Factors associated with late presentation to ART Services in St. Luke's Catholic Hospital and College of Nursing and Midwifery, Woliso, Oromia

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Summary

Background – International HIV guidelines for the use of antiretroviral therapy (ART) in adults are shifting towards earlier initiation of ART, even though most patients came with advance stage of the diseases.

The objective of this study was to assess factors associated with late presentation to ART services in the st.luke's catholic hospital and college of nursing and midwifery, Woliso, 2014

Methods – unmatched case control study design with total of 298 samples (149 samples of Cases and 149 samples of controls). A simple random sampling technique was used to select sample of cases and controls from the study population. Structured questionnaires were used. Epidata 3.1 used for data entry and cleaning and SPSS version 16 was used for data processing. Adjusted odds ratio, P-value <0.05 and 95% C.I were considered in significant testing and strength of association.

Result- The study revealed that being male was1.98 times late coming to the ART services when compared to female (AOR 1.98 *C.I 1.28- 3.34*), those who perceived side effects of ART drugs were 1.69 times late coming to ART services than not perceived side effect of ART drugs (AOR- *1.69, 1.01-2.83*), non pregnant female were coming late to the ART services than pregnant females in the study area with AOR 1.81*(1.34- 5.00*), drug users were coming late to the services of ART later than those did not use the drugs specifically shish.(AOR 7.48,C.I1.41-9.62), those perceived stigma were 1.81 times late comer to the ART services than not perceived stigma (AOR- *1.81 C.I 1.06- 3.09*) and those decided to attempt committing suicide after knowing their positive status were 3.75 times late comers than those decided to start the treatment (3.*75(1.24-11.29*).

Conclusion and recommendation – in the study area being male, non pregnancy, perceived side effects of ART drugs, attempt to commit suicide after knowing their HIV positive result, perceived stigma and drug usage were factors those associated with late presentation to ART services. The intervention to promote early initiation or prevent late presentation should focus on male, non pregnant female, advantage of ART drugs, drug users and way of reducing perceived stigma.

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At last data collectors, st.luke's catholic hospital and college of nursing and midwifery administration, all respondents of the study, friends and my wife Elsa Sebsibe

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Abbreviation

AIDS	Acquired Immunity Deficiency Syndrome
AOR	Adjusted Odds Ratio
ART	Antiretroviral Therapy
CI	Confidence Interval
DC	Data Collectors
HAART	Highly Active Antiretroviral Therapy
HAPCO	HIV AIDS Prevention and Control Organization
HIV	Human Immune Virus
JUCPHMS	Jimma University College of public health and medical science
MM^3	Milli Meters Square
PI	Principal Investigator
PMTC	Prevention Mother To Child Transmission
UN-	United nation
VCT	Volunteer Counseling and Testing
WHO	World Health Organization
SPSS	Statistical Package for Social Sciences Software
PLWHIV	People Living With HIV
FMOH	Federal Ministry of Health (Ethiopia)
SD	Standard Deviation
SNNP	South Nation, Nationalities and People

Chapter I

1. Introduction

1.1. Background

AIDS is a dreaded disease, as even with recent advances in the field of medicine and public health, no effective vaccine or drug therapy is available to completely eliminate the infection. During the natural course of HIV infection, there is a progressive loss of CD4 T cells; the rate of this loss being variable in patients, but averaging around 60-100 cells/ µL per year. [1]

Antiretroviral Therapy (ART) is treatment for AIDS that helps the body's immune system recover from the damage caused by infection with HIV. Although ART cannot cure AIDS, persons on ART will begin to feel better, eat more, and put on weight. Their bodies will recover the ability to fight infections. As persons on ART treatment become well, they can care for their children and return to household activities and productive life, which benefits the household and national economies. They recover their sense of hope for the future and can become powerful advocates for prevention and mitigation of HIV in their families and communities. They may remain well for many years, but must continue to take Antiretroviral (ARVs) for the rest of their lives. Thus, ART is an important component of the global response to AIDS.[2]

In Europe most research took CD_4 less than 200cells/ µL as the criteria for late presentation to ART services .[3] In Ethiopia CD_4 count less than 200 cells/µL or WHO stage III or IV considered late presenter [4]

Reduction in CD4 T cells to below 200 cells/ µL makes the host highly susceptible to opportunistic infections and increases overall AIDS related morbidity and mortality. So testing, diagnosis, and medical care soon after HIV infection and before developing opportunistic infections and other AIDS defining illness and clinical AIDS, can prevent illness, improve survival, and reduce transmission. However, patients receiving HIV diagnosis late in the course of infection are usually more severely immunocompromised and are more likely to present with co-morbidities like tuberculosis, and have short-term mortality.[1]

1.2 statements of the problems

Globally about 34 million peoples are living with HIV, among them only 9.7 millions are on ART in the world. And also 1.7 million people died of HIV-related Pathologies in 2011.[5]

In Sub Saharan Africa 23.5 million people are living with HIV and 6.2 million are on ART currently. 40% patients were late presenters that are World Health Organization disease stage 3 or 4. [5]

In Ethiopia about 800,000 people are living with HIV .249, 174 people receiving ART.[6] But the prevalence of late presentation is unknown.

studies were done to identify factors prohibited early coming to ART services: older age, male heterosexual, ethnicity for African , being homeless ,illiteracy ,belonging to a disadvantaged ,female gender, being unemployed, having no children under age 5, not reporting living alone, being unmarried or missing marital status ,non-pregnant women , HIV positive individuals who perceived ART have many side effects ,HIV positive individuals tested with sickness/symptoms , HIV positive individuals who did not disclose their HIV status for their partners , present late to HIV/AIDS care[7,8,11,14]

Tried strategies to reduce late comer to ART services: first ensuring that HIV testing is offered routinely in healthcare settings where high-risk individuals are seen frequently and the presence sexually transmitted diseases, viral hepatitis, those with signs of immune suppression (e.g. tuberculosis), and those seen in places where individuals with a high prevalence of infection are expected to attend (e.g. drug addiction treatment services) and routine HIV testing is also recommended for pregnant women. The second important strategy to encourage earlier diagnosis is to identify high-risk groups who would not normally seek testing. And a third key strategy is to provide testing services that are appropriate to the personal and cultural needs of clients, and to minimize any barriers to the acceptability of testing. [9]

It is clear, however early testing does not necessarily equate to early presentation for care and interventions.

In the scaling up of Antiretroviral Therapy in the developing countries, success or programs that have managed to achieve this goal have done it through: partnerships both internationally and

locally, establishing networks both internationally and locally, involvement of governments (politicians) so as to get political commitment, involvement of the local (country specific) experts and communities who know the dynamics of their geographical areas. [10]
However this scaling up activities has no desire effect if the patients are not coming earlier unless it is wastage of resources.
Access to free antiretroviral therapy (ART) has been steadily increased. The success to therapy program depends on early initiation of art. In Ethiopia the care and services of HIV/AIDS was expanded to the lower level of health institution like health center and private clinics to decentralize the services for the community in their nearby institution i.e. to increase accessibility. The decentralization strategy reduces the different cost of the patients coming to ART center. The capacity of health providers were also built by in service training and providing of standard clinical tools, reference materials and jobs aid. [4]

Despite of this good opportunity, most patients came late to the services/ART/.

Some studies done in Ethiopia on factors related to late presentation to ART were also revealed different factors according to their study area [7, 11, 12]
So indentifying factors which delay coming to ART service is vital activities to improve those related problems. No similar study was done on study area on the issues

Chapter II

2.1. Literature Review

2.1.1. Socio economic and demographic related factors

The study done United kingdom showed that on multivariable analyses, older age, male heterosexual and ethnicity of African significantly independently associated with late presentation.[13] Being homeless (aRR [adjusted risk ratio] 0.71, 95% CI 0.67-0.77), illiteracy (aRR 0.91, 95% CI 0.88-0.94), and belonging to a disadvantaged community (aRR 0.95, 95% CI 0.92-0.98). Later calendar year of HIV diagnosis, being symptomatic at HIV diagnosis, and female gender (aRR 1.08, 95% CI 1.05-1.12[8]

Study findings of sub Saharan Africa indicate , male gender, older age, local tribal identity , having no secondary school education, being unemployed, having no children under age 5, not reporting living alone, and being unmarried or missing marital status were independently associated with presenting late at WHO stage 3 or 4.[14]. Having no form of employment [adjusted OR (aOR): 1.9; 95% confidence interval (CI): 1.2 to 3.3] and being male (aOR: 2.4; 95%CI: 1.3 to 4.2) were strongly associated with late start of ART. Being married/cohabiting (aOR: 0.4; 95% CI: 0.2 to 0.9) and having signs of alcohol dependence (aOR: 0.4;95% CI: 0.2 to 0.8) were associated with a significantly lower likelihood of a late ART start[15].As a result of findings in Yirgalem Hospital, the sociodemographic characteristics of ART patients were, more than half (54.6%) of the participants had attended high school and 12% had a diploma or higher level of education, (92.4%) were gainfully employed, though 54.3%reported earning less than 500 birr per month[16] .HIV positive individuals who live with families were 3.29 times more likely to present late to HIV/AIDS care than HIV positive individuals who live alone [OR = 3.29, 95%CI: 1.28-8.45)]. HIV positive individuals who live with renting house were 2.52 times more likely to present late to HIV/AIDS care than HIV positive individuals who live with owning house [OR =2.52, 95%CI: 1.09-5.79).People living with HIV/AIDS who perceived HIV stigma were 3.1 times more likely to present late to HIV/AIDS care than those who did not perceive HIV stigma [OR = 3.1, 95% CI: 1.09-8.76].[7]

The results of study conducted in Harari region shows male respondents were 7.19 times more likely to present late for HIV care than female respondents, [*OR= 7.19; 95% CI: 1.279-8.447*]. People who were living in rural areas were 1.99 times more likely to present

late for HIV care than those who were living in urban areas [*OR= 1.99; 95% CI: 1.01-3.92*]. People who did not know where to get ART were 2.45 times more likely to present late for HIV care than who knew [*OR= 2.45; 95% CI: 1.03-5.82*].[12]

