42.9	28	57.1	49	16.6

Sexual behaviors and past HIV testing experience

1. Reported sexual behaviors:

Regarding the reported sexual behavior of the clients, majority 263 (88.9%) of the respondents had ever engaged on sex; of those respondents 84.8% (224/263) did their last sex with their spouse or premarital couple/ faience while remaining 15.2% (39/263) with causal partner (18/263) or sexual partner (21/263). Out of 263 respondents ever engaged on sex only 24.3% used condom in their last sexual encounter. About 6.53% (13/199) of clients who didn't use condom on last sex accounted for those who conducted with either of causal or sexual partner but which account shared about 33.33% (13/39) of total number of those who conducted last sex either accidentally or with sexual partner.

Regarding knowing the HIV sero status of sex partner of any kind, majority 60.1% (158/263) reported that they didn't know the status of their sex partner. Of those respondents not knowing their sex partner sero status, 19% (30/158) were those conducted their last sex with either of causal or sexual partner and only 24.1% (38/158) of those not knowing partners status had used condom on their last sex.

In relation to HIV test acceptance in OPDs, about 50% of those ever exposed to sex and more than 50% of clients who don't use condom on regularly bases refused testing in OPDs while about 47% of those missing condom in their last sexual encounter missed testing. (See table 2)

Table 2: Showing sexual behaviors by PIHT acceptance status, among clients visiting OPDs in Jimma town, April, 2011.

sexual behaviors		case control status					
		controls		cases		Total	
		N	%	N	%	N	%
Ever exposed to sex	yes	131	49.8	132	50.2	263	88.9
(N=296)	no	16	48.5	17	51.5	33	11.1
kind of current sex	causal	3	37.5	5	62.5	8	3.2
partner (N=248)	steady	27	42.9	36	57.1	63	25.5
	married spouse	90	53.6	78	46.4	168	67.7
	concurrent/multiple	4	44.4	5	55.6	9	3.6
Known HIV status of	yes	48	47.5	53	52.5	101	39
your partner (N=259)*	no	82	51.9	76	48.1	158	61
with whom you	causal partner	8	44.4	10	55.6	18	6.8
conducted last	steady partner/	21	46.7	24	53.3	45	17.1
sex(N=263)	premarital couple						
	married spouse	93	52.0	86	48.0	179	68.1
	sexual partner	9	42.9	12	57.1	21	8
Used condom in your	yes	26	40.6	38	59.4	64	24.3
last sex (N=263)	no	105	52.8	94	47.2	199	75.7
How often condom is	never	99	52.7	89	47.3	188	71.5
used (N=263)	sometimes	17	38.6	27	61.4	44	16.7
	usually	11	45.8	13	54.2	24	9.1
	consistently	4	57.1	3	42.9	7	2.7

*there were missing information

Regarding sharing of sharp material with others as a measure of exposure to risk of HIV, 21.3 % (63/296) of respondents reported having shared sharp material with in this last 6 months.

2. Past reported experience of HIV testing

Majority 231 (78.04%) of clients visiting the public health facilities in Jimma town had previously undergone HIV testing before this study with a median of 2 times ever test among which 88 (40.2 %) tested only once and 17(7.8%) more than three times. In addition to ever testing nearly a quarter (56/231) of respondents had undergone testing recently.

Regarding ever undergoing HIV testing in relation to pattern of condom use about 23.4% (44/188) of those who never used condom during sex and 11.76% (8/68) of those who don't use condom consistently had not undergone testing ever before. Among those who ever have been exposed to sex about 19.77% (52/263) had never undergone HIV testing before among which 88.46% (46/52) were those who reported having only one sex partner.

Regarding whose initiation made the respondents had history of ever undergone HIV testing before this study, about half (117/231) were initiated by health providers and or any HIV test advertisement while self initiation accounted for the next 36.8 % (85/231). While among never had undergone testing 15.4% (10/65) had ever been asked by health provider in any health facility. Of those who ever had undergone HIV testing about 2.6% (6/231) didn't receive their test result. (See table 3)

Table 3: Showing history of testing by PIHT acceptance status, among clients visiting OPDs in Jimma town, April, 2011.

Testing experience		HIV test acceptance status					
		controls		cases		Total	
		N	%	N	%	N	%
Ever been tested	yes	106	45.9	125	54.1	231	78
(N=296)	no	41	63.1	24	36.9	65	22
Tested recently	yes	13	23.2	43	76.8	56	24.3
(N=231)	no	93	53.1	82	46.9	175	75.7
Number of testing	only once	41	46.6	47	53.4	88	40.2
(N=219)*	twice	28	37.8	46	62.2	74	33.8
	3 times	18	45.0	22	55.0	40	18.3
	≥ 4 times	9	52.9	8	47.1	17	7.7
Ever been asked by	yes	84	43.5	109	56.5	193	65.2
health care provider	no	63	61.2	40	38.8	103	34.8
(N=296)							
Tested in health	yes	87	44.2	110	55.8	197	85.3
facility before now	no	19	55.9	15	44.1	34	14.7
(N=231)							
Tested in mobile	yes	26	51.0	25	49.0	51	22.1
centers before now	no	80	44.4	100	55.6	180	77.9
(N=231)							

* there were missing information

Modifying factors in HBM as predictors of refusal of PIHT

Considering socio-demographic variables, clients health motivation, knowledge related HIV/AIDS, clients perceived self obedience to providers, perceived selectiveness of initiation, perceived explicitness of opt-out right as modifying factors of health belief models, adjustment was made to see the effect on test acceptance status of clients in OPDs following the description of each concept taken as modifiers of the health belief model.

Regarding the socio-demographic as covariates (description in table 1), only place of residence had significant effect on current test acceptance status. Being resident in rural and small town in Jimma zone (clients visiting OPDs out of Jimma town) have lowered odd of refusing HIV testing in OPDs in Jimma town as compared to residence in Jimma town with [COR (95% CI) = 0.42 (0.23-0.78) at PV <0.01] and [COR (95% CI) = 0.51 (0.28-0.94) at PV <0.05] respectively though residing in small towns showed no adjusted effect with other modifying factors. Though it had no effect on current testing in OPDs, advancement in education protected clients from ever missing HIV testing before COR (95% CI) = 0.66 (0.56 – 0.77) at PV <0.01]. While being female had protected ever missing testing [COR (95% CI) = 0.48 (0.26 – 0.86), PV <0.05].

Regarding to the health motivation of clients; the value clients give for their health measured an average score of (mean± standard deviation) 9.4 ± 0.973. This mean score showing a statistically significant higher score of health motivation among controls as compared to cases [MD (95% CI)= 0.27 (0.05 – 0.49), PV<0.05]. With regard to effect of health motivation on refusing PIHT in OPDs, it had crude lowering effect on the odd of refusing PIHT [COR (95% CI) = 0.74 (0.58 – 0.95), PV<0.05]. (See table 4). It had also showed statistically significant positive effect on perceived benefit of testing: for planning future health care, undergoing as early as possible as health opportunity and attitude towards ART at [β (95% CI)= 0.99(0.76 – 1.22), PV<0.01], [β (95% CI)= 0.41(0.23 – 1.60), PV<0.01] and [β (95% CI)= 2.07(0.62 –3.52), PV<0.01] respectively.

With regard to clients' knowledge about HIV, among 4 questions measuring knowledge about 69.6% (206/296) of correctly answered all while the rest 19.3% (57/296), 7.1% (21/296), 1%(3/296) answered only 3, 2 and 1 correct answers. It had no relationship with perceiving susceptibility (r=0.07, PV>0.1] and no difference in mean among cases and controls.

Considering the way clients may feel situations during interaction with providers as one of the modifying factors in HBM, clients perceived self obedient to providers, perceived explicitness of opt- out/decision making right and perceived selectiveness of initiation for clinically suspected during actual interaction in OPDs were seen as follow:

Perceived obedience to providers had an average (mean ± standard deviation) score of (10.53 ± 2.43). Between cases and controls it showed statistically significant mean difference: cases had lower mean as compared to controls [MD (95% CI) = -0.72 (-1.27 to -0.17), PV< 0.05]. Concerning predictive effect, perceived self compliance showed negative effect on the odd of refusing the test in adult OPDs [COR (95%CI) = 0.88(0.80 -0.97), PV<0.05] even though when adjusted with other modifying factors it showed no significant effect and removed from the model. As qualitative study showed, there are many clients accepting tests when asked by provider just because they are obedient, for example one informant from MKHC reports "…I can generalize some clients are not rationally undergoing testing…I can say clients undergo testing just to be obedient…majority accept just because they are asked by provider."

Regarding clients' perception related to providers' initiation: there were statistically significant lower means among cases in both of client's perceived explicitness of opt out and perceived selectiveness of initiation of the suspected as compared to controls [MD(95% CI)= -0.37(-0.57 to -0.17), PV<0.01] and MD(95% CI)= -0.30(-0.51 to -0.09), PV<0.01] respectively. Beyond that, perceived explicitness of the opt-out and perceived selectiveness of initiation in OPDs lowered the odd of refusing PIHT [COR (95% CI) =0.61(0.46 – 0.90), PV<0.01)] and [COR (95% CI) = 0.70(0.45– 0.91), PV<0.01] respectively. In addition, perceived explicitness of opt-out and perceived selectiveness of initiation for clinically suspected showed statistically significant increase in perceived obedience to providers in OPDs [β (95% CI) =0.40(0.09 -0.72), PV<0.05] and β (95% CI)=0.87(0.59 -1.15), PV<0.01] respectively.

The qualitative study showed providers selectively initiate testing and there was some sort of ordering clients to test for HIV without clients' right when there they are busy with work load. For example, one informant said, "…we need to initiate all clients because we are getting many positive results without expecting it. But sometimes when we become very busy from work load we stick only to clinically suspicious clients…" Another interviewee said, "PIHT is expected to be 100% and we do initiate all but work load don't allow us to accomplish that way always". In relation to explicit opt –out initiation, one interviewee reported "….most of the time we ask clients to test for HIV if they are not tested recently. We tell to clients PIHT is our routine activity and everybody coming to out center should undergo testing in principle and so you should test…..sometimes when we are busy with work load we just send clients to test provider to bring test result without telling them what it is but still when clients approach the test provider they will be told that it is about testing and thus, it has little option for the client to give consent."

As clients' perceived explicitness of opt-out right and perceived selectivity of initiation in real PIHT were seen with respective awareness of opt-out strategy and non-selective all inclusive initiation in ideal PIHT in OPDs, knowing that PIHT is for all had no link with the way clients perceived the providers' initiation style in relation to selectiveness. While clients with misconception of decision making right doesn't belong to clients had lower mean of perceived explicitness of opt –out right as compared to those clients who were not sure that whose right it is to decide and those who reported knowing opt-out strategy. [MD (95% CI) = -0.37(-0.57 to -0.17), PV<0.01] and [MD (95% CI)= -0.30 (-0.51 to -0.09), PV<0.01] respectively. A qualitative study showed some clients don't know that it is their right to refuse test following providers' orders to test as they accept test with assumption that they may miss getting other health services if they don't do that. For example, one interviewee reported, "….when just ordered to bring HIV test result some clients especially those from rural area accept with suspicion of missing other services for which purpose clients basically visited the health facility".

Adjusted predictive effect of the modifying factors on refusal of PIHT

Regarding the adjusted predictive effect of the modifying factors in HBM, of the variables and concepts used; health motivation, perceived selective initiation to clinically suspected clients, perceived explicitness of opt-out during the actual initiations and rural place of residence had statistically significant adjusted protective effect on refusal of PIHT in OPDs with adjusted odd ratios of [AOR (95%CI)=0.68 (0.52 – 0.89), PV<0.01], [AOR (95% CI)= 0.54 (0.41– 0.73), PV<0.01], [AOR (95% CI)= 0.74(0.56 – 0.98), PV<0.01] and [AOR (95% CI)= 0.41 (0.22 – 0.79), PV<0.01] for health motivation, perceived selectiveness, perceived explicitness of opt-out and rural resident respectively. (See table 4).

