



ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES
COLLEGE OF NATURAL AND COMPUTATIONAL SCIENCES
DEPARTMENT OF ZOOLOGICAL SCIENCE

General Biology program

**A FIVE-YEARTREND OF HIV/AIDS PREVALENCE ON KNOWLEDGE, ATTITUDE
AND PRACTICE, AMONG PATIENTS, ATTENDING TREATMENT AT DELANTA
WOREDA, WOGELTENA HEALTH CENTER, SOUTHWOLLO ZONE, AMHARA
REGION, NORTH EAST ETHIOPIA**

By

Amisal Aragie Geremew

August, 2024

Addis Ababa, Ethiopia



ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES
COLLEGE OF NATURAL AND COMPUTATIONAL SCIENCES
DEPARTMENT OF ZOOLOGICAL SCIENCE

General Biology program

A FIVE-YEARTREND OF HIV/AIDS PREVALENCE ON KNOWLEDGE,
ATTITUDE AND PRACTICE, AMONG PATIENTS, ATTENDING TREATMENT AT
DELANTA WOREDA, WOGELTENA HEALTH CENTER, SOUTHWOLLO ZONE,
AMHARA REGION, NORTH EAST ETHIOPIA

By: Amisal Aragie Geremew

Advisor: Asnake Desalegn (PhD)

**A THESIS SUBMITTED TO ADDIS ABABA UNIVERSITY, COLLEGE OF
NATURAL AND COMPUTATIONAL SCIENCES, DEPARTMENT OF
ZOOLOGICAL SCIENCES IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR MASTER OF SCIENCE DEGREE IN BIOLOGY**

August, 2024

Addis Ababa, Ethiopia

APPROVAL SHEET

Addis Ababa University

This is to certify that the thesis is prepared by Amisal Aragie Geremew, entitled: “A five-year trend of HIV/AIDS prevalence on Knowledge, Attitude and Practice, among patients, attending treatment at Delanta Woreda, Wogeltena Health Center, South Wollo Zone, Amhara Region, North East Ethiopia”, and submitted in partial fulfillment of the requirements for the awards of the degree of masters of science (M.Sc.) in Biology.

Approved by Board of Examiners

Name of Chair Person

Signature

Date

Name of Internal Examiner

Signature

Date

Name of External Examiner

Signature

Date

DECLARATION

I declare that the work which is being presented in this thesis entitled “A five-year trend of HIV/AIDS prevalence on Knowledge, Attitude and Practice, among patients, attending treatment at Delanta Woreda, Wogeltena Health Center, South Wollo Zone, Amhara Region, North East Ethiopia” is the result of my own investigation except as cited in the references. I have undertaken the study independently with the guidance and support of my research advisor. All the sources of the materials used in this thesis paper have been properly acknowledged. Furthermore, the thesis has not been accepted for any degree and is not alongside submitted in candidature of any other degree.

Signature _____

Amisal Aragie Geremew

This thesis has been submitted for examination with my approval as university advisor.

Advisor's Signature _____

Asnake Desalegn (PhD)

ACKNOWLEDGEMENT

First and for most, I would like to praise to the Almighty GOD for everything he did in my life. Next, I would like to thank Addis Ababa University College of Natural and Computational Sciences Department of zoological sciences for giving me opportunity to execute this thesis. Then, I would like to also provide special thanks to my advisor Dr. Asnake Desalegn who guided me by giving valuable advice, and comments. Finally, I want to extend my appreciation to the health center workers who participated in the study especially for assisting by giving documents.