2.1.2. Individual related factors

The research done U.S.A show that the criminal justice system is burdened with a significant population of HIV-infected individuals that can be 2 to 5 times larger than that in the surrounding community and moreover, treatment of drug addiction may actually improve early coming to HIV treatment [17].In South Africa one study shows HIV-infection as a primary reason for their suicide attempts i.e. Suicide risk of 67.2 per 100 000 as the progression of HIV/AIDS than seeking for the ARV treatments. The manner in which testing for HIV is done and inadequate psychosocial support at the time; anxiety before the results are known; the development of full-blown AIDS with were the cause of this problems[18].Functional status at start of ART initiation was 562 (10.4%), ambulatory 2,105 (39.0%) and working 2,725 (50.5%) as stated in Study done in Yirgalem Hospital shows, [16].Study done in SNNP, 22% knew the benefits of the regimen before starting ART and 94.1% thought that ART had benefited them by improving their quality of life or improving their symptoms. The commonest fear before starting ART were lethargy, numbness, headache, abdominal pain, and fever or chills. However, only 73.2% of the respondents experienced at least one symptom in the past month. Thirteen percent had an adverse reaction to ART like skin rash, itching, nausea or vomiting, since starting ART. The proportion of participants with good knowledge about adherence, ART benefits and ART eligibility was 68%, 28.2% and 57.7% respectively. More than half (52.2%) had no discomfort when taking their drugs in front of others. For 96.9% of the patients, the regimen was fitted to their daily routine. Almost all (98.6%) had a good relationship with providers.[19]

The result of study conducted in South Wollo, non-pregnant women were 9.3 times more likely to present late to HIV/AIDS care than pregnant women [OR = 9.3, 95% CI: 1.93-44.82]. HIV positive individuals who perceived ART have many side effects were 6.23 time more likely to present late to HIV/ AIDS care than HIV positive individuals who did not know about side effects of ART drugs [OR = 6.23, 95% CI HIV positive individuals tested with sickness/symptoms were 2.62 times more likely to present late to HIV/AIDS care than those tested without HIV related symptoms at first HIV diagnosis [OR = 2.62, 95% CI: 1.26-5.44)].

HIV positive individuals who did not disclose their HIV status for their partners were 2.78 times more likely to present late to HIV/AIDS care than those disclosed their HIV status for their partners [OR = 2.78, 95% CI: 1.02, 7.56]. HIV positive individuals who spent more than 120 months with partners at HIV diagnosis [OR = 5.86, 95% CI: 1.35- 25.41)] were 5.86 times more likely to present late to HIV/AIDS care than those spent less than 24 months [7]

2.1.3. Health care related factors

As a result of findings from Study done in South Africa individuals who lived ≥5 kilometers from the test site [adjusted odds ratio (AOR) 2.8, 95% CI 1.7–4.7], reported competing needs to healthcare (AOR 1.7, 95% CI 1.2–2.4), were male (AOR 1.7, 95% CI 1.2–2.3), worked outside the home (AOR 1.5, 95% CI 1.1–2.1) ,227 (27.3%) participants had ever gone without healthcare because they needed money for basic necessities (food, clothing, or housing), living ≥5 kilometers from the clinic, perceived health service delivery barriers (have to wait too long to see the nurse or doctor (31.4%), , didn't think it was necessary, could not afford the cost of transportation (OR 1.80, 95% CI 1.29–2.29), could not afford medications (OR 1.79, 95% CI 1.30–2.46), could not arrange transport to the clinic (OR 1.71, 95% CI 1.20–2.43), could not get to the clinic during the hours it was open)(AOR 1.5, 95% CI 1.1–2.1), and/or had poor emotional health (AOR 1.4, 95% CI 1.0–1.9) had higher odds of late-stage HIV disease presentation[20]

The study done in Mozambique showed that, the largest proportion of ART patients were referred into care from VCT; significant proportions were also referred from other testing facilities and PMTCT Poor referral systems and lack of counseling during HIV testing are important risks for delayed presentation for care[21]

Finding of study done in Jimma indicates, presentation of symptom/s at first HIV diagnosis, got tested by VCT, chronic illness, visiting a health institution for any issue and time taken to reach ART clinic greater than 2 hours were associated with late presentation for HIV/AIDS care in the unlike what is seen by health worker/s, prior experience and way of travelling to ART [11]

2.1.4. Behavioral related factors

Tanzania study result showed that stigma prevent people living with HIV from seeking treatment, care and support and exercising other rights, such as working, attending school, etc. Such shame can have a powerful psychological influence over how people with HIV see

themselves and adjust to their status, making them vulnerable to blame, depression and self-imposed isolation. This may be exacerbated in cases where individuals are members of particular groups that are already isolated and stigmatized, such as injecting drug users, men who have sex with men, and sex workers, or migrants. In settings where medical care is available, stigma may increase the difficulty of adhering to treatment regimens and difficulty in seeking treatment care and support themselves. PLHA tend to experience feelings of shame, inferiority, and embarrassment or lack a sense of purpose. Perhaps related to these experiences is a belief in the stereotype that HIV infections are the result of sexual misbehavior. This generates both prejudice and self prejudice and the affected persons may believe they deserve to be poorly treated[22]

Study done in south Wollo shows, HIV-infected individuals who were frequent alcohol drinkers were 3.55 more likely to present late to HIV/ AIDS care than non-alcohol user HIV positive individuals [OR = 3.55, 95% CI: 1.63-7.71].[7]

Study done In Jimma shows, alcohol users, chewing chat, smoking cigarette, smoking Shisha, perceived risk and other risk categories such as blood contact and having an HIV positive mother were found to be associated with late presentation for HIV/AIDS care in the unlike drug abuse.[11]

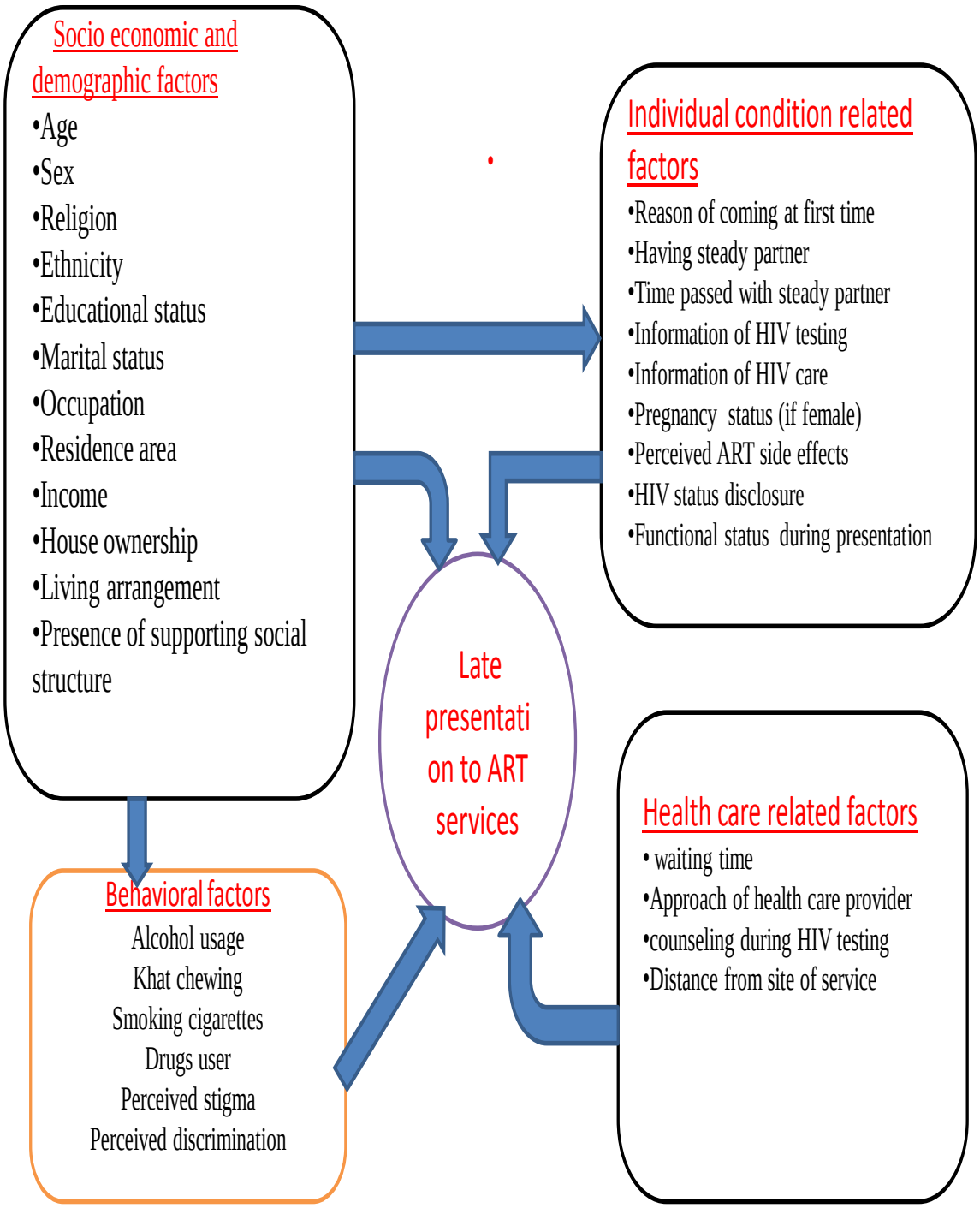

Fig1 .conceptual framework of factors related late presentation to ART (designed after reviewing many literatures)

2.2. Significance of the study

The study of associated factors to late coming to ART services will be improve patients coming early for their life saving treatments and as well as reduce the burden of infection from themselves and community since late coming is increase the morbidity, mortality to individual and community and also reduce the cost of medical care due to late presentation by indicating those barriers of early coming to ART services. This also will help the stakeholders working on HIV/AIDS Controlling and prevention programs

There was no such type of study done in the area, so this study will review the factors those associated with late presentation to the ART services and also used as stand point for further study in the area.