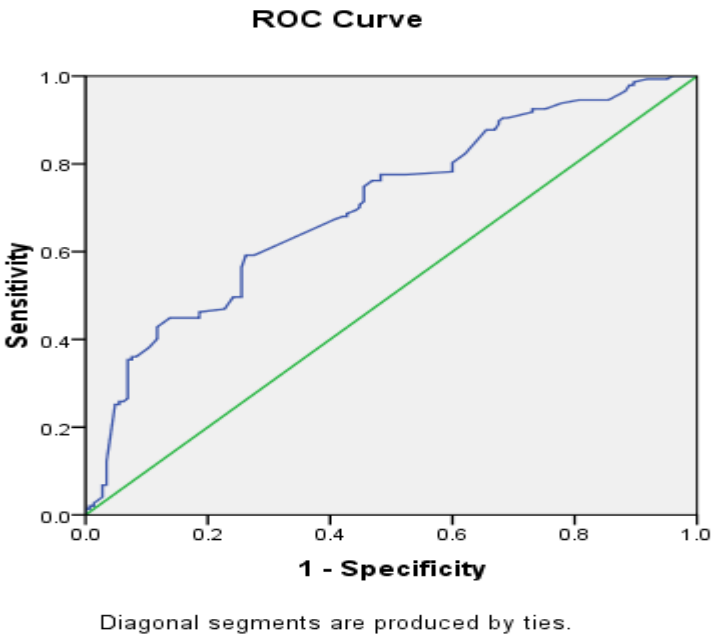
Table 4: Showing adjusted effects of modifying factors in health belief models on refusal of PIHT among clients visiting OPDs in Jimma town, April, 2011 (N=294)

Modifying factors	P.Value	COR (95% CI)	P.Value	AOR(95% CI)
place residence**	0.008		0.017	
Jimma rural	0.004	0.42 (0.23-0.76)	0.007	0.41(0.22-0.79)
Jimma small town	0.032	0.51 (0.28-0.94)	0.124	0.60(0.31-1.15)
out of Jimma zone	0.631	1.26(0.50-3.18)	0.392	1.53 (0.58-4.08)
Health motive	0.017	0.74 (0.58-0.95)	0.005	0.68(0.52-0.89)
Perceived selectiveness initiation	0.007	0.70 (0.55-0.91)	0.000	0.54 (0.41-0.73)
Perceived explicitness of opt-out strategy	0.000	0.61 (0.45-.80)	0.037	0.74 (0.56-0.98)

** Jimma town was reference

These modifying factors have explained a variance of 17.4% (Negelkerke R^2) in the prediction of refusal of PIHT with goodness of fit (x^2/df=2.8].

Regarding the sensitivity of modifying factors in predicting PIHT test acceptance status in OPDs a statistically significant case sensitivity was found [Area (95% CI) = 0.705(0.64-0.76), PV<0.01] (figure 3).



*the positive actual state on this curve is cases.

Figure 3: showing sensitivity of modifying factors to detect cases among clients visiting OPDs in Jimma town, April, 2011.

Past behaviors as predictors of refusal of PIHT:

Past behaviors considered in this study to influence prediction of refusal of PIHT included risky behaviors related to HIV, past experience of testing including ever testing and recent testing. The adjusted effects of these behaviors were seen following description of each behavior as follow.

As clients' potential HIV risk related behaviors (ever had sex, last sex condom use, pattern of condom use, kind of sex partner, knowing sero status of partner) (see table 2 for description) were considered in prediction of refusal of PIHT in OPDs, none of the behaviors showed significant effect on refusing or accepting PIHT in OPDs in spite of the fact that those clients reporting never having sex by more than 2 times ever missed HIV testing as compared to ever had sex [COR (95% CI)= 2.64 (1.23-5.65) at PV <0.05]. A qualitative study showed clients having exposure to risky behaviors report not prepared for testing at the time of visit. One informant said, "…those individuals who are engaged on infidelity, taking alcohols and drivers usually refuse by reporting recent testing and coming for other service not for HIV testing".

Regarding previous testing (see table 3 for description) when the effects of ever testing and recent testing were seen separately on the likelihood of refusing the test, both ever testing and recent testing had statistically significant effect on refusal of testing in OPDs. Never having history of testing had lowered odd of refusing PIHT [COR (95% CI) = 0.50 (0.28-0.86) at PV <0.05] while having recent test had aggravated the odd of refusing PIHT [COR (95% CI) = 3.75(1.89- 7.46) at PV <0.01].In addition, clients reporting ever have been initiated by health providers were nearly 2 times more likely to refuse HIV testing in OPDs as compared to never initiation [COR(95%CI) =2.05(1.26- 3.33), PV<0.01].

The qualitative study showed reporting recent testing as one reason is first line reason of refusal. For instance, one informant says, "…reporting repeated and recent testing is the first reason by which clients refuse testing..."

Predictive effect of adjusted past behaviors on refusal of PIHT

Regarding the adjusted effect of the above past behaviors (history of testing and HIV risk related) on refusal of PIHT in OPDs only recently being tested showed statistically significant more than 3 times facilitating effect the odds of refusal with adjusted odds ratios [AOR(95% CI) =3.82(1.71- 8.55) at PV < 0.01] (See table 5). This adjusted effect of past behaviors explained a variance of 8.5% (Negelkerke R^2) with case sensitivity=31.4% and control specificity=87% in prediction of refusal of PIHT in OPDs.

Table 5: Adjusted for past behaviors effect of recent testing on refusal of PIHT among visitors of OPDs in Jimma town, April, 2011 (Valid N=187).

Past behaviors	P.Value	COR (95% C.I COR)	P.Value	AOR (95% C.I. AOR)
Recent test (yes)	0.000	3.75 (1.89-7.46)	0 .001	3.82 (1.71- 8.55)
Constant			0.803	0.96

Regarding sensitivity in prediction of PIHT refusal, recent testing when adjusted with other past behaviors related to risk of HIV and history of ever testing, had statistically significant sensitivity [Area below the curve (95% CI) = 0.61(0.54-0.68),PV <0.01]. (See figure 4)

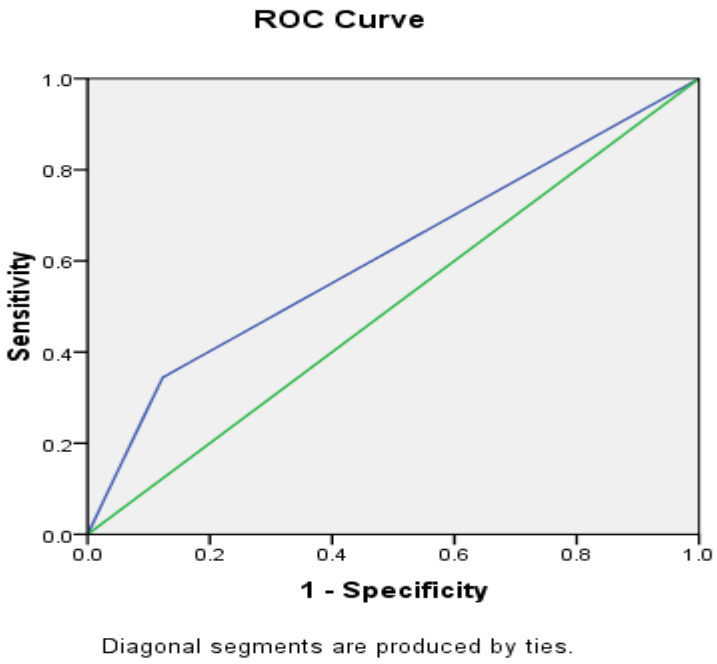


Figure 4: showing sensitivity of recently testing adjusted for past behaviors to detect cases among clients visiting OPDs in Jimma town, April, 2011(Positive actual state is cases) (N=187).

The Health Belief Model constructs as predictors of refusal of PIHT

The predictive effects of constructs of HBM on refusal of PIHT in OPDs were seen together to see the adjusted effect on testing. Before adjustments were made the descriptions and relationship of each of the model constructs were seen with refusal of PIHT. Accordingly, each of the constructs was described below as follows:

Clients' perceived susceptibility to HIV/AIDS had an average score of (mean ± standard deviation) (11.08 ± 2.49). There was also slight mean difference in perceived susceptibility between controls and cases [MD (95% CI) =0.59(0.02-1.15) at PV <0.05]. Beyond that, it had significant weak negative crude effect on the odd of refusing PIHT in OPDs [COR (95% CI)= 0.91(0.83-0.99) at PV <0.05] though it showed no significant effect when adjusted with other constructs. (See table 6).

With regard to clients' perceived severity of HIV/AIDS; perceived severity of HIV/AIDS were measured by two subscales: perceived clinical severity and social severity each with respective average (mean ± standard deviation) scores of [(7.89 ±0.119) and (6.05 ± 2.167)]. There were no statistically significant mean differences between controls and cases in perceived severity subscales (both clinical severity and social severity) and no effect on PIHT refusal [COR (95% CI)= 1.04(0.93-1.17) at PV >.10] and [COR (95% CI)= 1.04 (0.94-1.16) at PV >0.10] respectively though perceived clinical severity showed positive significant effect on odds refusing PIHT when adjusted with other HBM constructs. (See table 6).

The perceived severity subscales showed significant effect on perceived barriers. But when the scales were adjusted the social severity subscale showed significant aggravating effect on all perceived barrier subscales [β (95%CI) = 0.26(0.19-0.34), PV<0.01)], [β(95%CI) = 0.84(0.69-0.99), PV<0.01)], [β(95%CI) = 0.29(0.20-0.36), PV<0.01)], [β(95%CI) = 0.14(0.07-0.22), PV<0.01)] and [β(95%CI) = 0.24(0.15-0.34), PV<0.01)] respectively on fear of test result, stigma, non disclosure concern, feeling unprepared and feeling preferred condition was unmet in

OPDs. On the contrary, social severity had significant negative effect on perceiving ART favorably [β(95%CI) = -1.41(-2.05 to -0.77), PV<0.01)].

When clients' weighted perceived threat was considered, summed weighted perceived threat from HIV/AIDS: a product of perceived susceptibility and severity had an average (mean ± standard deviation) score of (154.19 ± 52.35). This summed weighted threat was measured by sum of weighted perceived clinical threat and weighted perceived social threat each with respective average (mean ± standard deviation) scores of (87.33 ± 30.3) and (66.85 ± 28.68). Regarding the effect of weighted perceived threats from HIV/AIDS there were no statistically significant mean differences between controls and cases and effect on refusal of PIHT. In spite of no effect seen on whole clients visiting OPDs on testing, weighted perceived social threat showed statistically significant negative effect on the odds of refusal of PIHT in OPDs between recently tested cases and controls. [COR (95% CI) = 0.97(0.95-0.99), PV<0.01]. (See table 6).

Regarding clients' perceived benefits of testing which were measured by 3 subscales with the average scores (mean ± standard deviation) of the subscales; attitude towards ART, perceiving early testing as health opportunity, perceived importance of testing for planning health care were [(34.68 ± 12.44), (8.55 ± 1.62) and (18.4 ± 2.162)] respectively. Weighted attitude towards ART was measured by a multiplicative output of belief and evaluation of beliefs items. There were statistically significant higher means of perceived benefits of testing among controls but only by benefit of testing for planning future health care and perceiving early testing as opportunity for health [MD (95% CI) = 0.59(0.10 -1.08) at PV <0.05] and [MD (95% CI) = 0.56(0.19 to 0.92) at PV <0.01]. Beyond that, perceiving early testing as health opportunity and perceived importance for planning future health care had significant crude negative effect on the odds of refusing PIHT [COR(95%CI)=0.80(0.69-0.93) at PV<0.01and [COR(95%CI)=0.88(0.79-0.98) at PV<0.05] respectively but when adjusted with other constructs of HBM using, none of the perceived benefits subscales were having statistically significant effect on refusal.(See table 6).

As interviews revealed, clients' testing is not necessarily with detail understanding and to plan life as; leaving OPDs with no further consultation with provider, unable to decide what to do:

failing to decide between to use ART or to try for other approaches as holy water were some of the signs that follow positive result from testing with no critical thinking for planning life.

In support to this view, one interviewee said, "…but sometimes we see clients leaving away following the positive test result …there are clients who already know they are positive but couldn't decide what to do between to use ART or to use belief approaches like holy water".

With regard to clients' perceived barriers to undergo HIV testing, the average scores (mean ± standard deviation) of subscales of perceived barrier of testing; perceived stigma towards someone living with HIV, perceived inconvenience from unpreparedness, perceived inconvenience from unmet preferred condition to undergo testing, non disclosure concern and fear of test result were [(17.44 ± 4.84),(6.46 ± 2.32), (5.70 ± 1.85), (5.52±1.743) and (4.74 ± 1.85)] respectively. The mean scores of all of the subscales of perceived barriers were slightly lower for controls than cases but only subscales of feeling inconvenience; from unpreparedness and unmet preferred condition for testing were statistically significant.[MD (95% CI) = 2.33(1.87- 2.783), PV < 0.01] and [MD(95% CI)= 0.61(0.20-1.03), PV < 0.01] respectively. Beyond mean difference, both inconveniences from unpreparedness and unmet preferred condition to test showed statistically significant aggravating crude effect on refusal of PIHT [COR (95%CI) = 1.67(1.47 -1.89), PV <0.01] and [COR (95%CI) = 1.20(1.06 -1.37) at PV <0.01] respectively (see table 6) despite unmet preferred condition showed no significant effect when adjusted with other constructs of HBM. Perceived stigma, fear of positive result and non-disclosure concern were having no statistically significant mean difference and effect on PIHT refusal in OPDs though non disclosure concerned showed negative effect on odds of refusing PIHT when adjusted with other constructs of HBM.