TABLE OF CONTENTS

	Pages
APPROVAL SHEET	I
DECLARATION	II
ACKNOWLEDGEMENT	III
LIST OF TABLE	VII
LIST OF FIGURE.....	VIII
ACRONYMS/ABBREVIATIONS.....	VII
ABSTRACT.....	IX
1. INTRODUCTION	1
1.1. STATEMENT OF THE PROBLEM	3
1.3. OBJECTIVES OF THE STUDY	4
1.3.1. <i>General objective</i>	4
1.3.2. <i>Specific objectives</i>	4
1.4 RESEARCH QUESTIONS	4
1.5. SCOPE OF THE STUDY.....	5
1.6. LIMITATIONS OF THE STUDY.....	5
1.7. SIGNIFICANCE OF THE STUDY	5
2. LITERATURE REVIEW	6
2.1. HUMAN IMMUNODEFICIENCY VIRUS (HIV).....	6
2.3. THE CURRENT STATUS OF HIV/AIDS	6
2.3. 1. <i>HIV/AIDS in the World</i>	6
2.3.2. <i>HIV/ AIDS in Africa</i>	7
2.3.3. <i>HIV/AIDS in Ethiopia</i>	8
2.4. CURRENT HIV PLAN OF ETHIOPIA	8
2.5. ANTI-RETROVIRAL THERAPY (ART).....	9
2.6. SEASONAL HIV INCIDENCE	10
2.7. COMPARISON OF PREVALENCE AND INCIDENCE HIV	10
2.8. CONCEPTUAL FRAMEWORK	11
3. MATERIALS AND METHODS.....	12
3.1. DESCRIPTION OF THE STUDY AREA	12

3.1.1. <i>Location</i>	12
3.1.2. <i>Demographic features</i>	13
3.2. SAMPLE DESIGN	14
3.2.1. <i>Study Population</i>	14
3.2.2. <i>Sampling Size</i>	14
3.2.3. <i>Selection of Respondents</i>	14
3.3. DATA COLLECTION TECHNIQUES	15
3.3.1. <i>Primary Data Collection</i>	16
3.3.2. <i>Secondary Data Collection</i>	16
3.4. STUDY VARIABLES	17
3.5. PROCESSING AND ANALYSIS OF THE DATA.....	17
3.5.1. <i>Quantitative Data Analysis</i>	17
3.6. ETHICAL CLEARANCE	17
4. RESULT	18
4.1. DEMOGRAPHIC CHARACTERISTICS OF THE PATIENTS	18
4.1.1. <i>Gender and age composition of retrospective data</i>	19
4.1.2. <i>Gender incidences of HIV/ AIDS in Wogeltena health center from 2011 E. C to 2015 E.C</i>	21
4.1.3. <i>Residence characteristics of patients from retrospective data</i>	22
4.1.4. <i>Educational Level of patients from retrospective data</i>	22
4.1.5. <i>Marital status of patients from retrospective data</i>	23
4.1.6. <i>Religious status of patients from retrospective data</i>	23
4.2. MEANS OF BEING INFECTED WITH HIV	23
4.3. ART AND HTS COVERAGE IN THE AREA.....	25
5. DISCUSSIONS.....	27
5.1. FIVE YEAR INCIDENCE RATES OF HIVPATIENTS.....	27
5.2. FIVE YEAR DEATH RATES OF HIV PATIENTS	28
5.3. CURRENT TRENDS OF HIV IN THE STUDY AREA.....	29
5.4. PROTECTION OR HIV PREVALENCE REDUCTION TRENDS IN THE STUDY AREA.....	29
6. CONCLUSION AND RECOMMENDATIONS	30
6.1. CONCLUSION	30

6.2. RECOMMENDATION	31
7. REFERENCES	32
APPENDIX I	38
APPENDIX II	43
APPENDIX III.....	44
APPENDIX IV.....	46

LIST OF TABLE

Table 1: Sample size for respondents	15
Table 2: Demographic characteristics of the patients	18
Table 3: Sex of patients with in the year recorded data	21
Table 4: Residence of the patients	22
Table 5: Means of HIV transmission of the respondents.....	24
Table 6: HIV prevalence reduction methods among the respondents	24
Table 7: ART and HTS coverage of patients of in Wogeltena health center	25
Table 8: Incidences of patients with in the year recorded data.....	27
Table 9: Death rates of patients with in the year recorded data.....	28