Chapter III

Objective

3.1. General objective

- To assess factors associated with late presentation to ART services in St. Luke catholic hospital and college of nursing and midwifery, 2014

3.2. Specific objectives

- ❖ To assess socio demographic related factors for late presentation to ART services in St.luke's catholic hospital and college of nursing and midwifery, Woliso, 2014
- ❖ To assess individual related factors for late presentation to ART services in St.luke's catholic hospital and college of nursing and midwifery, Woliso, 2014
- ❖ To assess behavioral related factors for late presentation to ART services in St.luke's catholic hospital and college of nursing and midwifery, Woliso, 2014
- ❖ To assess health care related factors for late presentation to ART services in St.luke's catholic hospital and college of nursing and midwifery, Woliso, 2014

Chapter IV

Methods and materials

4.1. Study area

The study was conducted in Woliso town, South West Shoa administrative zone, in Oromia regional state. Woliso is the capital city of the zone which is located 114 KM, South-west of Addis Ababa. . The Infrastructure like electricity, water source, telephone and transportation and social services are available. The town has health facilities like St. Luke's catholic hospital, Woliso health center 1 and 2 and 8 private health facilities and above 10 drug stores

St. Luke's catholic hospital is one of the health institutions in which serve for the zone population provision and nearby Gurage zone (SNNP) for about 1.2- 1.5 million peoples. It was established on January 1st 2001. It has a total of 200 beds for service provision of which 35 for medical, 24 for surgical, 65 for pediatrics, 14 for gynecology, 24 for maternity,32 for orthopedics and 6 for neonate. The hospital has also providing an outpatient, antenatal care including under-five clinics, public health department having out-reached service, psychiatric clinic, , pharmacy, laboratory, X-ray, ultra sound physiotherapy unit, maternity waiting service for high risk mothers and therapeutic feeding center for malnourished children .

ART services were started since 2006G.C in the hospital and had 2059 adults and 236 children were enrolled in clinic.

4.2. Study period

The study was conducted from March 26 to April26, 2014

4.3. Study design

Hospital based unmatched case control study design was done in St.luke's catholic Hospital and college of nursing and midwifery.

4.4. Source population for case

All HIV positive adults on initial visit medical records of ART clinic of St.luke's catholic Hospital and college of nursing and midwifery

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4.5. Source population for control

All HIV positive adults on initial visit medical records of ART clinic of St.luke's catholic Hospital and college of nursing and midwifery

4.6. Study population

All HIV positive adults on initial visit medical records who attend ART clinic during the study period in St.luke's hospital and college of nursing and midwifery

Case - was individual who had HIV with clinical stage III or IV or CD_4 less than 200cells /µL at enrolling time to the service site.

Control – was individual who had HIV and enrolled in ART at WHO stage I or II and CD4 equal or greater than 200cells/µL

4.7.1. Inclusion criteria

Willing individuals age18 and above years of old currently on the treatment.

4.7.2. Exclusion criteria

Critically ill individuals

Those who stayed on ART more than two years

4.8. Sample size determination

The sample size was calculated using epi info 7:

α - is the level of significance = 0.05

The power of the test = 80%

r- is the control to case ratio = 1: 1

Proportion of chronic illness among controls to be 45.6% adjusted odds ratio of 2[11]. Chronic illness had been chosen as an exposure variable since it gives maximum sample size. This gave sample size of 135 cases and 135 controls. Adding 10% for nonresponse gave total of **298** i.e. 149 cases and 149 controls

4.9. Sampling techniques and procedure

Simple random sampling techniques was be used for patients following during the study periods. First assignment of case and control using the criteria of case and control from medical records, then random selection done till required sample size fulfill by using lottery methods.

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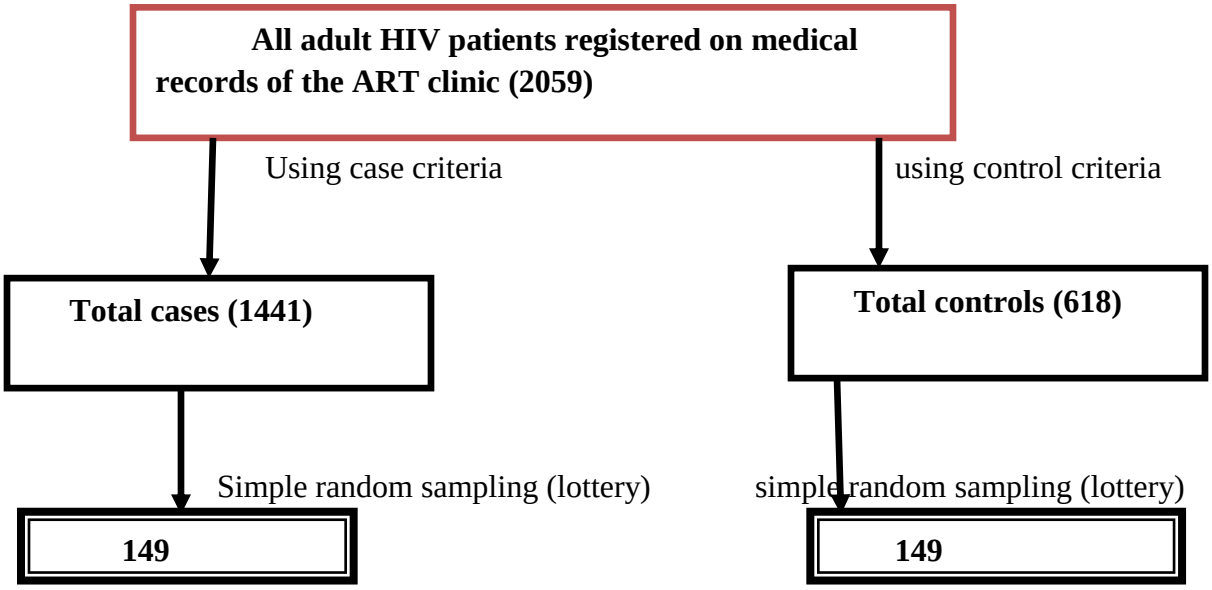

Figure 2.schematic presentation of sampling techniques

4.10. Variables

4.10.1. Dependent variables

Presentation to ART services status

4.10.2. Independent variables

Socio demographic related factors

Age, Sex, Educational status, marital status, Occupation, Residence area, Income, House ownership, Living arrangement, Presence of supporting social structure

Individual related factors

Reasons of coming at first time, having steady partner, Time passed with steady partner, information of HIV testing and treatment, Pregnancy (if female), Perceived ART side effects, HIV status disclosure, Functional status

Health care provision related factors

Waiting time, approach of provider, counseling during HIV testing, distance from the site

Behavioral related factors

Alcohol usage, khat chewing, smoking cigarettes, drug using, perceived stigma and perceived discrimination

4.11. Data collection tools and procedure

The structured questionnaire prepared for face to face interview after reviewing relevant literatures in English then translated to Afan Oromo by language professional and back translation by different person.

The contents of the questionnaires include: socio-demographic characteristics, individual condition, behavioral and health care provision related factors

Data collectors were ART nurses and trained for about two days on interviewing technique, details of questionnaires and confidentiality of interviewee. To reduce bias of data collectors, which group was case and which group was control were not told to them.

4.12. Quality control

Trained ART nurses were data collector. Pretest was done on non sampled individual who fulfill cases or controls criteria for checking the instrument and certain questionnaire were modified. Checking for consistence and completeness of questionnaire was followed by principal investigator overnight of each day data collection and during data entry double entry was done to reduce error.

4.13. Data analysis

The data was entered using EPI data to cleaned and edited then exported to SPSS windows version 16 statistical software for analysis. Frequencies and sorting of each variable were used to check for missed variables, outliers and errors. Errors found during data cleaning were corrected based on the hard copy. Analytic analysis was performed to check for the presence of significant association between dependent variable and independent variables using bivariate logistic analysis. Independent variables that are associated in bivariate analysis and others variables with (with p-value 0.25) were taken to the model for multivariate logistic analysis. Strengths of the associations and their statistical significance were measured using adjusted Odds Ratio (AOR), P - value < 0.05 and 95% CI.

4.14. Ethical consideration

The letter of approval was gain from Jimma University Ethical Review Committee of Public health and medical science college, and then brought to the institution where the study was done. All participants were asked for their volunteer to participant in the research.

4.15. Dissemination plan

The findings will presented to JUCPHMS scientific community, St.luke's catholic Hospital and college of nursing and midwifery, Zonal and regional health offices and attempt to publish on national or international journals.

4.16. Operational definition

Late presentation- CD_4 less than 200cells/ µL or WHO stage III or IV

Early presentation- CD_4 greater or equal to 200cells/ µL and WHO stage I or II

Perceived stigma- fear of casual transmission (sharing meal, shaking hands, talking with, caring for him/her) and blaming and feeling shame for PLWHIV reported by respondents

Perceived discrimination - action like excluded from a social gathering, lost customers to buy his/her produce/goods or lost a job, had property taken away, Abandoned by spouse/partner, Abandoned by family/sent away to the village, Teased or sworn at, Lost respect/standing within the family and/or community, gossiped about, No longer visited, or visited less frequently by family and friends, Isolated within the household as reported by the respondents

Drug – the substance taken in amounts or with methods neither approved nor advised by medical professionals

Perceived side effects of ART drugs- the respondents believed that rash, headache, night mare, difficult to tolerate, need special food; confusion might come when ART drug was taken.

Chapter V

Result

Sociodemographic related factors

In this study, a response rate of the study was 100% in total of 298 respondents, case 149 and control149. 60(40.30%) cases and 65(43.50%) controls were age between 28-37 years of age. The mean ages of the cases were 37±10 years and controls were 33±8 years. Female were dominant in control 102 (68.50%) and male in case 76(51.00%). Ninety eight (65.80%) of the respondents were married from case and controls. Orthodox religion follower were high in number(case 108(72.50%) and controls 100(67.10%) followed by protestant religion follower(28(18.80%) cases and 20(19.50%) controls .Most of the case and control were Oromo by ethnicity (99(66.40%) and 102)followed by Amhara (37 (24.80%)and 18(12.10%)) .Primary (1-8) educational status had high in both case 57(38.30%) and control 60(40.30%) . Sixty seven percents of cases and controls were live in urban area. Sixty four percents of respondents had their own house and 98 cases and 96 controls were living with their spouse. Regarding the occupation of the study population house wives were high in control 54(36.2 0%) and farmers were high in case group 37(24.80%). Incomes of the respondents were mostly under 500 birr in both late and early comer to the services. The mean monthly incomes for the cases were 883.06±745.45SD birr and 758.93±612.22SD birr in a month for controls.