Clients' perceived unpreparedness for PIHT as a barrier was statistically significantly aggravated by reported recent testing, higher perceived social threat and lower perceived benefit of early testing and attitude towards ART with [β (95%CI)= 1.25(0.56-1.95), PV<0.01], [β (95%CI)= 0.01(0.002-0.02), PV<0.05], [β(95%CI)= -0.24(-0.41 to-0.08), PV<0.01] and [β (95%CI)= -0.03(0.05 to -0.06), PV<0.01] respectively. While non disclosure concern as a barrier was also reduced by attitude towards ART [β (95%CI) = -0.03(-0.04 to -0.01), PV<0.01].

As health provider interviewees revealed, stigma is not currently hindering testing as attributed to ART existence as reported by one participant, "…clients still may perceive stigma… but rarely are refusal from stigma…but because of presence of ART the weight they give for stigma is lesser as compared to the benefit they get from ART", but reporting recently tested at other places (other than health centers visited), non-readiness for testing rather for other service, feeling inconvenience because of presence of accompany emanating from non-disclosure concerned, and poor privacy were among the reasons attributed to refusal of PIHT.

For instance, one informant reported, "there are clients who post phone PIHT only because of the presence of other accompanies….this especially applies to married women who are engaged on infidelity/adultery or having multiple partner. Such women at that time don't accept test whatever you do though other time they are alone they accept testing. These all happen because of non-disclosure concerned not due they never accept testing". The other interviewee said, "…presence of accompany with clients make clients refuse PIHT but especially affects receiving results…they don't receive they will go away unexpectedly". Supporting problem of privacy, one informant described as, "…there exists when clients feel inconvenience from poor privacy…our room is very narrow …any information/secret is liable to others hearing that some clients feel discomfort to test….. We need wider room".

Regarding clients' self efficacy to lead healthy productive life with HIV, the average (mean ± standard deviation) score was (12.29 ± 2.08). The mean score of self efficacy was statistically significantly higher among controls as compared cases [MD (95%CI)= 0.50(0.02-0.97), PV<0.05]. Regarding predictive effect, self efficacy had also statistically significant effect on client's decision making to testing in OPDs upon initiation by health provider as it reduced the odds of refusing PIHT [COR(95% CI) =0.89 (0.80-0.99) at PV<0.05)]. (See table 6).

Characteristically, self efficacy to live with HIV, have varied in magnitude across testing experience as previous experiences of testing depicted variation in self efficacy. Ever and recently tested had statistically significant higher mean score of self efficacy when compared with their own respective counterparts [MD (95% CI) = 0.74(0.12 – 1.35) at PV<0.05] and [MD (95% CI) = 0.63 (0.03 - 1.22) at PV <0.05] respectively. Clients who were more self efficacious had higher perceived importance of testing for planning life by r2 =10.2% and [β(95% CI)=0.33(0.22-0.45, PV<0.01] and reduced perceived stigma and perceived unmet preferred condition to test by r2 of 5% and 2.2% [β(95% CI)=-0.36(-0.55 to -0.18) ,PV<0.01] and [β(95% CI)= -0.13(-0.23 to -0.03), PV<0.05] respectively.

With regard to presence of cues to testing like HIV and testing related information from others or media few days before visiting OPDs excluding providers' initiation, the average (mean ± standard deviation) number of cues to testing per individual was (1.3 ± 0.84). Controls had statistically significant higher number of cues to testing as compared to cases. Beyond mean difference, higher number of cues to testing had negative effect on the odd of refusing PIHT [COR (95%CI) = 0.67(0.51-0.89), PV <0.01].(See table 6). Characteristically, in addition to the effect on test acceptance status, clients ever undergone testing by initiation of providers reported currently having lower number of cues while ever tested by self initiation reported currently as having higher number of cues to testing. Cues to testing was statistically significantly protective from perceived inconvenience to test without preparation with explanation of r^2=9.8%. [β (95%CI)= -0.86(-1.16 to -0.56), PV <0.01], but protected one to feel self efficacious [β(95%CI)= -0.5(-0.76 to -0.22), PV <0.01] but no effect on perceiving benefit of testing.

Predictive effect of adjusted HBM constructs on refusal of PIHT

When all the constructs of HBM described above where adjusted for effect on refusal of PIHT in OPDs by using enter method regression; non-disclosure concern and self efficacy reduced the odds of refusing PIHT [AOR (95%CI) = 0.74(0.58-0.93), PV <0.01] and [AOR (95%CI) = 0.79(0.66-0.93), PV <0.01] respectively. While perceived unpreparedness, perceived clinical severity and summed perceived severity aggravated the odds of refusing PIHT with odds of [AOR (95%CI) = 1.86 (1.57 - 2.21), PV <0.01], [AOR (95%CI) = 1.67 (1.06-2.66), PV <0.05] and [AOR (95%CI) = 2.27(1.7- 4.81), PV <0.05] respectively. (See table 6)

Table 6: Showing adjusted effects of constructs of health belief model on refusal of PIHT, among clients visiting OPDs in Jimma town, April, 2011. (N=294**)**

HBM constructs		P-Value	COR(95%CI)	PValue	AOR (95%CI)
perceived susceptibility		0.042	0.91 (0.83-0.99)	0.099	1.54 (0.92-2.56)
perceived severity	perceived clinical severity	0.454	1.05 (0.93-1.17)	0.027	1.67 (1.06-2.66)
	perceived social severity	0.422	1.05 (0.94-1.16)	0.056	1.56 (0.99-2.46)
	summed severity	0.35	1.03 (0.17-1.10)	0.032	2.27 (1.78-4.80)
perceived threat	weighted perceived threat	0.352	0.99 (0.99-1.02)	0.054	0.96 (0.93-1.01)
perceived benefits	Importance for planning health care	0.021	0.88 (0.79-0.98)	0.219	0.89 (0.75-1.07)
	perceiving early testing as opportunity	0.004	0.81 (0.69-0.93)	0.188	0.86 (0.69-1.08)
	weighted attitude towards ART	0.062	0.98 (0.96-1.01)	0.554	1.02 (0.97-1.07)
perceived barriers	perceived stigma	0.520	0.97 (0.90-1.05)	0.240	0.93 (0.83-1.05)
	non-disclosure concern	0.790	1.02 (0.89-1.16)	0.009	0.73 (0.58-0.93)
	fear of positive result	0.085	1.17 (0.98-1.41)	0.237	0.86 (0.66-1.11)
	perceived unmet preferred condition	0.005	1.20 (1.06-1.37)	0.192	1.15 (0.93-1.43)
	perceived unpreparedness	0.000	1.67 (1.47-1.89)	0.000	1.86 (1.57-2.21)
self efficacy		0.041	0.89 (0.80-0.99)	0.005	0.78 (0.66-0.93)
cues testing		0.005	0 .67 (0.51-0.89)	0.44	0.85 (0.57-1.27)

The health belief model constructs explained a variance of 43.6% in prediction of refusal of PIHT in OPDs.

The case sensitivity of the Health Belief Model (adjusted constructs) was statistically significant for prediction of refusal of PIHT in OPDs with [Area under the curve (95% CI) = 0.84(0.79-0.88),PV <0.01]. (See figure 5)

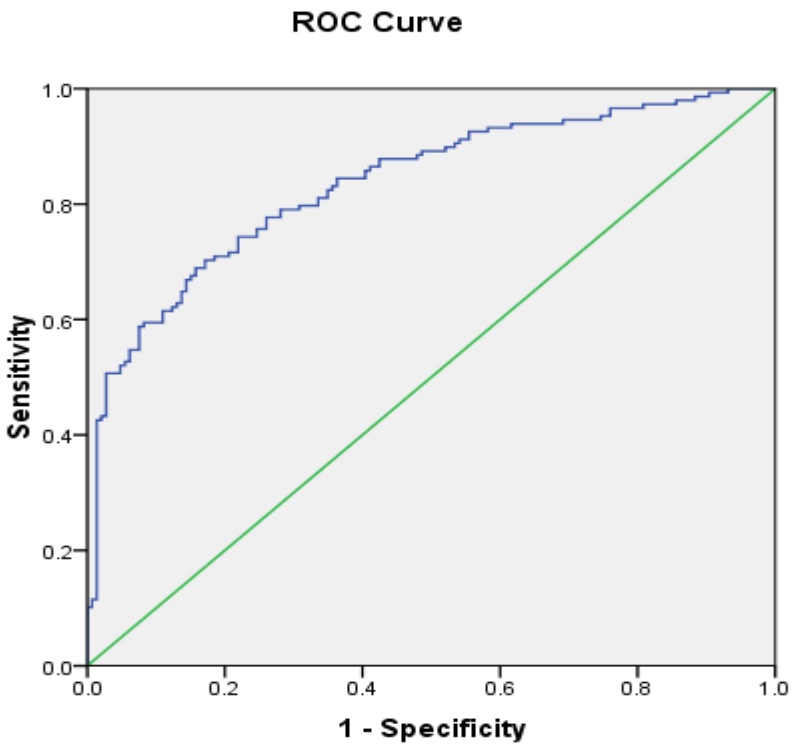


Figure 5: showing case sensitivity of the HBM constructs in prediction of refusal of PIHT among clients visiting OPDs in Jimma town, 2011 (positive state in this curve is cases) [valid N=294]

Final model of prediction of refusal of PIHT

When all the modifying factors, past risky behaviors and testing and the main health belief model constructs were adjusted to predict refusal of PIHT in OPDs: Clients' self efficacy, perceived barrier (unpreparedness), perceived explicitness of opt-out, place of residence remained in the final model.

Log (PIHT acceptance status=refusal) = 2.63 - 0.252 (self efficacy) +0.563 (perceived unpreparedness) - 1.053 (rural residence) -1.579 (small towns in Jimma zone) + 1.267(recently tested) + 0.563 (perceived explicitness of opt-out). The model explained about 62.2% of prediction of test refusal among clients visiting OPDs in Jimma town with statistically significant goodness of fit of the model (X^2/df= 19.58/8 =2.475). (See table 7)

Table 7: Showing the final fitted model of prediction of refusal of PIHT among clients visiting OPDs in Jimma town, April, 2011(valid N=206). (Forward Likelihood regression method)

Variables in the final fitted model	P.Value	COR (95% CI)	P.Value	*AOR (95% CI)
Place of residence	0.008		0.006	
Jimma rural	0.004	0.42 (0.23-0.76)	0.035	0.35 (0.13-0.93)
Jimma small towns	0.032	0.51 (0.28-0.94)	0.003	0.21 (0.07-0.58)
out of Jimma zone	0.631	1.26(0.50-3.18)	0.544	1.53 (0.39-5.96)
Recently tested (Yes)	0.000	3.75(1.89-7.46)	0.014	3.55 (1.27-9.81)
Self efficacy	0.041	0.89 (0.80-0.99)	0.011	0.78 (0.64-0.94)
Perceived explicitness of opt-out	0.000	0.61(0.46-0.80)	0.014	0.57 (0.36-0.89)
Perceived unpreparedness	0.000	1.67 (1.47-1.89)	0.000	1.76 (1.46-2.12)

* coefficients used in the final model were used in exponent form (as AOR) in table 8.

The case sensitivity of all variables and constructs used in this model as a whole was statistically significant [Area below the curve (95%CI) = 0.91 (0.87-0.95),PV<0.01]. The optimum sensitivity and specificity of the fitted final regression model could be obtained at the nearest distance to left top corner (*) of the ROC curve (see figure 6).