LIST OF FIGURE

Figure 1: Life cycle of HIV (UNLOM,2018)	10
Figure 2: Conceptual framework adopted from different literature.....	11
Figure 3: Map of study area	13
Figure 4: Gender composition of retrospective data.....	20
Figure 5: Age composition of retrospective data.....	20
Figure 6: Sex of recorded data from 2011 E.C to 2015 E.C.....	21
Figure 7: Residence of the patients.....	22
Figure 8: Religious composition of retrospective data	23
Figure 9: Means of HIV transmission of the respondents	24
Figure 10: HIV prevalence reduction methods among the respondents	25
Figure 11: ART and HTS coverage of patients of in study area.....	26
Figure 12: Incidences of patients with in the year recorded data	27
Figure 13: Death rates of patients with in the year recorded data	28

ACRONYMS/ABBREVIATIONS

ABC	Abstain Be Faithful Condom use
AIDS	Acquired Immune Deficiency Syndrome
ART	Anti Retro Viral Therapy
ARV	Anti Retro Virus
CART	Combination Anti-Retroviral Therapy
CIA	Central Intelligence Agency
CSA	Central Statistical Authority
DHIS	District Health information system
EDHS	Ethiopian Demographic Health Survey
EPHI	Ethiopian Public Health Institute
FHAPCO	Federal HIV/AIDS Prevention and Control Office
FMOH	Federal Ministry of Health
GAMET	Global AIDS Monitoring and Evaluation Team
GAC	Ghana AIDS Commission
HAART	Highly Active Anti-Retroviral Therapy
HIV	Human Immune Deficiency Virus
HTS	HIV testing service
MARPs	Most at Risk Populations
MDHS	Malawi Demographic and Health Survey
MOE	Ministry of Education
NRTIs	Nucleoside Reverse Transcriptase Inhibitors
PITC	Provider-initiated testing and counseling
PLHA	People Living with HIV/AIDS
RNA	Ribo Nucleic Acid
SARDP	Sida Amhara Rural Development Programs
SSA	Sub-Saharan Africa
STIs	Sexual Transmitted Infections
UAC	<i>Uganda AIDS Commission</i>
UNAIDS	Joint United Nations Programs on AIDS
UNFPA	United Nation Population Fund

UNLOM USA National Library of Medicine
UNICEF United Nation Children's Fund VCT- Voluntary Counseling and Testing
VCT Voluntary Counseling and Testing
WHO World Health Organization

ABSTRACT

One of the primary pathogenic agents responsible for a multitude of grave illnesses in people, animals, and plants is a virus. HIV/AIDS has a multifaceted and intricate impact. HIV/AIDS continues to be the biggest developmental obstacle for Ethiopia, notwithstanding its stability. The degree of awareness and changes in behavior are the primary factors influencing the incidence of HIV in communities. This study set out to evaluate the HIV/AIDS trends over the previous five years among patients at the Wogeltena health clinic in Delanta Woreda. Between 2011 and 2015, cross-sectional studies comparing HIV/AIDS patients was carried out. A total of 550 retrospective data and 84 respondents as a primary data source were selected through systematic sampling. Data analysis was made by SPSS version 16. Respondents in the study area were infected with HIV due to unprotected sex about 62.5%, unsafe blood transfusion about 12.5%, contaminated sharp materials about 6.25% and mother to child about 18.75%. According to this survey, 18.75% of participants said that abstaining from sexual activity effectively lowers the overall incidence of HIV/AIDS. Furthermore, 68.75% of them reported being faithful, and 12.5% of them were aware of the use of condoms. A significant proportion of respondents, both males (75%) and females (62.5%), reported having devoted sexual partners. In 2015 E. C., a sizable patient population was enrolled in HIV care and treatment. Since 2015 E. C., the general trend of connecting patients to care and treatment after HIV positive findings has exhibited a slightly enhanced pattern. The relationship involving care and treatment peaked in 2015 E. C. and peaked in 2011 E. C. Since 2011 E.C., the trend of HIV test positivity, or yield, has been rising. It peaked in 2011 E.C. at 18.7% and increased to 21% in 2015 E.C. The ART coverage trend in the current study demonstrated an improved pattern, rising from 400 (13.74%) in 2011 E.C. to 550 (21%) in 2015 E.C. According to the study, there was a significant gap in knowledge, attitudes, and practices regarding HIV/AIDS preventive practice. Youths were found to have a higher prevalence of HIV/AIDS than other population, and a high proportion of them engaged in risky sexual behaviors like multiple sexual partners, unprotected sex, and inconsistent condom use. In conclusion, even though the general public in the area is well aware about HIV and ART, much more work needs to be done to raise public awareness