Table 1.sociodemographic characteristics of respondents' in St.luke's Catholic hospital and college of nursing and midwifery, Woliso, 2014

Variables	Case N (%)	Control N (%)
Age (in years)		
▪ 18-27	24(16.10%)	44(29.50%)
▪ 28-37	60(40.30%)	65(43.50%)
▪ 38-47	47(31.50%)	34(22.80%)
▪ 48-57	8(5.40%)	2(1.70%)
▪ >57	10(6.70%)	4(2.70%)
▪ mean	37	33
▪ standard deviation	10	8
Sex of respondents		
▪ Male	76(51.00%)	47(31.50%)

▪ Female	73(49.00%)	102(68.50%)
Residence Area Of Respondents ▪ Urban ▪ Rural	 101(67.80%) 48(32.20%)	 101(67.80%) 48(32.20%)
Marital status of respondents ▪ married ▪ single ▪ divorced ▪ widowed ▪ separated	 98(65.80%) 15(10.10%) 14(9.40%) 17(11.40%) 5(3.40%)	 98(65.80%) 14(9.40%) 10(6.70%) 19(12.80%) 8(5.40%)
Religion of respondents ▪ orthodox ▪ protestant ▪ Muslim ▪ Catholic	 108(72.50%) 28(18.80%) 11(7.40%) 2(1.30%)	 100(67.10%) 29(19.50%) 20(13.40%) 0
Ethnicity of respondent ▪ Oromo ▪ Amhara ▪ Gurage ▪ Tigrie	 99(66.40%) 37(24.80%) 12(8.10%) 1(0.70%)	 102(68.50%) 18(12.10%) 24(16.10%) 5(3.30%)
Educational status ▪ no formal education ▪ primary(1-8) ▪ secondary(9-12) ▪ college(diploma, TVET) ▪ first degree and above	 35(23.50%) 57(38.30%) 41(27.50%) 11(7.40%) 5(3.40%)	 46(30.90%) 60(40.30%) 28(18.80%) 12(8.10%) 3(2.00%)
House ownership ▪ Own House ▪ Renting House	 101(67.8%) 48(32.20%)	 96(64.40%) 50(33.60%)
Living arrangement ▪ living alone ▪ living with spouse ▪ living with families	 37(24.80%) 98(65.80%) 14(9.40%)	 42(28.20%) 96(64.40%) 11(7.40%)

Had community support to come to ART Yes No	 20(13.4%) 129(86.6%)	 15(10.1%) 134(89.9%)
Occupation ▪ House wife ▪ Farmer ▪ Government employed ▪ Non government employed ▪ Merchants ▪ Unemployed ▪ Daily laborer ▪ Others(drivers, carpenter, tailor, house maid)	 32(21.47%) 37(24.83%) 14(9.39%) 13(8.72%) 19(12.75%) 5(3.35%) 25(16.77%) 4(2.87%)	 54(36.24%) 21(14.09%) 15(10.06%) 6(4.02%) 21(14.09%) 12(8.05%) 14(9.39%) 6(4.02%)
Income (monthly) ▪ <500 birr ▪ 501-1000 birr ▪ 1001-1500 birr ▪ >1500 birr ▪ mean ▪ standard deviation	 62(45.92%) 33(24.44%) 18(13.33%) 22(16.29%) 883.06 745.45	 75(50.33%) 32(21.47%) 18(13.33%) 14(9.39%) 758.93 612.22

Being male, being house wife and being farmer associated factors to late presentation from sociodemographic characteristics.

Table 2. Sociodemographic related independently associated factors to late presentation to ART services in st.luke's catholic hospital and college of nursing and midwifery, binary and multivariate , May 2014

Variables	**category**	**Case N (%)**	**. Control N (%)**	**Crude OR (95% C.I)**	**Adjusted OR (95.0% C.I.)**
Sex	Male Female	76(51.00%) 73(49.00%)	47(31.50%) 102(68.50%)	2.06(O.99- 4.31) 1.00	2.25(1.41-3.62)* 1.00
Age	18-27 28-37 38-47 48-57 >57	24(16.10%) 60(40.30%) 47(31.50%) 8(5.40%) 10(6.70%)	44(29.50%) 65(43.50%) 34(22.80%) 2(1.70%) 4(2.70%)	0.58(0.33-0.89) 2.708(.80-9.09) 1.80(0.52-6.25) 0.62(0.09-4.32) 1.00	0.17(0.23-3.87) 0.15(0.34-4.58) 0.99(0.98-1.12) 0.942(0.02-2;23) 1.00

Marital status	Single Married Divorced Widowed Separated	15(10.10%) 98(65.80%) 14(9.40%) 17(11.40%) 5(3.40%)	14(9.40%) 98(65.80%) 10(6.70%) 19(12.80%) 8(5.40%)	0.92(0.14-5.99) 1.96(0.36-10.62) 7.08(1.38-38.32) 3.94(0.79-19.48) 1.00	1.071(0.51-2.22) 1.000(0.75-1.32) 1.400(0.62-3.15) 0.895(0.46-1.72) 1.00
Educational status	No formal education Primary(1-8) Secondary(9-12) College(Diploma, TVET) First degree and above	35(23.50%) 57(38.30%) 41(27.50%) 11(7.40%) 5(3.40%)	46(30.90%) 60(40.30%) 28(18.80%) 12(8.10%) 3(2.00%)	0.23(0.27-2.03) 0.31(0.03-2.62) 0.55(0.06-4.38) 0.58(0.09-3.49) 1.00	0.761(0.49-1.18) 0.950(0.66-1.36) 1.464(0.90-2.36) 0.917(0.40-2.07) 1.00
Occupation	House wife farmer Governmental employed Nongovernmental employed merchant unemployed Daily laborer Others	32(21.50%) 37(24.80%) 14(9.40%) 13(8.70%) 19(12.80%) 5(3.40%) 25(16.80%) 4(2.70%)	54(36.20%) 21(14.10%) 15(10.10%) 6(4.00%), 21(14.10%), 12(8.10%) 14(9.40%) 6(4.00%)	0.86(0.20-3.72) 1.88(0.42-8.33) 0.56(0.07-4.23) 1.92(0.35-10.40) 1.29(0.29-5.65) 0.49(0.08-2.92) 2.05(0.45-9.30 1.00	0.593 (0.38-0.91)* 1.762 (1.031-3.01)* 1.071(0.51-2.20) 0.462(0.17-1.21) 1.105(0.59-2.05) 2.400(.846-6.81) 0.560(0.29-1.07) 1.00
Living arrangement	Living alone Living with spouse Living with families	37(24.80%) 98(65.80%) 14(9.40%)	42(28.20%) 96(64.40%) 11(7.40%)	0.69(0.28-1.71) 0.80(0.34-1.85) 1.00	0.88(0.56- 1.37) 1.02(0.77- 1.35) 1.00

*significant at p-value < 0.05

Individual related factors

The respondents had information of HIV testing before coming to ART services 98% in case and 94% control groups. The major sources of information in case were community meeting, mass media and health providers. One hundred Forty five cases and 135 controls had information of HIV care before coming to the service. Mass media, community meeting and health provider were common sources of information. Majority of the respondents were agreed to came to ART after knowing their status 88(59.10%) of case and 90(60.40%) of control. Fifteen (10.10%) decided to go to holly water from case and 4(2.70%) from control, 25(16.80%) of case and

19(12.80%) from control decided to commit suicide and some of the respondents were decided not to start the drug due to fear of stigma and discrimination and confused to decided any things.

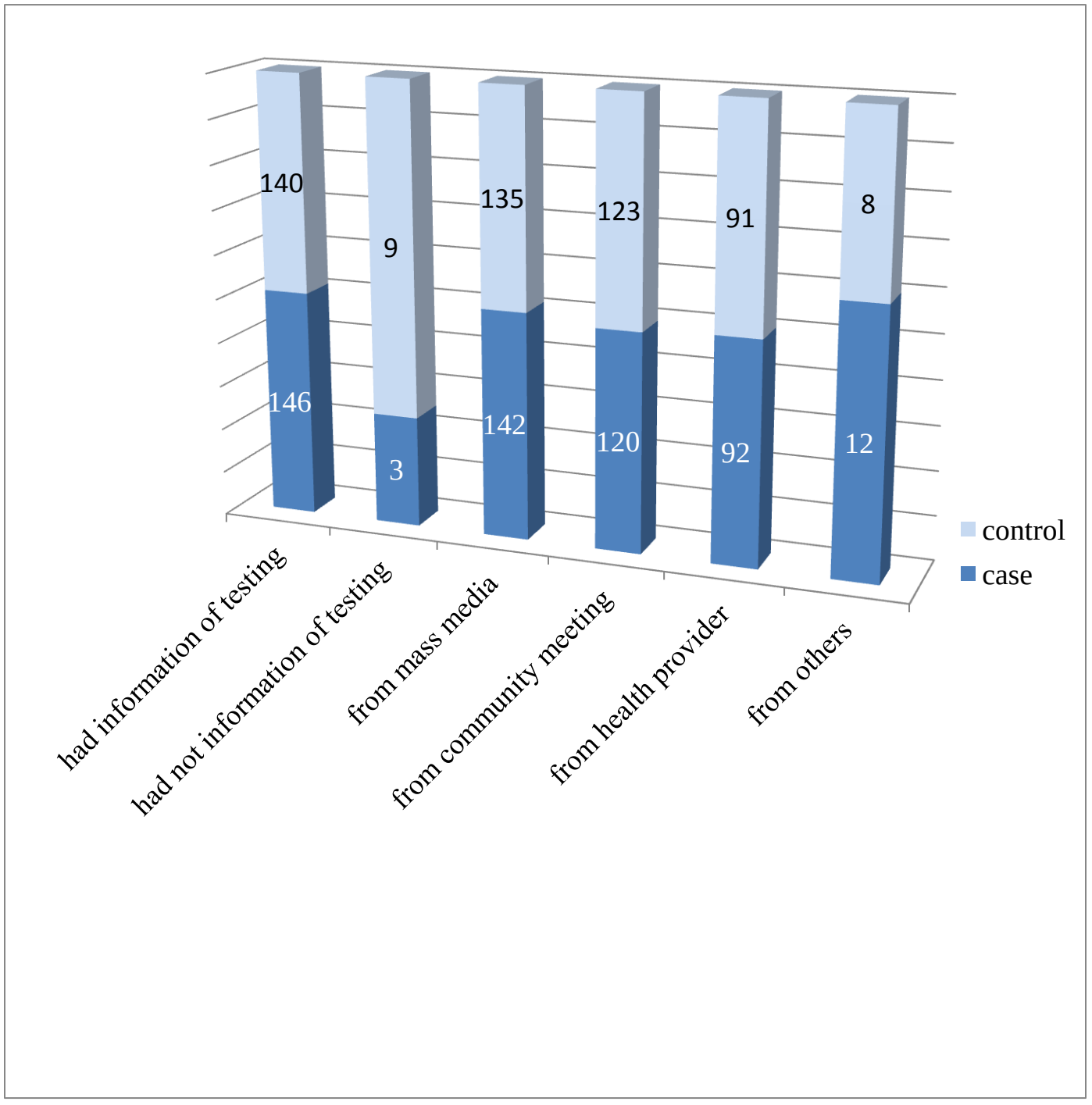

Figure 3. Information of testing and its source of respondents in st.luke's catholic hospital and college of nursing and midwifery, 2014