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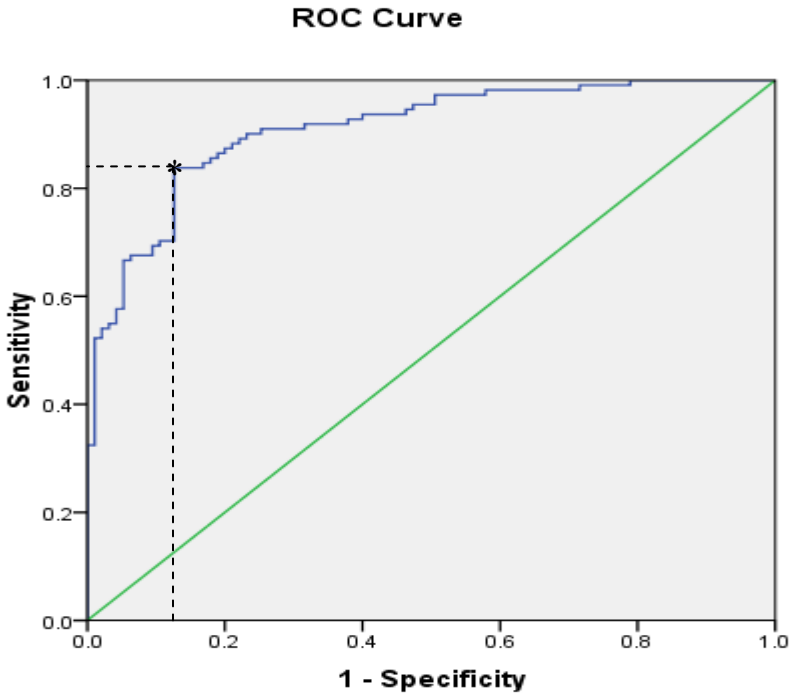

Figure 6: showing case sensitivity of the final model used in prediction of refusal of PIHT among clients visiting OPDs in Jimma town, 2011 (positive state in this curve is cases) [valid N=206]

Chapter Seven: Discussion

According to health belief model, someone perceiving susceptibility to and severity of ill health condition gets the force to engage on healthy behavior but think over the best path to be healthier by choosing best action; that are weight of balance between perceived benefit and perceived barrier under basic assumption that people are motivated for their health [42,63].

This study estimated likelihood of refusal of PIHT in OPDs under the concepts of HBM. Accordingly, this study showed perceived susceptibility to HIV/AIDS reduced client's likelihood of refusing HIV testing following initiation of the providers. In addition to consistency to the HBM, many studies in Ethiopia and other countries showed similar finding that client's perception of personal or partner susceptibility to HIV risk, acknowledging risk behaviors facilitate accepting testing while perceiving low risk, was one of the main reasons to declining testing [13, 34, 44 and 48].

In this study none of potential behaviors that expose to HIV/AIDS predicted HIV testing independently rather some of them like sex with casual partner and multiple partners made difference in perceived susceptibility to HIV/AIDS. Similarity, a cross sectional study in southern African countries on HIV testing showed HIV risk factors like multiple partners and lack of condom use were not associated with intention to be tested for HIV[47]. This is supported by the concept of HBM that perceiving susceptibility is better than real susceptibility to facilitate preventive health behavior.

In this study perceived clinical severity of HIV/AIDS showed positive effect on refusing PIHT. Similarly, a review of evidences on the utilization of HCT in America in 2007 shows clients' perceptions; the emotional connotations of HIV tests, fears related to stigma and negative reactions to disclosure negatively influenced HIV testing use [32]. In support in this study perceived severity of HIV/AIDS was positively associated with perceive stigma and significantly affected clients' to perceive barriers like perceived inconvenience to test without preparation and to prefer more comfortable mechanism to undergo testing than effect to accept or refuse testing.

This study, regarding predictive effect of perceived threat found no significant predictive effect on refusal of PIHT when total clients were considered but among only recently tested clients the perceived social threat from HIV/AIDS had negative effect on refusal of PIHT. This is because of the balance between the protective effect of perceived susceptibility and aggravating predictive effect of perceived severity on refusal of PIHT as explained above separately. But the potential reason of effect only among recently tested clients might be due to exposure to any perceived risk after the recent testing experience (there was statistically significant higher mean of susceptibility among recently tested acceptors in this study) in addition to that any number of times clients previously underwent testing didn't alter their susceptibility to HIV/AIDS as this study indicated.

In this study, in general perceived benefit of testing especially perceiving early testing as opportunity was protective of refusing PIHT in OPDs. Many studies documented similar finding. Studies with different designs and among various subjects on accepting HIV testing showed individuals with a high awareness about the benefits of HIV testing, knew that ART can help a person live longer were more likely to be tested than individuals with low awareness [34,47].

In spite of the fact that perceived benefit was protective predictor of refusal of PIHT in this study, it seemed that there is no remarkable difference in emotion involved benefit of testing among acceptors and refusal beyond mere better perception of benefit among acceptors. This was indicated by no adjusted effect of perceiving importance of testing for planning health care and attitude towards ART. Attitude towards ART was not statistically significantly associated to refusal of testing, though it reduced clients' perceived barriers. Qualitative part of this study accompanied this view as it showed clients usually undergo testing without rational thinking for the next step that follows but rather undergo mere testing even though they perceive ART is beneficial. For example one informant reported, "…I can generalize that some clients are not rationally undergoing testing with detail understanding ''. Another interviewee said, "...Some clients never accept positive result…"

In spite of the fact that clients may perceive benefit of testing, they may perceive barriers to undergo testing when initiated by providers. In this study, perceived inconvenience to undergo testing with out preparedness was the main perceived barrier facilitating refusal of PIHT in OPDs. The qualitative study also showed unpreparedness for HIV testing with related reasons more; not emotionally ready for testing, visiting OPDs for other illness than for HIV testing, priority for management of the current perceived illness, making testing another time were common reports by clients refusing the test. Similarly, various studies documented in Ethiopia and other African countries showed ; getting tested after their current illness is improved, a need to consult with their spouses before testing, not being emotionally prepared and fear of an HIV-positive result were among the commonly reported reasons among clients refusing test [13,26,28,45].

The qualitative part of this study showed, as perceived by health providers, clients' suspicion of exposure to HIV as a result of risky behaviors was linked with reporting unpreparedness for HIV testing. One health provider said,"…those individuals who are engaged on infidelity, taking alcohols and drivers usually refuse …report coming for other service not prepared for HIV test". This seemed opposite to the protective effect of perceived susceptibility on refusal of PIHT. If the providers' perceptions come true, the possible justification may rest on stages of behavior change model in which model preparation is an important step that motivates people to plan specific actions that help them adopt healthy behaviors following appreciation of one's risk [63].

This study, have also found that clients' feeling of unmet preferred condition was a significant perceived barrier exposing to declining PIHT. As the qualitative finding accompanied this, it is common for people to undergo testing usually under conditions they feel more comfortable; comfortable place, time and person in relation to the interest to keep confidentiality of their result. Similarly, a review of studies up to 2006 conducted in Asia region on the utilization of HCT showed clients' perception of how confidentiality is handled influence clients' willingness to be tested [32]. Indicating that people prefer testing under condition they feel comfortable.

In this study, even though non-disclosure concern had no significant association with refusing PIHT in OPDs, when adjusted with other HBM constructs it facilitated acceptance of PIHT especially among not recently tested clients. Despite studies with different designs showed higher concern for non disclosure, interest to keep confidentiality and stigma was associated with refusing testing [1,32] This perhaps because clients with higher concern of non disclosure were having statistically significant higher perceived social threat, showing that they were thinking about what to do from feeling susceptibility and perhaps it was comfortable condition to these clients to undergo testing as non disclosure was main reason to prefer better condition to test as qualitative study showed. For example, one informant said,"…Those who suspect themselves first find someplace where they feel more comfortable to test….they first go alone…after that if they are negative they feel confident to go anywhere."

In this study, perceived stigma and feeling of fear of positive result have no significant association with refusal of PIHT in OPDs even though they were slightly higher among decliners despite numerous studies in Ethiopia and other Africa showed higher stigma was associated with refusing testing [1, 32, and 34]. As qualitative part of this study showed, currently clients are not missing testing because of stigma and fear of result as they have noticed the importance of ART. For example, one informant explicated, "…clients may still perceive stigma and fear results….but because of presence of ART the weight they give for stigma and fear of positive result is lesser as compared to the benefit they get from ART…but it used to be, not currently as of ART existed". In addition in this study, attitude towards ART had statistically significant protective effect on all of perceived barriers including stigma and fear of result.

In this study, clients self efficacy to be able to live with HIV was one of the predictors observed to be protective of refusal of PIHT. According to HBM people will engage on healthy behavior if they are confident to successfully undertake and cope with it [42, 63]. This was supported by the fact that self efficacy in this study significantly reduced perceived barriers from unmet preferred condition to undergoing testing and increased perceived benefit of testing for planning future healthy living.

In this study, existence information related to HIV and testing few days before visiting health facilities (cues to testing) was protective predictor of refusal PIHT excluding the cues nature of providers' initiation to test in OPDs. On top of that, even though cues to testing reduced clients self efficaciousness it increased feeling of preparation for testing. Studies in Ethiopia and South African countries also documented similar effect of cues to testing on likelihood of testing and increased preparation showing those individuals talked to others about HIV/AIDS, open discussion about HIV/STI with partners were more likely to intend to be tested [36,47]. In addition cues to actions according to behavior change theories were put as strategies to increase readiness [42, 63]. But, the fact that it reduced self efficacy may be justified by the pessimistic contents of the discussions or information clients had few days before visiting health facilities.

Apart from different clients' perceptions affecting clients decision making to test for HIV in OPDs, this study have found that self reported ever and or recently undergoing HIV testing as one predictor facilitating refusal of PIHT. As shown in qualitative part of this study client's report of recent testing was front line reason to facilitate refusal. Similarly, many studies of different design on routine testing showed reported prior testing and numerous times negative testing was among very common reasons for declining testing [26, 28, 44, and 48].

In this study (qualitative and quantitative), in addition to perceptions related to HIV testing clients' dynamics during interaction with providers determined testing in OPDs. Feeling obedient to provider was one predictor facilitating acceptance of testing. Clients perceived nature of provider's initiation style: Explicitness of opt-out right, and the real providers ordering than request to undergo test facilitated the compliance and testing for HIV in OPDs. Similarly, a survey in Botswana regarding routine opt-out testing shows even though majority of respondents reported that routine testing was beneficial, about 68% felt that they could not refuse a test offered by their provider [1]. There is also, arguably universal psychological tendency to obey authority (as medical professionals assume high social status) that clients may be unlikely to oppose the says' of physicians that they may either intentionally or unintentionally coerced at the point of testing and cannot really opt-out of PIHTC [22]. As qualitative part of this study showed, some clients perceive that they don't get other services unless they do test for HIV in OPDs.

In relation to clients' characteristics and testing, in this study, being small town and rural resident in Jimma zone were protective predictors of PIHT while none of the other socio demographic variables were associated with refusing PIHT, even though being females and more educated reduced the likelihood of ever missing testing before visiting OPDs. Similarly, a study in Botswana shows female gender and higher educations were among adjusted correlates of testing [1]. A study conducted in Uganda hospitals showed no significant demographic differences between patients who declined and accepted testing [28]. The potential reason of higher significant acceptance among small towns and rural residents compared to Jimma town residents may be related to the reduced barriers of feeling discomfort as rural residents had significantly lower mean of unmet preferred condition of testing in OPDs.

Generally, in this study, perceived inconvenience to undergo testing without unpreparedness as main perceived barrier, perceived severity and past experience of testing had positive effect on the likelihood of declining routine opt-out testing in OPDs while perceived importance of early testing as main perceived benefit, perceived susceptibility, self efficacy, cues to testing had negative effect on likelihood of declining PIHT in OPDs of Jimma town. These predictive effects of the variables were more or less according to the HBM except perceived severity.

Chapter Eight: Conclusions and recommendations

8.1. Conclusions:

The findings of this study comprehensively summed up to the following conclusions and recommendations to encouraging acceptance of testing with better understanding;

Clients' acceptance or refusal of testing in OPDs were determined partly by factors perceived in OPDs/institution and partly by clients psychosocial make up in relation to HIV/AIDS and testing. In spite of the encouraging higher acceptance rate of provider initiated testing than decliners in OPDs as to the purpose of PIHT initiative, commonly there existed accepting the test by just being obedient to health providers than accepting PIHT with critical thinking in relation to linking to required levels of preventive (primary or secondary preventions) health care. In some of the Health facilities ART clinic is lacking.

In health care facilities, commonly attributed to high clients flow to health facilities, conditions under which PIHT services is provided were facilitating selective initiation and non-explicitness of clients' opt-out right indicating missing of potential HIV positive result and violation of clients right which is partly unethical.

The fact that clients' perceiving susceptibility to HIV/AIDS better accepted provider initiated testing was an indicative that many were not self initiated for HIV testing and the commonly existing unscreened health care errors (missed individuals who should have been visited for test). The social consequences related to HIV/AIDS and perception of severity increased barriers to undergo testing even among clients who visit health facilities who can get the chance of being initiated by providers in OPDs. While better attitude towards ART is encouraging to reduction of these perceived barriers to testing and can normalize testing. In addition, self efficacy to productively live with HIV routinely encouraged testing as depicted by observed increased self efficacy from never to recent testing.

Clients' perception of testing without being prepared for HIV testing was the best predictors facilitating refusal of PIHT in OPDs irrespective of clients' perceived susceptibility to HIV/AIDS indicating that clients need time to think and ready for testing. In line with this encouraging is exposure to various cues to testing (including discussions and access to information about HIV and testing) to increase readiness.