.Keywords: HIV/AIDS, ART, HTS, Trend, pathogenic agents.

1. INTRODUCTION

Numerous relatively frequent diseases, such as the common cold, influenza, chickenpox, herpes, gastroenteritis (stomach flu), hepatitis, HIV/AIDS, and influenza are caused by viruses. In fact, viral infections are probably to blame for over 60% of illnesses that strike people in affluent nations. Viral diseases frequently result in serious and sometimes fatal consequences (Zhang, et al., 2015). Since the dawn of human civilization, infectious diseases have been widely recognized (Asiri, et al., 2020). Various microorganisms (bacteria, viruses, and fungi) are the cause of infectious diseases. Unlike the complicated structures of fungi, helminthes, and protozoa, the structure of a virus is simple and consists of a protein coat, nucleic acid, viral enzymes, and occasionally a lipid envelope (UNAIDS, 2008). Furthermore, viruses are obligatory intracellular pathogens since they replicate via the host's cellular apparatus (Sam, 2013). It is challenging to produce medications with specific toxicity against viruses because of these features (Sam., 2013). According to Saxena SK, et al. (2010), viruses are extremely small agents with genetic material made up of either DNA or RNA. They are known to cause a wide range of diseases in people, animals, and plants. Since viruses and humans utilize different tactics to combat one another, the battle between the two is an ongoing one. A new chapter in the history of antiviral drug development was initiated with the June 1963 approval of the first antiviral medication, idoxuridine (Wang, et al., 2019). Many medications with antiviral potential have since been created and are being used in clinical settings to treat millions of people globally (U.S.A. Census Bureau, 2002). A family of medications known as antiviral drugs is specifically used to treat viral infections (Ryu, et al., 2017). Just as antibiotics are used to treat bacteria; certain antiviral medications are used to treat particular viruses. Unlike most antibiotics, antiviral medications impede the growth of their target microorganisms rather than eliminating them (GAC, 2004). Since viruses replicate in the cells of their hosts, developing safe and efficient antiviral medications is challenging. Finding medication targets that would disrupt the virus without endangering the host's cells is therefore challenging (Mohamed, 2015). Despite advanced equipment and stringent quality control protocols, only a few numbers of antiviral drugs are approved for use in humans. Antiviral medication resistance or side effects are the causes of this (Balloux F, et al., 2017).