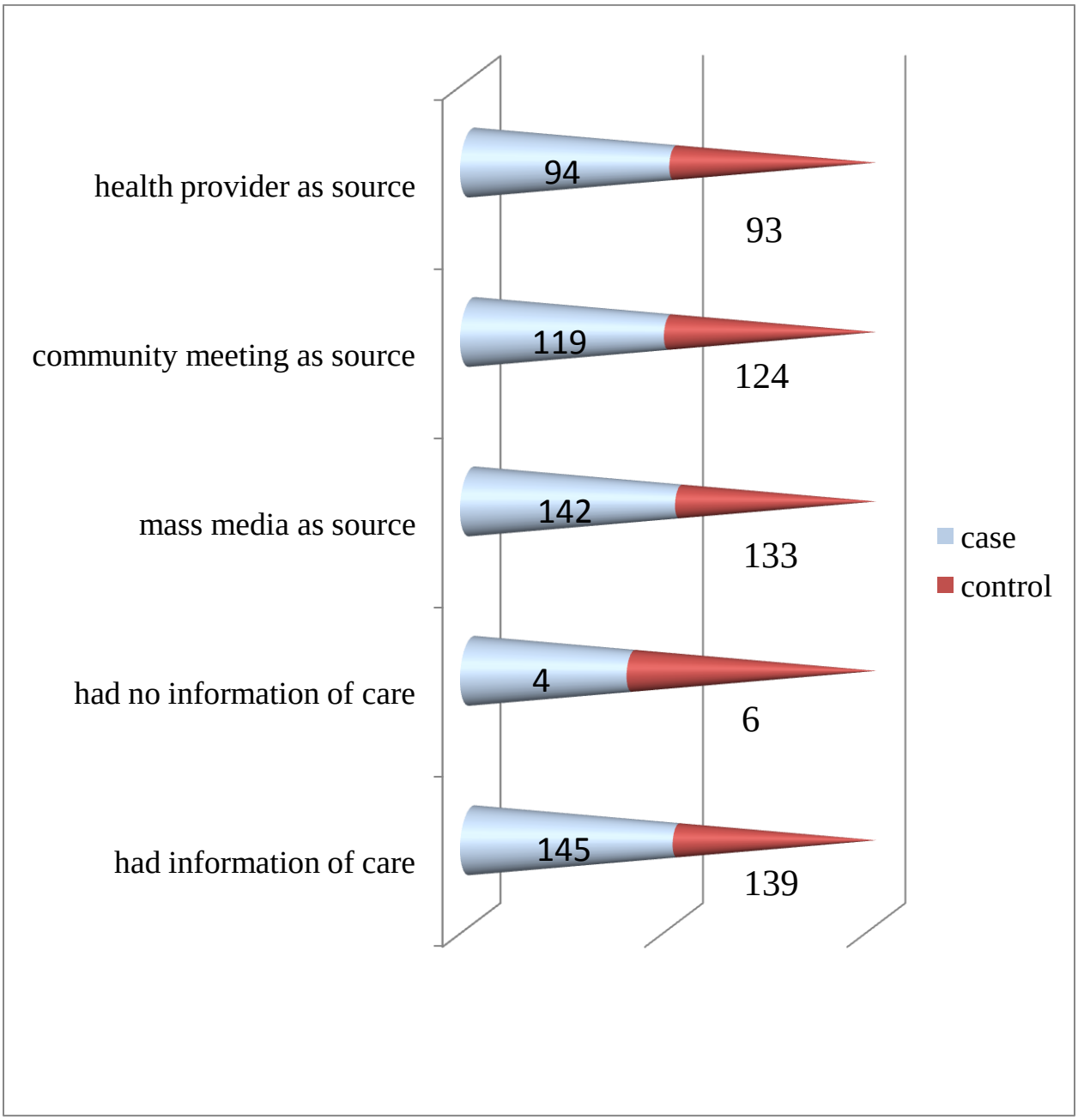

Figure 4. Information of care and its source of respondents in st.luke's catholic hospital and college of nursing and midwifery, 2014

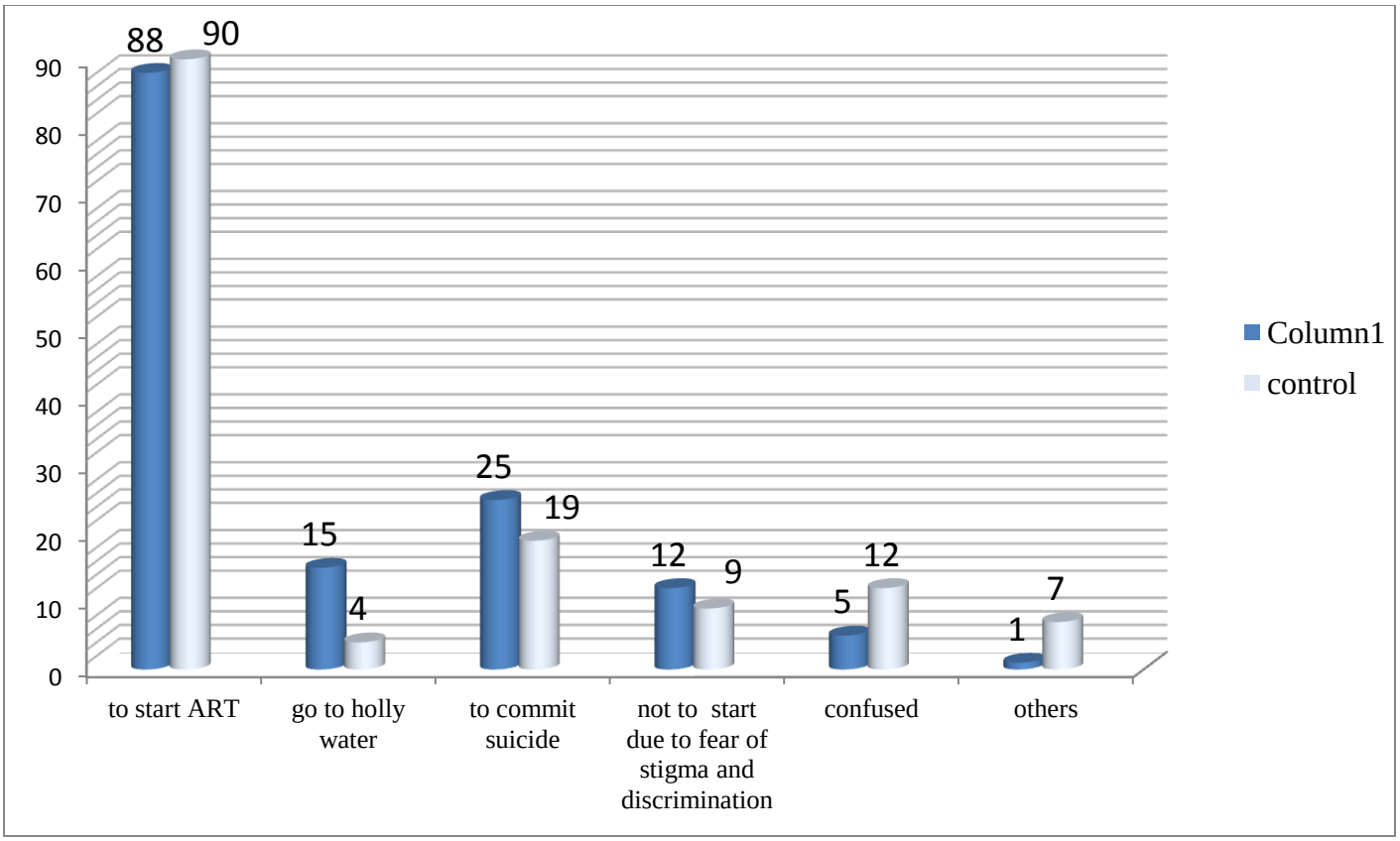

Figure 5.Decision of respondents after knowing their HIV positive status in st.luke's catholic hospital and college of nursing and midwifery, 2014

Sixty six percent and 49% respondents were coming sickness to the services in case and control group respectively One hundred five respondents from both group had steady partner during their presentation. Majority of them stay 6-10 years spent together. Sixteen female in case and 6 in control were pregnant during their first presentation to the services. Some of the respondents had perceived side effects of ART drugs 36(24.20%) from control and 57(38.30&) from case group. Eighty two point six percent of respondents from case and 84.60% of control group were disclose their status at least for one person. The functional status at presentation were working 92(61.70%) and 108(72.50%), ambulatory 48(32.20%) and 35(23.50%) and bedridden 9(6.0%) and 6(4.0%) in case and control respectively.