8.2. Recommendations:

The following targeted recommendations were forwarded depending on the conclusions:

- Generally, there is a need to strengthen opt-out provider initiated HIV testing for better case detection in particular and to encourage linking to next health care to contribute to HIV prevention following low self initiation of the susceptible.
- Health care providers who are engaged on initiating PIHT should;
    - Stick to keeping clients right while initiating clients for HIV testing so that clients get clear understanding of their right and benefit of testing as they undergo testing and because it is in part universal ethical approach in the model of HIV testing.
    - Initiate all clients to pick positive results and for better link in to next health care steps and in so doing achieve the purpose of PIHT initiative.
    - Give emphasis, during client-provider interaction, the potential to live with HIV and increased attitude for ART following the encouraging effect of self efficacy and attitude towards ART increasing clients' perceived benefit to plan future health care and readiness to test.
- The health care facilities and related administrations in Jimma should;
    - Solve the problems that affect clients privacy related to adequacy of rooms in which clients and providers interact for HIV testing.
    - Work on availing ART services (in health centers it was absent) to link positives than just undergoing mere testing to meet PIHT initiative purposes.
    - Assign adequate number of health providers initiating PIHT to avoid problems of selective initiation, reduced interaction time and violation of rights related to testing as clients flow affected these.
    - Give attention to health education programs targeted on increasing benefits and making clients more self efficacious in relation to HIV/AIDS and testing.

- ❖ HIV prevention and control offices at all levels:
    - Should make intervention that emphasize at making clients in particular or the community from where they come in general to be self efficacious in relation to HIV/AIDS via media and community health workers that will be supportive as it allows clients perceive benefit of testing to plan their future healthcare and can potentially contribute even to self initiation testing in community.
- ❖ Any organizations or offices with related work on HIV/AIDS prevention and control including health facilities should be encouraged to avail HIV testing services in community via outreach or mobile testing in order to avoid the unscreened health care errors due to low self initiation following perceiving susceptibility and meet with clients' preference of comfortable condition of testing.
- ❖ Generally, in relation to health education interventions targeted at encouraging rational HIV testing the core messages required should encompass at increasing ART attitude and self efficacy to be able to live with HIV.
- ❖ Further community based research on nature of preparation for HIV testing need to be conducted.

Annexes:

Annex I: References

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Annex II: Data collection instruments.

Part I: Questionnaires

Questionnaires on predictors of refusal of PIHCT among clients visiting outpatient departments in public health facilities in Jimma Town:

***General direction**: Read the instructions and keep the rights of clients during the interview. Tell to the participants that they can decline to give answers to questions they don't want to answer.*

Basic background information for undergoing the interview:

Date of interview	_____ (dd/mm/yyyy)
Name of the Health care facility	1. JUSH 2. JHC 3.KHC 4. MKHC
OPD room where clients assigned	_____
clients' reason of visit	1. Screening 2. Treatment 3.Referral.
clients' current HIV test acceptance status	1. case/declined 2= control/tested

***Direction 1:** The following questions are the respondents' socio-demographic characteristics.*

	Socio-demographic variables.	*Response formats.*
Q001	Age (in year)	_____.
Q002	Sex	1. Male 2. Female
Q003	current residence	1. Jimma town 2. Out of Jimma. Specify_____
Q004	With whom you currently live?	1. Family 2.Alone 3. Friends 4. Other _____
Q005	Religious view	1. Muslim 2. Orthodox 3. Protestant 4. Catholic 5. Others_____
Q006	Ethnicity	1. Oromo 2. Dawro 3. Yem 4. Tigre 5. Amhara 6. Wolaita 7. Others_____
Q007	Marital status	1. Single 2. Married 3. Separated 4. Divorced 5. widowed
Q008	Educational status	1. Illiterate 2. Read and write 3. Highest grade completed_____.
Q009	occupational status	1. Government employee 2. Student 3. Merchant 4. Farmer 5. Private business employee 6. Day laborer 7. Others_____.
Q010	Monthly income (in birr)	_____.

Direction 2: *The following questions are respondents' past behaviors related to risk of HIV/AIDS and experience of HIV testing. Multiple responses are possible some questions.*

s.no	*Past behaviors and experience of HIV testing.*	*Responses format.*	*skip*
Q101	Have you ever exposed to any kind of sex?	1. Yes 2. No	if no,>> Q 8
Q102	If yes to Q# 1, with whom you conducted your last sexual exposure?	1. Casual partner 2. steady partner (premarital couple) 3. spouse (married partner) 4. Sexual partner 5. other_____	
Q103	If yes to Q≠ 1, did you use condom your last sexual exposure?	1.Yes 2.No	
Q104	If yes to Q# 1, how often did you use condom?	1. Never 2. Sometimes 3. usually 4. Consistently 5. Other_____	
Q105	Do you have sexual partner currently?	1. Yes 2. No	if no, >>Q 8
Q106	If yes to Q# 5 , what is the number of your partner?	_____	
Q107	If yes to Q# 5, what type of partner?	1. Casual 2. Steady 3. Spouse 4. Concurrent 5. Other_____	
Q108	Have you shared sharp material with any others within the last 6 months?	1. Yes 2. No	
Q109	Have you ever been tested for HIV before now?	1. Yes 2. No	ifno,>> Q14
Q110	If yes to Q#9, how many times had you been tested before?	_____	
Q111	If yes to Q#9, did you receive your last test result?	1. Yes 2. No	
Q112	If yes to Q#9, whose initiation facilitated you to get tested ever before?	1. health care providers/HCP/ 2. Self 3. friends 4.others_____	
Q113	If yes to Q#9, where did you get tested?	1. Health facility 2. Mobile testing 3. Home 4. other_____	
Q114	If no to Q#9, have you ever been asked by health care providers to undergo HIV test any where?	1. Yes 2. No	
Q115	If yes to Q#5, have you ever known HIV status of your partner?	1. Yes 2.No	
Q116	If yes to Q#9, did you get test within last 3 months?	1. Yes 2. No	

Direction 3: *The following are questions on awareness about HIV transmission and prevention, treatment service and PIHTC. The responses format will be; "yes", "no" and "don't know".*

s.no	*HIV related awareness questions*	*Responses format*		
		Yes	*No*	*don't know*
Q201	HIV can transmit through sharing sharp materials of different kind like razor blade; needle etc with an infected person.			
Q202	A person can get HIV/AIDS by touching or hugging or shaking hands of someone with infected with HIV/AIDS AIDS.			
Q203	You can get HIV/AIDS from kissing someone infected with HIV/AIDS.			
Q204	HIV can transmit through a single episode of unprotected sex with HIV infected.			
Q205	Apparently healthy looking person can transmit HIV/AIDS.			
Q206	HIV can be prevented by being faithful to one's sexual partner.			
Q207	Condom use reduces the risk of getting the HIV/AIDS.			
Q208	There is ART treatment care service for HIV.			
Q209	Health care providers' initiated HIV testing in health facilities is one of the current strategies to encourage HIV testing for everybody.			
Q210	It is the right of the client to decide for accepting or refusing the HIV testing during initiation in health facilities.			

Direction 4*: The following questions are about clients' Health value as reflected by the respondents' preventive activities when ill health is perceived. Responses are; strongly agree =SA, Agree= A, Not sure= NS, Disagree = DA, Strongly disagree= SDA, Not applicable =NA and declined to answer=D.*

Health motivation/value statements.		*Likert scale responses format.*						
		SA	*A*	*NS*	*DA*	*SDA*	*NA*	*D*
Q301	Nothing is better than my good health.							
Q302	I always try to keep myself healthy from health risk.							
Q303	Whenever I think my health is compromised I try to restore it back quickly in some way.							
Q304	For the best of my health I will pay any cost.							
Q305	I want to check my health status whenever I get opportunity.							

Direction 5: *The following are questions about susceptibility to and severity of HIV/AIDS. The responses are; strongly agree =SA, Agree= A, Not sure= NS, Disagree = DA, Strongly disagree= SDA, Not applicable =NA and declined to answer=D.*

Questions on perception of susceptibility to HIV/AIDS		*Likert scale responses format.*						
		SA	*A*	*NS*	*DA*	*SDA*	*NA*	*D*
Q401	I am not confident that I might have not get HIV/AIDS still.							
Q402	A person may get infected with HIV in one or the other way. I might have been infected with HIV/AIDS in some way.							
Q403	I just know that I am not infected with HIV/AIDS.							
Q404	My sexual behavior is safe and didn't expose me to HIV/AIDS.							
Q405	Lack of faithfulness of one's sexual partner may expose to HIV. I might have been susceptible to HIV due to lack of your partner faithfulness.							
Q406	One may fail to know HIV status ones partner. I may be exposed to HIV because my partner may be at risk of getting HIV/AIDS.							
Q407	I will not be infected with HIV come whatever.							
Questions on perceived severity of HIV/AIDS		*Likert scale responses format.*						
		SA	*A*	*NS*	*DA*	*SDA*	*NA*	*D*
Q501	HIV/AIDS is a disease that has neither cure nor vaccine.							
Q502	One will die of a painful death if infected with HIV/AIDS.							
Q503	HIV/AIDS is probably the worst disease one can get.							
Q504	HIV/AIDS is a life threatening disease.							
Q505	One lives with HIV/AIDS means you will suffer from discrimination.							
Q506	Health wise, there is much one can do for oneself once he/she have the HIV.							
Q507	HIV infection imposes hopelessness on the victims in the rest of life.							

***Direction 6**: The following questions are about benefit of undergoing HIV testing. Some questions may not be applicable to some of the participants. The responses are; strongly agree =SA, Agree= A, Not sure= NS, Disagree = DA, Strongly disagree= SDA, Not applicable =NA, declined to answer=D.*

Question on perception of benefit of HIV testing in leading healthier life		*Likert scale responses format.*						
		SA	*A*	*NS*	*DA*	*SDA*	*NA*	*D*
Q601	HIV testing helps to decide reducing risky behaviors that expose to HIV infection.							
Q602	HIV testing is the first step to confidently start to have safer sex with ones partner.							
Q603	Being tested is helpful to know ones HIV status irrespective of the test result.							
Q604	Knowing ones HIV status is important for ones future sexual and health life plan.							
Q605	Early considering HIV testing helps to early get the next health care benefits that improve health.							
Q606	Getting tested helps to reduce ones tension from suspicion of being infected with HIV/AIDS.							
Q607	Early HIV testing is better than delay in getting tested for one's health							
Q608	Not being tested early affects ones healthy life in case one has HIV infection.							
Q609	Missing early HIV testing means allowing minutes to count against one's health life.							
Q610	If not tested, a person who suspects him/her self may become careless to refrain from any HIV risk behavior.							
Q611	ART is a treatment that reduces ill health effect of HIV/AIDS for those tested HIV positive.							
Q612	ART prevents occurrence of opportunistic infections for those tested HIV positive.							
Q613	Prevention of opportunistic infections means leading healthy longer life for those tested HIV positive.							
Q614	Even though ART doesn't cure HIV infection, it is very important to keep health of the infected.							
Q615	For those tested HIV positive, it is meaningless to use ART if doesn't cure HIV infection.							
Q616	Using ART help undertake routine activities that earn life by reducing illness.							

Direction 7*: The following questions assess barriers of undergoing HIV testing. For those who refused testing, some questions may be asked imagining they will undergo testing some time else. Significant others include others whom a person nearly knows. The responses are; strongly agree =SA, Agree= A, Not sure= NS, Disagree = DA, strongly disagree= SDA, Not applicable =NA, declined to answer=D.*

Questions on barriers of undergoing HIV testing.		*Likert scale responses format.*						
		SA	*A*	*NS*	*DA*	*SDA*	*NA*	*D*
Q701	People say one, who is HIV infected, deserves for the bad behaviors he/she has done.							
Q702	If know I am HIV positive, I will always be in thought that others will also know and gossip against me.							
Q703	Some people are afraid even to shake your hands once they know HIV positive status.							
Q704	Someone who tested HIV positive will be abandoned by any of proximate others including family members, friends, partners etc.							
Q705	Being HIV positive in a test, results in breakage of relationship with proximate others.							
Q706	A person living with HIV will be neglected by the community at large.							
Q707	I don't want anyone to know, even my friends, if I get positive result in HIV test.							
Q708	It seems me that I wouldn't tell my test result to my proximate (friends, family, partner) whenever I get tested.							
Q709	If I undergo testing, the test result will never escape from being known by significant others in some way.							
Q710	Health care providers who offer HIV testing will never keep results really confidential.							
Q711	It would bother me a lot if someone I know is a round me while getting an HIV test and result.							
Q712	I will get HIV testing only when the tester doesn't know me personally.							
Q713	Undergoing HIV testing, when I come for other services, is not convenient to me.							
Q714	Undergoing HIV testing, when I may not ready for it, is not convenient to me.							
Q715	It seems me unnecessary to undergo HIV testing when I have had known my status recently.							
Q716	I don't want to know whether I have HIV/AIDS because what you don't know won't hurt you.							
Q717	Getting HIV positive test result means experiencing emotional threats that last long in a life.							