With increased understanding of viruses and their processes of infection, as well as the rapid development of novel antiviral strategies and techniques, the production of new antiviral drugs will quicken (UNAIDS(c), 2016).The state of the world now suggests that microbiological threats will continue to emerge and spread more quickly, mostly due to unprecedented globalization and climate change. DNA contamination Viruses that normally contain double-stranded DNA, such as papilloma, herpes, adenoviruses, and poxviruses, are known to possess single-digit DNA. When a DNAvirus enters the cell core, more viruses are produced. Retroviruses (AIDS, T-cell leukemia), influenza, measles, mumps, colds, meningitis, and polio are examples of single descriptor RNA (ssRNA) viruses. The RNA virus does not enter the cell core this season, in addition to the cold virus infection. Viral RNA is arranged by the host genome, which is then used to make a DNA copy of the viral RNA, which is subsequently followed by retroviruses. When a host cell is infected with a virus, the virus replicates its DNA and releases more viruses. Viral attachment, invasion, uncoating, replication, assembly, and release are the six phases of viral replication (CIA, 2016/2017).Human immunodeficiency virus (HIV), which causes acquired immunodeficiency syndrome (AIDS), can be spread through sexual contact, blood exposure (including sharing contaminated needles and syringes), specific blood products, and other bodily fluids (Saxena SK et al., 2010). AIDS and the human immunodeficiency virus (HIV) have emerged as one of the world's most serious health issues in numerous nations (Pinskyet al., 2009).It is one of the most harmful and a serious hazard to the global population (FMOH, 2005)). In Sub-Saharan Africa in 2015–16, almost 80% of people do not know they are infected. Over 90% of people are unsure if their sexual partners are infected. Circumstances like these encourage the pandemic to spread farther (Christian and Jorgen, 2015–16).The greatest threat to Ethiopia is the HIV/AIDS epidemic, with the bulk of the country's working-age population—those between the ages of 15 and 49—being the most severely impacted (FMOH, 2011).Due to the powerful influence of peer pressure and the formation of their sexual and social identities, which frequently result in experimentation, young people between the ages of 13 and 30 are especially vulnerable to HIV (Connolly et al., 2011).A UNAIDS report from 2019 states that as of the end of 2018, there were an estimated 37.9 million HIV-positive individuals, 1.7 million newly infected individuals, and 770,000 AIDS-related deaths. According to UNAIDS, 2019 there were 690,000 HIV-positive people living in Ethiopia, 11,000 AIDS-related deaths, and 23,000 new HIV infections. Of the 36 million projected

HIV/AIDS positive individuals, over 95% reside in developing nations, with Sub-Saharan Africa accounting for the majority at 70% (UNAIDS, 2012). The HIV/AIDS epidemic is primarily affecting young people (Modi, 2018). According to UNICEF (2010), over one-third of all HIV/AIDS patients were under 25 years old. HIV prevention knowledge is less common among rural youth (15–24 years old, both sexes) than it is among urban youth (CSA and ICF, 2016). In contrast to larger cities, small towns covered in the Demographic and Health Survey (DHS) showed a greater prevalence of HIV (Yamane et al., 2008). In its HIV prevention package for MARPs, the Federal HIV Prevention and Control Office recognized the following categories as vulnerable and most at-risk (Mohamed et al., 2015). Schoolchildren between the ages of 15 and 24 are included in MARPs (FHAPCO, 2011). All program activities include efforts to increase public knowledge and understanding of HIV/AIDS (Asiri et al., 2020). In order to influence people's attitudes and behaviors, it is imperative that communities become more aware of HIV/AIDS. . People are more inclined to find out their HIV status, protect themselves, and so lower the prevalence when there is community knowledge. The main aim of this study was to assess five years trend of HIV/AIDS in the study area.

1.1. Statement of the problem

HIV/AIDS is a severe issue for Ethiopia that goes beyond health concerns. People are impacted by it in a variety of ways, including economically, socially, emotionally, physically, and psychologically. The Wogeltena Town Health Center did not assess the progress towards achieving this goal or the trends of HIV patients with comparison in the past year, despite the government of Ethiopia having already launched the 2nd HIV/AIDS national strategic plan of Ethiopia (2021–2025) (UNAIDS(c), 2016). There is a gap in the treat-all approach and launching trends of decreasing HIV positives, as well as routinely monitoring treatment outcomes through viral load testing. Understanding present progress enables the creation of relevant action items for the accomplishment of the previous five years and forecasts the upcoming year's serve as baseline data for future comparison. Thus, the purpose of this study was to evaluate the HIV five-year trends among patients from Wogeltena Health Center, Delanta Woreda, from 2011 E. C. to 2015 E. Young people in Wogeltena town's Delanta Woreda are among the most stigmatized and