Table 3. Individual related factors of the respondents in st.luke's catholic hospital and college of nursing and midwifery, 2014

Variables	**Category**	**Cases**	**controls**
Reason to visit ART at first time	sickness counseling form health provider advice from partner for other purpose	99(66.40%) 31(20.80%) 10(6.70%) 9(6.00%)	73(49.00%) 32(21.50%) 23(15.40%) 21(14.10%)
Had steady partner at first coming	yes No	105(70.50%) 44(29.50%)	105(70.50%) 44(29.50%)
Time spent with spouse before starting ART	< 1 year 1-5 years 6-10 years >10 years	2(1.90%) 22(20.80%) 66(62.30%) 16(15.10%)	5(4.80%) 31(29.50%) 63(60.00%) 6(5.70%)
Having pregnancy at first coming	Yes No	10(13.69% 63(86.31%)	23(22.54%) 79(77.46%)
Perceived side effect of ART drug	yes No	57(38.30%) 92(61.70%)	36(24.20%) 113(75.80%)
Disclosure of status	yes No	123(82.60%) 26(17.40%)	126(84.60%) 23(15.40%)
Functional status of respondent at first visit	working ambulatory bed ridden	92(61.70%) 48(32.20%) 9(6.10%)	108(72.50%) 35(23.50%) 6(4.00%)

Having information of HIV testing from community meeting, decision to commit suicide after knowing HIV positive status time spent with partner, pregnancy status, perceived side effect of ART drug, and coming due to sickness were associated with late presentation to ART services

Table 4**.** Individual related independently associated to late presentation to ART services in st.luke's catholic hospital and college of nursing and midwifery, binary and multi, May 2014

Variables	category	Case N (%)	Control N (%)	Crude OR (95%.C.I)	Adjusted OR (95.0% C.I.)
Source information of testing					
Mass media	yes	142(95.30%)	135(90.60%)	2.40(0.37-15.39	3.00(0.8-11.08)
	No	4(2.70%)	5(3.40%)	1.00	1.00
Community meeting	Yes	120(80.50%)	123(82.60%)	5.70(0.49-7.59)	4.58(1.0-19.41)*
	No	26(17.40%)	17(11.40%)	1.00	1.00
Decision after knowing HIV positive status	To start ART	88(59.06%)	90(60.40%)	0.08(0.45-2.54)	0.10(0.45-2.93)
	Go to holly water	15(10.06%)	4(2.68%)	1.02(0.98-3.06)	1.27(0.91-3.56)
	To commit suicide	25(16.77%)	19(12.75%)	2.10(1.12-4.37)	2.34(1.26-4.78)*
	Not to start due to fear of stigma and discrimination	12(8.05%)	9(6.04%)	1.35(0.11-3.65)	1.42(0.52-4.01)
	Confused	5(3.35%)	12(8.05%)	0.07(0.21-5.14)	0.13(0.21-1.14)
	others	1(0.68%)	7(4.69%)	1.00	1.00
Time spent together with spouse before ART services	< 1 year	2(1.90%)	5(4.80%)	9..43(0.36-	6.66(1.0-44.09)
	1- 5 years	22(20.80%)	31(29.50%)	10.65)	3.75(1.2-11.12)*
	6-10 years	66(62.30%)	63(60.00%)	2.11(1.03-9.02)	2.54(0.93-6.91)
	>10 years	16(15.1%)	6(5.70%)	1.30(0.63-2.67)	1.00
				1.00	
Pregnancy status	Yes	10(6.70%)	23(15.40%)	0.49(0.30-0.80)	0.54(0.33-0.90)*
	No	63(42.30%)	79(53.00%)	1.00	1.00
Perceived side effect of ART drug					
yes		57(38.30%)	36(24.20%)	1.75(1.04-2.94)	1.94(1.180-.20)*
No		92(61.70%)	113(75.80%)	1.00	1.00
Reason of coming to the services	sickness	99(66.40%)	73(49.00%)	0.45(0.13-1.49)	3.16(1.37-7.30)*
	Advice from health provider	31(20.80%)	32(21.50%)	0.53(0.15-1.84)	2.33(0.92-5.84)
	Advice from partner	10(6.70%)	23(15.40%)	1.37(0.34-5.43)	0.97(0.33-2.84)
	Others	9(6.00%)	21(14.10%)	1.00	1.00
Functional status at first presentation	Working	92(61.70%)	108(72.50%)	0.89(0.49-1.64)	1.61(0.96-2.69)
	Ambulatory	48(32.20%)	35(23.50%)	0.84(0.27-2.60)	1.76(0.60-5.13)
	Bedridden	9(6.00%)	6(4.00%)	1	1

*****significant at p-value <0.05

Behavioral related factors

Majorities of the respondents were used alcohol at least once a week in both case and control groups 112(75%) and 94(63.10%) respectively. Every days of a week consumers of the alcohol were 45(4.20%) and 18(18.90%) in case and control group respectively. Chewing khat was 28.90% and 20.10% in case and control group respectively. Drug usage was 5.4% and 1.3% in case and control group respectively. Perceived stigma and discrimination were 49.0% and 22.80% in control group and 42.30% and 16.10% in control group

Table 5.behavioral related factors of the respondents in st.luke's catholic hospital and college of nursing and midwifery, 2014

Variables	**Category**	**Case N (%)**	**Control N (%)**
Using of alcohol	Yes No	112(75.20%) 37(24.80%)	94(63.10%) 55(36.90%)
How often per week	once a week twice a week 3-4 times a week every day of a week	57(50.90%) 3(2.70%) 7(6.20%) 45(40.20%)	65(68.40%) 4(4.20%) 8(8.40%) 18(18.90%)
chewing khat	yes no	43(28.90%) 106(71.10%)	30(20.10%) 119(79.90%)
Frequency of chewing chat per week	Once a week Twice a week Three times a week Four times a week Five times a week Daily in a week	23(53.48%) 2(4.65%) 3(6.97%) 3(6.97%) 2(4.65%) 10(23.25%)	12(40.00%) 5(16.67%) 3(10.00%) 1(3.33%) 0(.0%) 8(26.67%)
Smoking cigarettes	yes No	19(12.80%) 130(87.20%)	17(11.40%) 132(88.6%)
Drug usage	yes No	8(5.40%) 141(94.60%)	2(1.30%) 147(98.70%)
Types of drug used	Shisha Hashish Marijuana	8 0 0	2 0 0

Perceived stigma	Yes No	73(49.0%) 76(51.0%)	63(42.3%) 86(57.7%)
Perceived discrimination	Yes No	24(16.10%) 125(83.90%)	34(22.80%) 114(76.50%)

Alcohol usage and perceived stigma were associated with late presentation to ART services in study area.

Table 6 .Behavioral related independently associated to late presentation to ART services in st.luke's catholic hospital and college of nursing and midwifery, binary and multi, May 2014

Variables	**category**	**Case N (%)**	**. Control N (%)**	**Crude OR (95% C.I)**	**Adjusted OR (95.0% C.I.)**
Alcohol usage	Yes No	112(75.20%) 37(24.80%)	94(63.10%) 55(36.90%)	1.65(0.98-2.76) 1.00	1.77(1.072.91)* 1.00
Frequency of alcohol usage	Once a week Twice a week 3-4 per week Every day of a week	57(50.90%) 3(2.70%) 7(6.20%) 45(40.20%)	65(68.40%) 4(4.20%) 8(8.40%) 18(18.90%)	0.26(0.05-1.30) 0.35(0.03-4.13) 0.27(0.02-2.73) 1.00	0.35(0.18-0.67)* 0.30(0.06-1.475) 0.35(0.11-1.10) 1.00
Khat chewing	Yes No	43(28.90%) 106(71.10%)	30(20.10%) 119(79.90%)	1.60(0.83-3.08) 1.00	1.60(0.94-2.74) 1.00
Drug usage	Yes No	8(5.4%) 141(94.60%)	2(1.30%) 147(98.70%)	0.24(0.05-1.14) 1.00	4.17(0.87-9.97) 1.00
Smoking	Yes No	19(12.80%) 130(87.20%)	17(11.40%) 132(88.60%)	1.13(0.56-2.28) 1.00	0.71(0.31-1.65) 1.00
Perceived stigma	Yes No	63(42.30%) 86(57.70%)	73(49.00%) 76(51.00%)	1.07(1.12-1.43) 1.00	1.16(1.08-1.20)* 1.00

*significant at p-value <0.05

Health care related factors

Respondents had got the services within 30 minutes after registration and the first approach of provider were nice to the respondents. Opening time, before and after test counseling and points of counseling were good to the respondents. Only 2.70% faced problems from the providers.

Majorities of the cases were coming from Woliso town 53.0% and control 50.70% from out of Woliso town.

Table 7. Health care related factors of the respondents in st.luke's catholic hospital and college of nursing and midwifery, 2014

Variables	Category	Case	Control
Waiting time to get services	< 30 minutes 30 minutes to 1 hour	144(96.60%) 5(3.40%)	148(99.30%) 1(0.70%)
Nice approach from providers	yes no	149(100.00%) 0(0.0%)	145(97.30%) 4(2.70%)
Opening time appropriateness to the respondents	Yes No	149(100.00%) 0(0.0%)	149(100.00%) 0(0.0%)
Provider giving information About care when offer testing	yes no	149(100.00%) 0(0.0%)	148(99.30%) 1(0.70%)
After test counseling	yes No	149(100.0%) 0(0.0%)	148(99.30%) 1(0.70%)
Problem faced from provider	yes No	0(0.0%) 149(100.0%)	5(3.40%) 144(96.60%)
Distance from ART center	1-5 km/<1hour >5kms/1hour	79(53.00%) 70(47.00%)	73(49.30%) 75(50.70%)

Variables P- value less than 0.25 were included using forward stepwise method in formation of the final model ,then, pregnancy status in female respondents, decision after receiving the HIV positive status, drug usage before presentation, being male, perceived side effects of ART drugs and perceived stigma were associated with late presentation to ART service.

Table 8. Factors associated to late presentation to ART services in st.luke's catholic hospital and college of nursing and midwifery, multivariate (final model), May 2014

variables	**Category**	**Case N (%)**	**Control N (%)**	**AdOR(95%C.I)**
Pregnancy status	Yes	10(13.69%)	23(22.54%)	0.45(0.258-0.80)*
	No	63(86.32%)	79(77.46%)	1.00
Decision after receiving the HIV positive status	To start ART	88(59.06%	90(60.40%)	0.46(.03-6.77)
	To go to holly water	15(10.06%)	4(2.68%)	0.14(.01-1.47)
	To commit suicide	25(16.77%)	19(12.75%)	3.75(1.24-11.29)*
	Not to start due to fear of stigma	12(8.05%)	9(6.04%)	1.31(.72-2.38)
	Confused to decided	6(4.02%)	12(8.05%)	1.33(0.56-3.16)
	Others	1(.0%)	6(4.02%)	1.00
Drug usage	Yes	8(5.40%)	2(1.34%)	7.48(1.41-9.62)*
	No	141(94.60%)	147(98.66%)	1.00
Sex	Male	76(51.00%)	47(31.54%)	1.98(1.17-3.34)*
	Female	73(49.00%)	102(68.46%)	1.00
perceived side effects of ART drugs	Yes	57(38.26%)	36(24.16%)	1.69(1.01-2.83)*
	No	92(61.74%)	113(75.84%)	1.00
Perceived stigma	Yes	73(49.99%)	63(42.28%)	1.81(1.06-3.09)*
	No	76(51.01%))	86(57.72%	1.00

*p-value <0.05 for all in the model

Chapter VI

Discussion

In this study factors associated with late presentation to ART services were investigated by using CD4 level and WHO stage classification as criteria and its results and implication reviewed as followings with similar previous studies.