Direction 8: *The following are questions that assess the presence of facilitating conditions that may be related to HIV testing in the participants' internal or external environment. The responses format will be; "yes "or "no" or NA (non applicable) and declined to answer=D.*

Question on cues to HIV testing		*Responses format.*			
		Yes	*No*	*NA*	*D*
Q801	I have heard from media about HIV testing few days before visiting health institution.				
Q802	My friends/partners/etc were discussing with me to get HIV testing few days before visiting health institution.				
Q803	The health care provider's initiation was the only request to HIV testing that I have ever encountered.				
Q804	I encountered my friends who get HIV in near past.				
Q805	I have seen on myself symptoms that may infer to the HIV/AIDS.				

Direction 9: *The following questions assess clients' self confidence in relation being able to live with HIV, undergoing HIV testing and use related health care. The responses format are; strongly agree =SA, Agree= A, Not sure= NS, Disagree = DA, Strongly disagree= SDA, Not applicable =NA, declined to answer=D.*

Questions on self efficacy related to HIV testing and leading healthier life.		*Likert scale responses format.*						
		SA	*A*	*NS*	*DA*	*SDA*	*NA*	*D*
Q901	If I get HIV positive result in a test, I can achieve my goals in a life.							
Q902	If I get tested to be HIV positive, I am confident to use health service that can make me lead healthier life no matter how lifelong it is.							
Q903	People may experience fear to use ART service in transparent way. If I get tested to be HIV positive, I am confident to transparently use ART service.							
Q904	If I am HIV negative when I get tested, I am confident I will avoid all risks I know it exposes to HIV/AIDS.							
Q905	I can freely continue my daily routine activities as previous in spite of HIV positive test result.							
Q906	I am confident to undergo HIV testing whenever needed.							

Direction 10: *The following questions are about clients' perception of providers HIV testing request and self and others obedience to providers. The responses format are; strongly agree =SA, Agree= A, Not sure= NS, Disagree = DA, Strongly disagree= SDA, Not applicable =NA and declined to answer=D.*

Perception of HCT request and obedience		*Likert scale responses format*						
		SA	*A*	*NS*	*DA*	*SDA*	*NA*	*D*
Q121	Clients always remain acquiescent to any recommendations of health care providers.							
Q122	Most clients keep obedient to health care providers when requested for HIV testing in OPDs.							
Q123	For me, it is difficult to refuse HIV testing when requested by health care providers							
Q124	Health care providers ask for HIV testing only when they suspect clients for HIV infection.							
Q125	During interaction for HIV test request, the possibility to decline testing was very explicit to me							

Part II: Qualitative data collection instrument.

In-depth interview guides with health care providers.

Date of interview: _____ Interviewer: _____.

Background information of the participants		Remark
Age		
Sex		
Work place		
C/profession		
Qualification/educational level/		
Experience year		
Position in h/facility		
How long have you initiated for HCT		

In-depth interview guide questions:

1. What do OPD clients nature of acceptance of PIHTC look like? Is there refusal? Which is greater; refusal or acceptance?
2. What does the providers nature of client selection look like? Probe; a) Reason for initiation in relation to PIHTC guide of opt-out for all?
3. What does the providers HIV testing request look like? Probe; a) do clients' usually get the chance to clearly opt-out /is there explicit informed consent/. (b) Perceived effect of nature of their request on clients' acceptance?
4. What kinds of clients usually accept PIHTC? What kinds refuse the test? Probe: a) in terms of perception of susceptibility and severity and health values. (b) Clients' rational decision/based on critical thinking/ while testing in relation the possible results?
5. What do you think is the difference between acceptors and decliners of PIHTC?
6. How do you rate the clients' perception of benefit of testing? Probe: belief on use of ART service, early knowing ones status, leading healthier life.
7. What do you think are barriers to undergo HIV testing? Probe; perception of stigma and discrimination, knowing health providers, fear of test result?
8. Do you think it is convenient for clients to undergo testing in OPDs? Probe: a) when there are many others around in OPDs? b) Without readiness for testing before? C) Where they come for other purpose/complaint/.
9. What is the perceived difference between self and provider initiation on acceptance of testing?

Annex III: Information Sheet for interview client participants.

Study Title: Predictors of refusal of provider initiated HIV testing among clients visiting outpatient departments of public Health care facilities in Jimma town.

Read for the study participants

Introduction and Purpose of the study

Hello! My name is_____ (give your name) and I am health professional working in_____ (state where you work). I am gathering information on determinants of refusal of health care providers initiated HIV testing among clients visiting health facilities. Now days, HIV/AIDS became a major public health problem globally and nationally as it affected, is infecting and killing millions people especially in Sub-Saharan including Ethiopia. Therefore, HIV testing is one of the current strategies health facilities in Ethiopia and worldwide is currently working with to prevent and control HIV/AIDS, increasing the number of people who know their HIV status, with aim of allowing HIV infected people get support, engage on treatment, lead quality life and uninfected people bring underlying risky behavior change but still some people may fail to accept testing even when requested by health providers. The aim of this study is to learn more about determinants of refusal to undergo HIV testing and be able to prevent further transmission of HIV/AIDS by increasing acceptance of testing and related health care services with better understanding. If you participate in this study, information you give is worthwhile by far, to meet the aim health sector aspires for, in enhancing the way individuals will get access to benefit from existing services provided for HIV/AIDS. Now I need your consent to participate in the study while simultaneously considering your opportunity to get your complaint managed when your turn transpires should be kept as it is.

Procedure

If you agree to participate, I will have an interview with you mainly about HIV/AIDS, its modes of transmissions and preventions, your opinion on self risk perception to HIV/AIDS, benefits of testing, barriers to testing, past experience of testing and behavior related to HIV/AIDS. I will use a sort of questionnaire sheet to facilitate our interview and tick your response on the sheet. The interview may take about 20 to 30 minutes.

Confidentiality

The information you provide me will not be disclosed to anyone. Only the researcher team will have access to the information you provide. Your name will not be written anywhere rather we use a unique code for each participants.

Risks or discomfort

There might be slight discomfort to share some personal information. However, we do not wish this to happen, thus feel free to refuse to answer any of the questions, if you are uncomfortable.

Benefits

Do not expect any direct benefit or payment to you by participating in this study but the information learned from this study may be valuable to develop appropriate strategy to prevent and control HIV/AIDS.

Right to Refuse or Withdraw

I really value your participation by giving me your precious time while that time may only slightly touch some of your other issues in the facility. However, it is up to you to decide whether to participate in this interview or not. I will definitely respect what so ever your decision will be. Even if you start, you can withdraw at any time if you want.

For Further Information: Contact

For general questions about the study:

Principal investigator: Yohannes Kebede: Tel: 0913232040

For questions about one's rights as a research participant:

Secretary of Ethics Review Board of Jimma University; Tsion Aseffa: Tel: 0911551959

Fax: +251471114484; P.O.Box 378, Jimma University.

Annex IV: Consent Form for interview client participants.

I have been fully informed about this research study, and understand that its aim is to learn more about determinants of refusal to undergo HIV testing and be able to prevent further transmission of HIV/AIDS by increasing acceptance of testing and related health care services with better understanding. I have also been told that our interview may take about 20-30 minutes. I have been informed that my participation may only slightly take my time for other issues and the research study does not harm me but may be associated with minimal discomfort.

I am aware that information acquired from the interview will not be shared outside the research team. The data will be stored for a maximum of 10 years.

I consent voluntarily to take part in the study and understand that I have the right to withdraw from the interview at any time without in anyway affecting my right.

Print name of study participant, date and signature or thumb impression of subject

_____, ____/____/____ (dd/mm/yyyy)

_____ Signature/thumb impression

(If illiterate)

Print name of independent literate witness, date and signature of witness

_____, ____/____/____ (dd/mm/yyyy)

_____ Signature

Print name of researcher, date and signature of researcher

_____, ____/____/____ (dd/mm/yyyy)

_____ Signature

Afan Oromo version of questionnaire and information sheet and consent form
Maxxansa II: Meeshalee Odeeffannoon Qorannoo ittiin geggefamu.

Kutaa tokkoffaa: Gaffiilee Qorannoo.
Kan armaan gadii gaffilee sababa mallin akka, mamiltootni gara mana yalaa ummataa magaalaa Jimmaa kessa jiran dhufan qorranoo HIV hoggessa fayyaatiin gafataman, diidan agarsiisa.

Xiyyefannoo waliigala bar-gaaffii: Ajajoota armaan gadiitti barreefaman hundumaa suuta jechuun ilaali. Mirgi hirmaattota qorranoo kana irratti hirmatanii kan eegame ta'a. Hirmaattonni gaafillee deebii itti laachuu hin barbaadne dhiisuu akka danda'an itti himi.

Odeeffannoo hundee bar-gaaffiicha geggesuuf gargaaran:

Guyya gaafii fi deebiin itti geggefame	_____ (gg/jj/bbbb)
Maqaa mana yaalichaa	1. Hospitala 2. BFJ 3.BFK 4. BFS
kutaa OPD mamilichi jiru (OPD'n 1 ol yoo ta'e)	_____lakkofsa
Sababa mamilaan dhufeef	1. Qorrannoo yeroonii 2. Yaalii 3. Geggesaan kan dhufe
Haala simannaa qorrannoo HIV kan ammaa	1. Kan diide (case) 2. Kan qoratame (controls)

<u>Xiyyeefannoo 1</u>: Gaffileen armaan gadii maalumma hirmaattota Qorannoo kanaa agarsiisu.

	Gaaffilee hawaasummaa	Guuca deebii
G001	umurii (waggaan)	_____.
G002	Saala	1. Dhiira 2. Durba
G003	Bakka jireenya	1. Magaala Jimmaa. 2. Jimmaarraa adda; ibsi_____
G004	Yeroo amma eenyu wajjin jiraatta?	2. Maatii 2. Qofaa 3.Hiryoota 4. Kan biraa _____
G005	Amantaa	1. Musliima 2. Ortodosii 3. Protestaantii 4. katolikii 5. Kan biraa_____
G006	Saba	1. Oromoo 2. Dawuroo 3. Yem 4. Tigree 5. Amaara 6. Wolayitaa 7. Kan biraa_____
G007	Halaa fudhaa fi heerumaa	1. Qenxee 2. Kan fudhee 3. Kan bakka adda jiratan 4. kan adda ba'e 5. Kan duraa du'e
G008	Haala barnootaa	1. Kan hin baratne 2. Kan dubbisuu fi bareessu 3. yoo barate, Kutaa barnootaa xumuramee _____.
G009	Haala hojii	1. Hojeetaa motummaa 2. Barataa 3. Daldalaa 4. Qonnaan bulaa 5. Hojjetaa dhabbata dhuunfaa 6. Hojii humnaa 7. Kan biraa_____.
G010	Galii ji'aa (birriin)	_____.

<u>Xiyyeefannoo 2</u>: Gaffileen armaan gadii amaloota darban Kan HIV waliin walitti dhufeenya qabaniif muxxannoo Qorannoo HIV kan ilaalan ta'u. Deebii'n tokkoo ol jiraachuu ni danada'u.

Lakk.	*Amala darbee fi muxxannoo Qorannoo HIV.*	*Guuca deebii*	*utaali*
G101	kanaan dura waliqunnamtii saala gotee beektaa?	1. Eyyee 2. Lakki	yoo,2>> G 8
G102	Yoo G # 1 eyyee ta'e, walqunnamtii saala isa dhumaa eenyu wajiin raawwatte?	1.nama akka tasaa/hin yadamne/ 2.hiriya dhaabbataa (fudha dura) 3. Nama ofii (abba/haadha manaa) 4. hiriyoota koo keessa isa tokko 5. kan biraa_____	
G103	Yoo G # 1 eyyee ta'e, walqunnamtii saala isa dhumaa irratti Koondomii fayyadamtee turtee?	1. Eyyee 2. Lakki	
G104	Yoo G # 1 eyyee ta'e, walqunnamtii saala yeroo geggesitu hammam Koondomii fayyadamta?	1. Hinfayyadamu 2. Darbee darbee 3. Yeroo baayyee 4.yeroo hunda 5. Kan biroo_____	
G105	Yeroo ammaa hiriya walqunnamtii saala qabdaa?	1. Eyyee 2. Lakki	yoo,2>> G 8
G106	Yoo G # 5 eyyee ta'e, hiriya meeqa qabda?	_____	
G107	Yoo G # 5 eyyee ta'e, hiriya gosa akkamii?	1.Kantasaa 2.Dhabbataa 3.Nama ofii 4. Hiriyaa hedduu 5.kan biroo _____	
G108	Ji'a 6 darbe keessatti meeshalee qara qaban kan nama biraa fayyadamtee beektaa?	1. Eyyee 2. Lakki	
G109	Haraan dura Qorannoo HIV geggesitte beektaa?	1. Eyyee 2. Lakki	yoo,2>> G 14
G110	Yoo G # 9 eyyee ta'e, si'a meeqa qoramtee beekta?	_____	
G111	Yoo G # 9 eyyee ta'e, qabxii Qorannoo fudhateetaa?	1. Eyyee 2. Lakki	
G112	Yoo G # 9 eyyee ta'e, eyyuutu Qorannoo sikakaase?	1. Ogeessa fayyaa 2. ofiin 3. hiriyoota 4.kan biroo_____	
G113	Yoo G # 9 eyyee ta'e, eessatti qoramtee?	1. Dh/fayyaa 2. Qorannoo socho'aa 3. manatti 4. Kan biroo_____	
G114	Kanaan dura ogeessi fayyaa Qorannoo HIV'f sikakaase/sigaafatee beeka?	1. Eyyee 2. Lakki	
G115	Yoo G # 5 yookiin 1 eyyee ta'e, haala HIV hiriya walqunnamtii saalakee beekta?	1. Eyyee 2. Lakki	
G116	Yoo G # 9 eyyee ta'e, ji'a 3 kana keessa qoratamtetaa?	1. Eyyee 2. Lakki	

<u>Xiyyeefannoo 3</u>: Gaaffileen armaan gadii hubannoo hirmaattonni wa'ee halaa daddarbaa, ittisa, yaalii HIV fi qoranno HIV ogeessa fayyaan kakafame agarsiisa.

lakk	*Hubannoo HIV irratti jiru*	*Guuca deebii*		
		Eyyee	*lakki*	*hin beeku*
G201	HIV'n Meeshalee qara qaban kan akka lilmoo nama hubamee wajjin waljijjiranii fayyadamuu dhaan nama irraa namatti ni darba			
G202	Namni tokko nama dhibee HIV/AIDS'n hubame yoo tuqe, itti siqee fi harka fudhee HIV'n qabamuu ni danda'a.			
G203	Namni tokko nama HIV'n hubame waliin yoo afaan keessa wal-dhungate HIV'n ni qabama.			
G204	HIV/AIDS'n walqunnamtiin saala yoo of-eeggannoo itti hiratte si'a tokkoon illee darbuu ni danda'a.			
G205	Namni dhibee HIV osoo qabu waan hinqabnee fakkatee 'HIV/AIDS' dabarsuu ni danda'a			
G206	HIV, hiriya walqunnamtii saala ofiif amanamuun ittisuun ni danda'ama			
G207	Koondomii fayyadamuun HIV'tti saaxilamuu ni ittisa.			
G208	HIV'n tajaajila yaalii cimina dhibechaa hirisu (ART) ni qaba.			
G209	Yeroo ammaa namni haala HIV ofiisaa akka baruuf tarsiismoo jiran keessaa qorannoon mamiltoonni dhabbataa fayyaatti ogeessa fayyaan kakafamuun godhan isa tokko dha.			
G210	Yeroo ogeessi fayyaa mamiltoota dh/fayyaa qorannoo HIV'f kakasu qorannoo geggesuus ta'ee diduun murtee fi mirga mamilichaa ti.			

<u>Xiyyeefannoo 4</u>: Gaaffileen armaan gadii gatii fayyaan hirmaatotaaf qabu kan garsiisu yoo ta'uu kunis wantoota hirmaattonni fayyaa jaraa eeguuf jecha godhan ofi keessatti ni qabata. Guuci deebii; Baayyeen waliigala =BW, Waliingala= W, Murteesuu hindanda'u= MH, Waliihingalu = WH, baayyee waliihingalu= BWH, Hin ilaalatu =H and Hindeebsine=HD.

Ilaalcha gatii/bakka fayyaa dhuunfaa ilaalan.		*Guuca deebii qabxii 5-Likert.*						
		BW	*W*	*MH*	*WH*	*BWH*	*H*	*HD*
G301	Anaaf wanti fayyaa koo naaf caalu hin jiru.							
G302	Yeroo hunda wanta fayyaa koo miidhu irraa ofineega.							
G303	Yeroon fayyummaa koo shake hundumatti, fayyaa koo iddootti deebiisuuf ariitiidhaan yaalii nan godha.							
G304	Fayyaa koof jecha wanta danda'amu hunda nan godha.							
G305	Yeroon carraa argadhee hundumatti haala fayyaan koo irra jiruu ofi-ilaalchisuu nan barbaada.							

<u>Xiyyeefannoo 5</u>: Gaaffileen armaan gadii ilaalcha hirmaataan dhunfaasaatti HIV'tti saaxilamuu isaa/ishee fi hammeenya HIV'f qabuu agarsiisa. Guuci deebii; Baayyeen waliigala =BW, Waliingala= W, Murteesuu hindanda'u= MH, Waliihingalu = WH, baayyee waliihingalu= BWH, Hin ilaalatu =H and Hindeebsine=DH.

Ilaalcha HIV'f saaxilamuu dhunfaa		*Guuca deebii qabxii 5-Likert.*						
		BW	*W*	*MH*	*WH*	*BWH*	*H*	*HD*
G401	HIV'tti hin saaxilamne jedhee gutumaa gutuutti dubachuu hin danda'u.							
G402	Kalattii hin beekamneen namni HIV'tti saaxilamuu ni danda'a. Haaluma ta'een ani HIV'tti saaxilameera ta'uu danda'a.							
G403	Akkan HIV'tti hin saaxilamne sirritti nan beeka.							
G404	Amalli saal-qunnamtii koo of-eeggannoon kan guutamee fi amma yoonaatti HIV'tti nan saaxille dha.							
G405	Amanamummaa dhabuun hiriya saal-qunnamtii ofii HIV'tti nama saaxilu danda'a. Ani amanamummaa dhabuu hiriya koo irraa kan ka'e HIV'tti saaxilameera ta'uu danda'a.							
G406	Namni tokko haala HIV hiriya saal-qunnamtii ofii isa/she beekuu dhiisuu danda'a. Hiriyaan koo HIV qabachuu waan danda'uuf anis HIV'tti saaxilameera ta'uu danda'a.							
G407	Ani nama gonkumaa HIV'tti saaxilamu miti.							
Ilaalcha hammeenya HIV irratti qaban		*Guuca deebii qabxii 5-Likert.*						
		BW	*W*	*MH*	*WH*	*BWH*	*H*	*HD*
G501	HIV/AIDS'n dhukkuba gutumaa gutuutti fayyuu hin dandeenyee fi talaalli hin qabne dha.							
G502	Namni HIV/AIDS qabu tokkoon baayyee rakkana argee du'a.							
G503	HIV/AIDS'n dhukkuboota hunda keessaa baayyee hamaa kan ta'e dha.							
G504	HIV/AIDS'n dhukkuba lubbuu heddu dabarsu dha.							
G505	Namni tokko HIV qaba yoo ta'e namaan adda baasamuun heddu rakkata.							
G506	Namni tokko HIV'n yoo qabame, fayyaa ofii isaa eeguuf yaaliin godhamuu danda'an heddu dha.							
G507	HIV'n hubamuun jireenya kee keetti abdii kutataa akka taatu sigodha.							

<u>Xiyyeefannoo 6</u>: Gaaffileen armaan gadii faayidaa Qorannoo HIV geggesuun hirmaatotaaf qabu agarsiisa. Guuci deebii; Baayyee waliigala =BW, Waliingala= W, Murteessu hindanda'u= MH, Waliihingalu = WH, baayyee waliihingalu= BWH, Hin ilaalatu =H and Hindeebsine=DH.

Ilaalcha faayidaa qorrannoo HIV geggesuun		*Guuca deebii qabxii 5-Likert.*						
		BW	*W*	*MH*	*WH*	*BWH*	*H*	*HD*
G601	Qorannoon HIV namni tokko wantoota HIV'f saaxilan irraa of-eeguuf akka murteessu gargaara.							
G602	Qorrannoo HIV geggesuun hiriya kee wajjin walqunnamtii saala of-eeggannoo guutame geggesuu jalqabuuf gocha isa jalqabaati.							
G603	Qabxiin qorrannoo HIV maaliyyuu yoo ta'e, qorrannoo geggesuun of-beekuuf ni fayyada.							
G604	Of-beekuun jireenya saal-qunnamtii fi fayyaa gara fuul-duraa karooruuf gargaara.							
G605	Qorrannoo HIV yeroodhaan geggesuun yeroodhaan faayidaa tajaajila fayyaa itti aanuu argachuuf gargaara.							
G606	Qorannoo HIV geggesuun dhiphina namni tokko HIV'tti saaxilameerra jedhee of-shakkusaa irraa maddu hirisuuf ni gargaara.							
G607	Qorannoo HIV yeroodhaan geggesuun, fayyaa ofiitiif, turanii qoramuu caalaa faayidaa qaba.							
G608	Namni HIV'n hubame yeroodhaan qoramuu dhiisuunsaa jireenya fayyaa ofii isaa miidha.							
G609	Yeroodhaan HIV qoramuu dhiisuun wantoota fayyaa miidhaniitti dabarsanii of-kennuu dha.							
G610	HIV qoramuu dhiisuun, namni osoo HIV hin qabaatin of-shakku tokko wantoota/amaloota HIV'f saaxilan irraa akka of hin qusanne godha.							
G611	Yaaliin HIV'f kennamu (ART) miidhaa fayyaa HIV/AIDS'n nama HIV'n qabame irraan ga'u ni hirisa.							
G612	Yaaliin HIV'f kennamu (ART) nama HIV'n qabame irraa dhukkuboota biroo (OI) ni ittisa.							
G613	Dhukkuboota biroo (OI) nama HIV'n qabame irraa ittisuun jireenya foyya'aa fi dheeraa akka jiraatu godha.							
G614	Yaaliin HIV (ART) guutumma gutuutti HIV faayyisuu baatullee, fayyaa nama hubamee ni eega.							
G615	Yaaliin HIV (ART) guutumma gutuutti waan hinfayyisneef itti fayyadamuun hin barbachisu.							
G616	Yaaliin HIV (ART) nama HIV qabu irraa dhukkuba ittisuun hojii idileesaa halaa gaariin akka rawwatu godha.							

<u>Xiyyeefannoo 7</u>: Gaaffileen armaan gadii wantoota Qorannoo HIV geggesuuf gufuu ta'an ilaala; gaafiin muraasni namoonni qorrannoo didan yeroo biro akka geggesanutti tilmaameeti. Guuci deebii; Baayyee waliigala =BW, Waliingala= W, Murteessu hindanda'u= MH, Waliihingalu = WH, baayyee waliihingalu= BWH, Hin ilaalatu =H and Hindeebsine=DH.

Ilaalcha wantoota gufuu qorrannoo HIV geggesuu ta'an irratti jiru.		*Guuca deebii qabxii 5-Likert.*						
		BW	*W*	*MH*	*WH*	*BWH*	*H*	*HD*
G701	Namoonni namni HIV'n qabame tokko gatii hojiisaa/amala badaa/akka argatetti fudhatu/illalu.							
G702	Yoon HIV'n qabamuu bare, yeroo hunda namoonni biroonis waan beekanii fi wa'ee koo waan hasawan natti fakkata.							
G703	Namoonni tokko tokko HIV'n qabamuu kee yoo beekan, gaafa beekanii jalqabee harka sifuuchuu illee ni sodaatu.							
G704	Namni tokko HIV yoo qabatee namoota itti dhihaatan kan akka Maatii, hiriyootaa fi k.k.f'niin illee ni gatama/bakka hin qabu.							
G705	Namni HIV'n qabame tokkoo walitti dhufeenyi inni namoota itti dhihaatan wajjin qabu sababuma kanaan addaan cita.							
G706	Namoonni HIV qaban uummata keessaa jiraatan keessatti akka maayii hin baasnetti ilaalamu/fudhatama hin qaban.							
G707	Qorrannoo geggesee yoo HIV'n na keessatti argame, hiriyoota koo dabalatee namni tokkollee akka dhaga'u hin fedhu.							
G708	Qorannoo HIV yoon geggessee qabxii qorannoo koo namoota natti dhihaatanitti (hiriya, Maatii) hin himu.							
G709	Qorrannoo HIV yoon geggesse qabxii qorannoo koo karaa ta'een namoonni natti dhihaatan osoo hin dhaga'in hin hafan.							
G710	Oggeessonni fayyaa qorrannoo HIV geggesan qabxii qorannoo icitiidhaan hin qabanu/eeganu.							
G711	Namoonni wal-beeknu osoo naannoo koo jiraanii qorannoo HIV geggesuus ta'e qabxii fudhachuun natti hin tolu.							
G712	Ani qorannoo HIV kanan geggesuun yoon ogeessa qorannoo geggessu wajjin qamaan wal-hinbeekne qofa dha.							
G713	Tajaajila fayyaa adda biroof dhufee qorannoo HIV geggesuun naaf mijaawaa miti/natti hin tolu.							
G714	Osoon dursee hin qophaa'in qorrannoo HIV geggesuun natti hintolu/mijaawu.							
G715	Haala HIV ofiikee erga beektee booda yeroo dhihoo gidduutti dabaltee qorannoo HIV geggesuun hin barbachisu.							
G716	HIV qabachuu fi dhiisuukoo baruu hin barbaadu. Sabaabni isaas wantin hin beekne nan miidhu.							
G717	HIV qabaachuu jechuun jeequmsa yeroo dheeraaf nama keessaa hin baanetti saaxilamuu dha.							