The study revealed that being male was 1.98 times late coming to the ART services when compared to female (AOR *2.07 C.I 1.28- 3.34*). The similar study done in Harari region shows male respondents were 7.19 times more likely to present late for HIV care than female respondents[*OR= 7.19; 95% CI: 1.279-8.447*][12]. Study done in Sub-Sahara Africa being male (*aOR: 2.4; 95%CI: 1.3 to 4.2*) was strongly associated with late start of ART. [14]. Male gender in Uganda was independently associated with presenting late at WHO stage 3 or 4. [15].On opposite side study done in India show that being female was associated with delayed from HIV medical care.[8] .The possible explanation here is the difference in setting that is India study done in the area with limited resource and also difference in study design and area.

Those who perceived side effects of ART drugs were 1.69 times late coming to ART services than not perceived side effect of ART drugs (*AOR-1.69, 1.01-2.83*). similar study in South Wollo revealed that , HIV positive individuals who perceived ART have many side effects were 6.23 time more likely to present late to HIV/ AIDS care than HIV positive individuals who did not know about side effects of ART drugs [*OR = 6.23*][7].Awareness of people will developed with the time.

Non pregnant female were coming late to the ART services than pregnant females in the study area with AOR 1.81*(1.34- 5.00*).Similar study done in South Wollo show that non-pregnant women were 9.3 times more likely to present late to HIV/AIDS care than pregnant women [OR = 9.*3, 95% CI: 1.93-44.82*]. [7].Awareness gained from time to time and many women centered activities were also gave attention on all females.

Drug users were coming late to the services of ART later than those did not use the drug specifically shisha.(AOR 7.24).study done in Jimma revealed that using shisha was associated

with late coming to care of HIV[11]. The drug usage is currently increased, this in other way lead to late coming to HIV services as well as involvements in to crime activities, one study in U.S.A show that the criminal justice system is burdened with a significant population of HIV-infected individuals that can be 2 to 5 times larger than that in the surrounding community and Moreover, treatment of drug addiction may actually improve early coming to HIV treatment [17].Difference were the availability of drugs in different ways in U.S

Respondents those perceived stigma were 1.81 times late comer to the ART services than not perceived stigma.(*AOR- 1.81 C.I 1.06- 3.09*).People living with HIV/AIDS who perceived HIV stigma were 3.1 times more likely to present late to HIV/AIDS care than those who did not perceive HIV stigma [*OR = 3.1, 95% CI: 1.09-8.76*][7]. The difference was due to increments of community awareness on HIV from time to time through different method as mentioned earlier.

Respondents those decided to commit suicide after knowing their positive status were late comers than those decided to others (*3.75(1.24-11.29*).Study done in Uganda show that due to fear of stigma and discrimination most people prefer to see witchdoctors than ART treatment[15], In South Africa one study shows HIV-infection as a primary reason for their suicide attempts as the progression of HIV/AIDS than seeking for the ARV treatments[18].There are different in their study design (descriptive and analytic) and difference in study population had their unique socio-demographic characteristic.

Most studies revealed that distance from the center, waiting time to get service, provider approach, absence of medication and referral system to the center were factors leading to late presentation to ART services[11,20,21],but in this study those factors were not problems of late presenters to ART services this study. The possible explanations were currently the services of ART started in health centers i.e. near to community, health workers were also assigned as routine work like other services but previously there was no permanent staff for ART services. Update training for providers was given timely and sometimes hiding of information concerning health care might be there due to data collectors were health providers.

Limitation of the study

- Respondents recall bias since it was based on their memory or might not like to remember their past history
- Social desirability bias

Chapter VII

Conclusion and recommendation

Conclusion

From this study core associated factors to late presentation to ART services were being male from sociodemographic related factors, perceived side effects of ART drugs, being no pregnant in female, attempt of committing suicide after knowing HIV seropositive from individual related factors and perceived stigma and drug usage from behavioral related factors.

Recommendation

For HAPCO and others stake holders

The intervention to promote early initiation or prevent late presentation should focus on male, non pregnant female, advantage of ART drugs, and way of reducing perceived stigma .The emphasis should also given on drug users because they are not coming to services on time because they did not aware of some sign and symptom of infection unless they reach on advance stage diseases.

For researcher

Another study is needed for less than 18 years age individuals since they were not included in this study and also further study needed on the relation of drug usage and late coming to ART services.

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Annex 1

Participant Information Sheet and Consent

Greeting, How are you, I am----------. I am working with Mr. Moges Tesfaye, who is Master Degree student in Jimma University. The main objective of this study is to assess factors associated to late presentation to ART in st.luke's catholic hospital and college of nursing and midwifery. To this effect, your involvement in the study has of great importance to the research's output. Your name will not be written in this form and will never be used in connection with any information you tell us. All information given by you will be kept strictly confidential. Your participation is voluntary and you are not obligate to answer any question you do not wish to answer. If you fill discomfort with the interview, please fill free to drop out any time you want.

Title: Factors associated with late presentation to ART Services in St. Luke's Catholic Hospital and College of Nursing and Midwifery, Woliso, Oromia

Name of Principal investigator: Moges Tesfaye
Name of the organization: Jimma University College of public health and medical science.

Introduction

This information sheet and consent form is prepared to explain the study you are being asked to join. Please listen carefully and ask any questions about the study before you agree to join. You may ask questions at any time after joining the study.

Purpose of the Study

The main aim of the project will be to assure Master degree in General Public Health from Jimma University**.** The purpose of this research title is Factors associated with late presentation to ART Services in St. Luke's Catholic Hospital and College of Nursing and Midwifery, Woliso, Oromia. The study will be helpful in identifying factors leads to late presentation and helpful for stakeholder working on it

Procedure

If you are willing to participate there are some questionnaires that you give the response, if you need explanation for unclear you can ask interviewer for unclear interview question

Risk/ Discomfort

By participating in this research project, you may feel that it has some discomfort especially on wasting time about 15 minutes. We hope you will participate in the study for the sake of the benefit of the research result. There is no risk in participating in this research project.

Benefits

No gift or any bonus given due to this interview**.**

Confidentiality:

The information collected from this research project will be kept confidential and information about you that will be collected by this study will be stored in a file, without your name, but a code number assigned to it. In addition, it will not be revealed to anyone except the principal investigator and will be kept locked with key.

Right to Refuse or withdraw:

You have full right to refuse from participating in this research. You can choose not to respond to some or all questions if you do not want to give your response. You have also the full right to withdraw from this study at any time you wish, without losing any of your right. If you face any problem, please contact:

Address of the PI: Moges Tesfaye

Mob. 0910167915

E-mail mogesmule@gmail.com

I thank you in advance for taking your time to answer questions.

Could I have your permission to continue?

Yes ☐ No ☐

If yes continue the interview, if no stop here

Annex 2
JIMMA UNIVERSITY

College of public health and medical science, Epidemiology department

Questionnaires for assess factors associated with late presentation ART in St.luke's catholic Hospital and college of nursing and midwifery

- Code_____
- CD4 number____
- WHO stage :1.stage I or stage II 2.stage or stage IV

Part I- Socio-Demographic Characteristics			
Number	**Question**	**Response**	**Code**
001	Age	_____	
002	Sex	1.Male 2. Female	
003	Marital status	1.Single 2. Married 3. Divorced 4. Widowed 5. Separated	
004	Religion	1.Orthodox 2.Muslim 3.Protestant 4.Catholic 5.others(specify----------)	

005	Ethnicity	1.Oromo 2.Amhara 3.Gurage 4.Tigre 5.others	
006	Educational status	1.No formal education 2.Primary (1-8) 3.Secondary (9-12) 4.College(diploma, TVET) 5.First degree and above	
007	Occupation	1.House wife 2.Farmer 3. Government employed 4. Non government employed 5. Merchant 6. Unemployed 7. Daily laborer 8.othres (specify _____)	
008	Residence area	1.Urban 2.Rural	
009	House ownership	1.Owner house 2.Renting house	
010	Living arrangement	1.living alone 2.living with spouse 3.living with families	
011	Income	_	_

012	Did you have any support from community/social to come to ART service?	1.yes 2.no	
013	If yes what types of support you got?		
Part II. Individual condition related factors			
101	Did you have information about HIV testing?	1.yes 2.no →	Q 103
102	If yes from where you got information?	1.mass media 2.community meeting 3.health provider 4.others(specify _____)	
103	Did you have information about HIV care?	1.yes 2.no →	Q 105
104	If yes form where you got information?	1.mass media 2.community meeting 3.health provider 4.others(specify	
105	What was your decision after having information?	_____	
106	Have you steady partner at first diagnosis?	1.yes 2.no →	Q108
107	How long you passed with her/him?		
108	Did you pregnant when you know your status?(only for female)	1.yes 2.no	
109	Did you perceived ART side effect?	1.yes 2.no →	Q111

110	If yes mention them	_____	
111	Did you disclose your status for any one?	1.yes 2.no →	Q 113
112	For whom you disclosed for first time?	1.spouse 2.families 3.friends 4.others	
113	What was your reason to visit ART clinic at first time?	1.sickness 2.counseling from health provider 3.advice from partner 4.for other purpose(specify_____)	
114	What was your functional status at first presentation to the services?	1.working 2.ambulatory 3.bed ridden	
Part III- Behavioral related factors			
201	Did you have ever used alcohol before coming to the service?	1.yes 2.no →	Q203
202	How often per week?	_____	
203	Did you chew khat?	1.yes 2.no →	Q205
204	How often per week?	_____	
205	Did you smoke cigaretes?	1.yes 2.no →	Q 207
206	How much pack per week?	_____	
207	Did you take other drugs?	1.yes 2.no →	Q209

208	Which drug you used?	1.shisha 2.hashish 3.marijuana 4.others	
209	Have you experienced any perceived stigma?	1.yes 2.no →	Q211
210	If yes what kinds of perceived stigma you faced?		
211	Have you experienced any perceived discrimination?	1.yes 2.no	
212	If yes what kinds of perceived discrimination you faced?		
Part IV.Health care provision related factors			
301	How long you wait to get services?	1.< 30 minutes 2.30minutes to 1 hour 3.> 1hour	
302	Did you feel comfort with the approach of care provider?	1.yes → 2.no	Q 303
303	If no, why?		
304	Did the opening time of services appropriate to you?	1.yes → 2.no	Q309
305	If no forno.407 why?		
306	Did health provider told you about HIV/AIDS care during offer you to have testing?	1.yes 2.no	
307	Did the health provider give you counseling before testing?	1.Yes 2.No	
308	Did the health provider give you counseling after testing?	1.yes 2.no →	Q310
309	What was the main point of their		

	counseling?		
310	Have you any problems facing from health provider	1.yes 2.no →	Q312
311	What kinds of problems you faced?		
312	Distance form center of ART (KMS or hrs)	1.1-5kms(< 1 hour) 2.= or > 5kms or 1 hour	

Annex 3

Foormii Hayyamaa

Akkam jirtu, ani maqaan koo ----------. Ani miiltoo barataa digrii lammaffaa Unvarsiitii Jimmaa kanta'e obboo Mogas Tasfaayee. gara wal'ansa ART akka dafanii hin dhufneef sababoota ta'an addaan baasuuft'a. Maqaan keessan kan hin katabamnee fi yaadni isin asirratti kennitan kammiyyuu maqaa keessan waliin hidhata tokkollee hin qabu.Yaadni isin kennitan hundi iccitiin isaa kan eeggameedha. Hirmaannan keessan fedhii irratti kan hundaa'eefi gaaffii yaada itti kennuu hin barbaanneirratt dirqisiifamuu hin qabdu.Miirri gaariin yoo isinitti dhaga'amuu baatee yeroo kammiiyyuu hirmaannaa keessan addaankutuuf mirga guutuu qabdu. Gaaffii Koo itti fufuu danda'aa?

Mata duree qorannoo: gara wal'ansa ART akka dafanii hin dhufneef sababoota ta'an addaan baasuuft'a **,Qiddus luuqaas hospitaala kaatooliikii fi kollejjii narsoota,walisoo**

Maqaa dhaabbataa:Unvarsiitii Jimmaa Damee Kolleejjii Saayinsii Fayyaa hawaasaa fi saayinsi meedikaalaa .

Seensa Waraqaan hubannoo kun kan qoophaayeef qorannoo kana irratti akka hirmaattaniif odeeffannoo gahaa ta'e isiniif kennuuf. Qorannoo kanarratti osoo hin hirmaatin dura Sirritti qalbeefachuun waan isiniif hin galle gaafadhaa.Erga qorannoo kana irratti hirmaachuu jalqabdanis gaaffii kamiyyuu gaafachuu ni dandeessu.

kaayyoo Qorannoo Kaayyon qorannoo kanaa inni ijoon digrii lammaffaa fayyaa hawaasatiin unvarsiitii Jimmaa irraa ittin eebbifamuuf .

Adeemsa –hirmaannaa fedhi irratti qofa hunda'een gaaffilee muraasa gaafatamtuun deebii kennuu ta'a.

Miidhaa – hirmaachuu diduun rakkoo tokko sitti hin fidu

Fayyidaa – hirmaachuu keetiif wanti adda akka keennaatti keennamu gonkummaa hin jiru.

Iccitii eeguu: Infoormeeshiniin qorannoo kana irraa funaaname maqaa nama qorannicha irratti hirmaatetiin osoo hin taane koodiin itti kennemee faayila keessa kan taa'u ta'a. Dabalataan bu'aan qorannichaa qaama qorannoo gaggeessun alatti nama birootti dabarfamee kan hin kennamneedha.

Mirga diduu/addaan kutuu: Qoranno kana irratti hirmaachuu diduuf mirga guutuu qabdu.Gaaffiwwan yaadaa kee irratti kennuu hin barbaanne keessaa filattee diduu mirga qabda.Yeroo barbaaddetti hirmaannaa kee addaan kuttee deemuuf mirga guutuu qabda.Rakkoon kamiiyyu yoo si mudate teessoo armaan gaditiin nu qunnamuu ni dandeessa:

Qorannoo kan gaggeessu : Mogas Tasfaayee

Mob 0910167915

E mail mogesmule@gmail.com

Qornnoo irratti hirmaachuuf fedhii qabdaa?

Eeyyee ☐ lakkii ☐

Eeyyee yoo ta'e ,itti fufa.

Annex 4

Jimmaa Yuuniivarsiitii, Kolleejjii Saaynsii Fayyaa Hawaasaa Fi Meedikaalaa

Diipartiimantii Ipiideemooloojii

Gaaffilee sababoota tajajila HIV akka dafanii hin argannee godhan,hospital Qiddus Luqqaas fi kolleejii narsoota

Koodii_____

Lakk.CD4_____

Ramaddii WHO 1.ramaddii I fi II 2.ramaddii III fi IV

1.Gaafii eenyummaaf hawaasummaan wal qabatan			
Lakk.	Gaafii	Deebii eegamu	koodii
001	Umrii		
002	saala	1.dhiira 2.dubra	
003	Haala fuudha/heerumaaa	1.kan hinfuune/hinheerumne 2.kan fuudhe/heerumte 3.kan walhiikan 4.kan jalaa du'ee 5.kan gargar bahan	
004	Amantii	1.oortoodooksii 2.muusliima 3.pirooteestaantii 4.kaatoolikii 5.kan biraa_____	
005	sabummaa	1.oromoo 2.amaaraa 3.guraagee 4.tigiree 5.kan biraa _____	
006	Haala baruumsa	1.kan hoomaa hin barannee 2.sadarkaa 1ffaa(1-8) 3.sadarkaa 2ffaa(9-12) 4.koleejii(BLTO) 5.uniivarsiitii fi sanaa ol	
007	Gahee hojii	1.hojii mana keessaa 2.qonnaan bulaa 3.hojjetaa mootummaa 4.hojjetaa mitimootummaa 5.daldaalaa 6.kan hojii hinqabnee 7.hojjetaa guyyaa 8.kan biraa _____	
008	Bakka jireenyaa	1.baadiyyaa 2.magaalaa	
009	Abbummaa manaa	1.kan ofii kan qabu 2.kan kireeffannaa	
010	Haala jireenyaa	1.kan qophaa jiraatu/ttu 2.kan abbaa/haadhaa warraa waliin jiraatu/ttu 3.kan maatii waliin jiraatu	
011	Galii		
012	Gargaarsa hawaasaykn qaama biraa	1.eeyyee	

	irraa ni argattaa?	2.lakkii	
013	Yoo eeyyee ta'e gargaarsa maal fakkatu argate?		
Gaaffilee haala dhuunfaa ilaalan			
101	Hubannoo qarannoo HIV qabdaa?	1.eeyyee 2.lakkii	
102	Hubannoo kaba eessaa argatte?	1.miidiyaa irraa 2.marii uummataa irraa 3.ogeesaa fayyaa irraa 4.kan biraa _____	
103	Hubannoo wal'aansa HIV qabdaa?	1.eeyyee 2.lakkii	
104	Hubannoo kana eessaa argatte?	1.miidiyaa irraa 2.marii uummataa irraa 3.ogeesaa fayyaa irraa 4.kan biraa _____	
105	Hubannoon keen booda maal murteessite?		
106	Yeroo gara kana dhuftu hiriyaa dhaabbataa/ttu qabdaa?	1.eeyyee 2.lakkii	
107	Yoo qabattee waggaa meeqa waliin turtan?		
108	Ulfa turte yeroo gara wal'ansaa dhuftu?	1.eeyyee 2.lakkii	
109	Qorichi rakkina fida jette ni sodaataa?	1.eeyyee 2.lakkii	
110	Rakkina mal fida jettee yaada?		
111	HIV qabaachuu kee nama biraatti himtee beektaa?	1.eeyyee 2.lakkii	
112	Yeroo duraatiif eenyutti himte?	1.abbaa/haadha manaa 2.maatii 3.hiriyaa 4.kan biraa_____	
113	Gara wal'aansa akka dhuuftu sababni kee maali?	1.dhukkuba 2.gorsa oogeessa fayyaa 3.gorsa hiriyaa 4.kan biraa _____	
114	Yeroo gara wal'aansaa dhuftu maal fakkata?	1.deemuufi hojjechuu nan danda'a 2.siree irran jira	
Gaaffilee Haala amala dhuunfaa			
201	Alkoolii ni fayyadamta turtee?	1.eeyyee 2.lakkii	
202	Torbanitti hammam/guyyaa meeqa?		

203	Jiimaa ni qamaataa?	1.eeyyee 2.lakkii	
204	Torbanitti guyyaa meeqa?		
205	Sigaaraa ni aarsitaa?	1.eeyyee 2.lakkii	
206	Torbanitti paakoo meeqa?		
207	Wanta biro kan fayyadamtu jiraa?	1.eeyyee 2.lakkii	
208	Yoo jiraate maal fa'a?	1.shiishaa 2.ashiishii 3.mariijuwaanaa 4.kan biraa _____	
209	Hiv qabaachuu keetiin wantii si irraa hafee jiraa?	1.eeyyee 2.lakkii	
210	Yoo jiraate ibsi		
211	HIV qabaachuu keetiin wanti ati itti miidhamte jira?		
212	Yoo jiraate ibsi		
Gaaffii haala wal'aansan walqabatan			
301	Wal'aansa argachuun hammam eegda?	1.daqiiqaa 30 gadi 2.daqiiqaa 30- sa'aa 1 3.sa'aa 1 ol	
302	Haalli wal'aansa ogeesaa sitti ni tolaa?	1.eeyyee 2.lakkii	
303	Lakkii yoo jettee maaliif?		
304	Haalli sa'aa tajaajilaa sitti ni tolaa?	1.eeyyee 2.lakkii	
305	Lakkii yoo jettee maaliif?		
306	Ogeesi yeroo qarannoof si argu waa'ee wal'aansaa sitti himee jiraa?	1.eeyyee 2.lakkii	
307	Gorsa ogeessaa qarannoon duraa siif kenname jiraa?	1.eeyyee 2.lakkii	
308	Gorsi qarannoon booda siif keenname jiraa?	1.eeyyee 2.lakkii	
309	Gorsi maal irratti xiyyefate?		
310	Rakkinni oogeessa irraa si qunnamee jiraa?	1.eeyyee 2.lakkii	
311	Yoo jiraate ibsi		
312	Fageenya as irra qabu	1.1-5km/sa'aa 1 gadi 2.=>5kms/sa'a 1	