<u>Xiyyeefannoo 8</u>: Gaaffileen armaan gadii wantoota dhunfaa fi naannoo ta'anii mamiltoota qorrannoo HIV'f kakaasuu danda'an agarsiisa. Guuci deebii 'eyyee', 'lakki', 'hin ilaalatu=H' fi hin deebisne=HD dha.

Wantoota qorrannoo HIV'f kakaasan.		*Guuci deebii*			
		eeyyee	*lakki*	*H*	*HD*
G801	Osoo mana yaalaa hin dhufin guyyoota muraasaan dura waa'ee qorrannoo HIV sab-qunnamtii(media) irraa dhaga'een ture.				
G802	Osoo mana yaalaa hin dhufin guyyoota muraasaan dura waa'ee qorrannoo HIV hiriyoota koo wajjin hasawaan ture.				
G803	Hanga hammaatti qorannoo HIV'f gaafii/kakaasuu oggessa fayyaa addatti/alatti qorannoof wanti nakakasu na qunnamee hinbeeku.				
G804	Hiriyoota koo keessaa nama dhiheenya darbe HIV'n qabamuu isaa hubate nan beeka/na qunnameera.				
G805	Ani mallatoolee dhukkuba HIV/AIDS ta'uu jedhee tilmaamu tokko tokko ofiikoo irratti argeera.				

<u>Xiyyeefannoo 9</u>: Gaaffileen armaan gadii ofitti amanamummaa maamiltoonni HIV wajjin jiraachuu, qorannoo HIV geggessuu fi tajaajila fayyaa itti aanuutti fayyadamuuf qaban ilaala. Guuci deebii; Baayyee waliigala =BW, Waliingala= W, Murteessu hindanda'u= MH, Waliihingalu = WH, baayyee waliihingalu= BWH, Hin ilaalatu =H and Hindeebsine=DH.

Ilaalcha ofitti amanamummaa HIV ilaalchisee jireenya fayyaa foyya'aa geggessuu		*Guuca deebii qabxii 5-Likert.*						
		BW	*W*	*MH*	*WH*	*BWH*	*H*	*DH*
G901	HIV'n yoon qabame illee, kaayyoo jireenyaa koo bakkan ga'uu nan danda'a.							
G902	Qoratamee HIV'n qabameera yoo ta'e, ammam umurii guutuu yoo ta'ellee, tajaajila fayyummaa koo eeganu hundaa fayyadamuuf ofitti amanamummaa nan qaba.							
G903	Namoonni yaalii HIV (ART) ifa baasanii fayyadamuu sodaachuu ni danda'u. Ani HIV qaba osoo ta'ee, ifaa ifatti yaalii kanatti akkan fayyadamuu nan amana.							
G904	Qoratamee HIV'n hin qabamne yoo ta'e, wantoota HIV'tti na saaxilu jedhee yaadu hunda irraa akkan of-eegu nan amana.							
G905	HIV'n yoon qabame illee, hojii idilee koo haala kanaan duraan itti fuufuu nan danda'a.							
G906	Yeroo barbachisaa ta'ee hundatti qorannoo HIV geggeessuuf ofitti nan amana.							

<u>Xiyyeefannoo 10</u>: Gaaffileen armaan gadii ilaalcha maamiltoonni gaafii/kakasa ogeessa fayyaa fi ogeessa fayyaaf ajajamuu irratti qabanu ilaala. Guuci deebii; Baayyee waliigala =BW, Waliingala= W, Murteessu hindanda'u= MH, Waliihingalu = WH, baayyee waliihingalu= BWH, Hin ilaalatu =H and Hindeebsine=DH.

Ilaalcha kakasa ogeessa fi ajajamuu irratti jiru.		*Guuca deebii qabxii 5-Likert.*						
		BW	*W*	*MH*	*WH*	*BWH*	*H*	*DH*
G121	Mamiltoonni ajajaa fi wantoota ogeessa fayyaan gaafataman yeroo hundaa ni fudhatu.							
G122	Maamiltoonni hedduun qorannoo HIV ogeessa fayyaan yeroo gaafataman tole ni jedhu.							
G123	Akka dhuunfaatti, qorannoo HIV akkan geggeessuuf ogeessa fayyaan gaafatamee diduun natti ulfaata.							
G124	Ogeessi fayyaa qorannoo HIV'f mamiltoota kan gaafatu nama HIV'tti qabameera jedhee shakku qofa dha.							
G125	Yeroon qorannoo HIV'f ogeessa fayyaan gaafatamee, qorannoo geggesuu dhiisuuf mirgi murteessuu guutummaa gutuutti kan koo ture.							

Maxxansa 3: Waraqaa Odeeffannoo maamiltoota hirmaattota bar-gaaffiitiif (interview) kennamu.

Namoota qorannoo kana keessatti hirmaataniif dubbisi yookiin yoo barbadan kenniif:

Galumsaa fi barbaachisuummaa qorannoo kanaa:

Akka nagaa dhaa! Ani maqaan koo_____ jedhama. Ani ogeessa fayyaa Yeroon ta'uu kanan hojjedhus_____(bakka hojii kee itti himi) dha. Ani namoota gara mana yaalaa dhufan yeroo ogeessi fayyaa akka qorannoo HIV taasisaniif isaan kakasu maaliif akka qoratamuu didan baruuf oddeeffannoo guuraan jira. Yeroo ammaa HIV/AIDS'n akka adduynaattiifi akka guutuu biyyoolessaatti dhukkuba rakkoo hawaasummaa ta'aa jira. Akkasumas Itiyoopiyaa keessatti tamsaa'inaasaa fi namoota kumaatamatti lakkawaman ajjeesuudhaan bakka gudda qabachaa dhufeera. Kanaafuu qorannoo HIV gochuun sagantaa haaraa eegumsi fayyaa Itiyoopiyaa fi dhabbatni fayyaa addunyaa ittiin hojechaa jiran yommuu ta'u; kunis tamsaa'ina dhukkubichaa dhorkuu fi namoonni dhukkubichan qaban akka of beekanii fi yaalii barbachisaa gochuudhaan jireenya fooyya'aa akka geggesan ni fayyada. Namoonni bilisa ta'an immoo amaloota fayyaa eegan akka horataniif gargaara. Haa ta'u malee namootiin tokko tokko ogeessa fayyaatiin akka HIV qorataman yoo gaafataman illee fedha hinqabani.Kaayyoon qo'annoo kanaa irra caalaatti sababbii namaanni qoratamuudhaaf fedha dhaban baruu fi tamsaa'in dhukkuba HIV/AIDS irra caalaatti hirdhisuufi akka namoonni qorannoo manni yaalaa kennu kan fudhachuu danda'aniif fedhii isaani dabaluufi. Yoo qo'annoo kan keessatti hirmaattan Odeeffannoon isin kennitan hedduu faayidaa qabeessa ta'uura darbee kaayyoo dhaabbatni fayyaa qabu bakkan gahuuf gargaara. Kanaaf yeroo ammaa kanaa qo'annoo kana keessatti akka hirmaattan fedhii keessa nan barbaada dabalataanis tajaajila fayyaa argachuuf dhuftan dabaree keessan eggatanii itti fayyadamuu danda'uun keessan akkuma jiruutti kan eegame dha.

Adeemsa bar-gaaffiicha

Qo'annoo kana keessatti hirmaachuun yoo fedhii keessan ta'e bar-gaaffiin keessumaa iyyuu waa'ee HIV/AIDS waliin walqabatu isin waliin taasisa. Bargaaffin kunis karaa dhukubni kun ittiin tamsaa'uufi haala ittisa isaa, ilaalcha saaxilamuu fi balaa HIV/AIDS' tti saaxilamuun fidu ,faayidaa qo'atamu, wanta akka hin qoratamneef sababa ta'an, muuxannoo qorannoo fi amaloota HIV/AIDS walqabatun irratti ta,a. Bargaaffi kan mijeessuudhaaf waraqaa gaaffi muraasa waanan fayyadamuuf iddoo waraqaa irratti kennametti deebii keessan barreessaa. Bargaaffiin kun daqiiqa 20 hanga 30 tti fudhachuu ni danda'a

Iccitii

Odeeffannoon isin laattan kun eeynumattuu dabarsamee hin himamu.Namoota qo'annoo kana gaggeessan qofaatu odeeffannoo kana beekuu danda'a.Maqaan keessan essumattuu hin barreeffamu, mallattoo dhoksaa waliigalaa adda ta'e fayyadamuurraa kan hafe.

Balaa ykn haala hin mijoofne

Odeeffaannoo waa'ee dhuunfaa ofii laachuun xiqqoo ishii namati mijaa'uu dhiisuu ni danda'a ,ha ta'u maale haalli kun akka uumamu waan hin feeneef ,yeroo kamiyyuu odeeffannoo kan laachuun yoo isaa mijachuu baate didun mirga isaati.

Faayidaa

Namni qo'annoo kana keessatti hirmaatu waan hirmaateef faayidaan ykn kanfaltiin isaaf kennamu akka hin jirre beeku qaba ,garuu barumsi isin irraa argamu sagantaa kana guddisuufi dhukuba HIV/AIDS ittisuuf faayidaa guddaa qaba.

Mirga hirmaachuu didu ykn addaan kutuu

Yeroo keessan hedduu mi'aawaa ta'e kana hojii birraa osoo hojjechuu dandeessani naaf laattani bargaaffi kan keessaatti hirmaachuu keessaniifi odeeffannoo isin naaf laattaniif iddoo guddaan kenna.Haata'umalee qo'annoo kana keessatti hirmaachuufi dhiisuun mirga keessani. Ani yoomiyyuu murtii keessan nan kabaja, kanaafuu fedha keessan ta'uu baannan yeroo barbaaddanitti bargaaffii kan addan kutuu ni dandeessu.

Odeeffannoo dabalaataatiif teessoo armaan gadiin quunamtii gochuu ni dandeessu

Gaaffii waliigalaa waa'ee qo'annoo kanaa irratti yoo qabatan;

- Namni qo'annoo kan akka addadureetti gaggeessa jiru :Yohaannis kabadee,Bil: 0913232040

Gaaffii waa'ee mirga hirmaatan qaba baruu yoo barbaaddan;

- Barreesituu boordii Itiiksii yuuniversiity Jimmaa addee Tsion Asseffaa: Bil: 0911551959 argachuu ni dandessu.

Maxxansa 4: Waraqaa fedha maamilaan bar-gaafii irratti (interview) irratti hirmachuu agarsiisu.

Waa'ee qorannoo kanaa haala gahan hubadheera. Barbaachisuummaan isaas sabaaboota mamiltootnni gara mana yaalaa dhufan qoranoo HIV geggessuu didan baruun akkaataa mamiltoonni itti tajaajila fayyaa jiruutti fayyadamuu danda'anu fi tatamsaa'inni dhiibee kana itti hirisamuun danda'amuu irratti fala barbaaduuf ta'a. Itti dabalatees immoo bar-gaaffiin kun daqiiqaa 20-30 akka fudhatu natti himaamera. Qo'annoochi dhibee gudda narran geessiisuu akka hin jiree haa ta'uyyuu malee wanti deebii kennuu irratti namatti hin mijoofne akka jiruu natti himameera. Odeeffannoon kanarra argamuu qorannoon alatti icitumman isaa kan eegame akka ta'e hubadheera.

Ani qorannoo kana irratti fedhiikoo guutuudhaan hirmaachuuf fedhakoo yommuu kennuu yeroon fedheerratti bar-gaafficha addaan kutuuf mirga akkan qabu nan beeka.

Maqaa hirmaataa, guyya fi mallatoo isaa/shee

_____, ____/____/____ (gg/jj/bbbb)

_____ mallatoo.