Marginalized social groups due to their involvement in unwelcome sexual relations and large numbers of guests come to the area to buy the Demand-like Mineral called **Opal** which is very expensive that export outside world main issues for dangerous sexual activity, and Youngs specially females are highly susceptibility to illness. As a result, the complex social phenomena in the town have been created by those multifaceted issues pertaining to kids and teens. Here, questions can be asked about awareness, patient trends regarding HIV, vulnerability, knowledge, attitude, and practice of HIV and AIDS prevalence and prevention. To the best of the researcher's knowledge, no researcher has thoroughly investigated the HIV trends among patients at Delanta Woreda, Wogeltena health center, despite the fact that numerous academics have studied these trends in various parts of Ethiopia. This study's primary goal is to evaluate the prevalence of HIV among patients at Wogeltena Health Center over a five-year period. The findings of this study would be important in determining where the proper ART use tactics should be concentrated, to close knowledge gaps in comparable.

1.3. Objectives of the study

1.3.1. General objective

The general objective of this study is to assess a five year trends of HIV among patients attending at Wogeltena, Health Center.

1.3.2. Specific objectives

The specific objectives of this study were;

- ◆ To assess trends in the level of HIV incidence in the study area.
- ◆ To assess HIV prevalence and protection methods at Wogeltena health center.
- ◆ To determine ART and HTS coverage in the study area.

1.4 Research Questions

At the end of this study the following questions are expected to be answered:

- ◆ What is the incidence of HIV at Wogeltena health center?
 - How the prevalence of HIV/AIDS infections in the Wogeltena?
 - What are the means of transmission of HIV in the study area?
 - What is the level of knowledge, attitude and practice of Delanta Woreda HIV positives about HIV and AIDS?

1.5. Scope of the study

This study assesses the five years trend in the prevalence of HIV and ART use at Wogeltena town health center, Delanta Woreda. It is a pioneer study agenda that attempts to find out the incidence of HIV and ART use practices among patients. Therefore, the study results are valid for the study population during the study period.

1.6. Limitations of the Study

. These limitations stemmed from the data gathering procedures, which involved reviewing medical records (document review). In Wogeltena health center some of the staff members were currently absent in the area because the security in the area was difficult and some of the personnel's were not giving service as they were before. So it very difficult to get health center workers directly in the health center rather they are in different cities of Ethiopia. Therefore these research study with limited data sources.

1.7. Significance of the Study

This study may contribute in providing relevant information and genuine data about the topic gathered from trustworthy sources. Thus, the study would be significant for the health professionals, who want to research in this Woreda. And also the research finding would be valuable for Delanta Woreda health community, Woreda leaders in providing genuine information about the trends prevalence and prevention of HIV AIDS among patients in Delanta Woreda, south Wollo zone of Amhara regional state Ethiopia. The result also would be a starting point for the researchers to conduct further research on Wogeltena health center.

2. LITERATURE REVIEW

2.1. Human Immunodeficiency Virus (HIV)

Human immunodeficiency virus (HIV) causes acquired immunodeficiency syndrome (AIDS), a chronic sickness that impairs a person's ability to fight the disease and leaves the body susceptible to diseases that would otherwise be considered benign (Pinsky and Douglas, 2009). The RNA genome of the human immunodeficiency virus (HIV), a retrovirus (a subgroup of lentiviruses) that causes acquired immune deficiency syndrome (AIDS), permits greater genetic variety and quick adaptation (Bazzeew and Ascheneke, 2012). Antiretroviral medication has made it possible for people to live longer, which has increased the prevalence of HIV. However, at the same time, the number of new infections has dropped from 3.3 million in 2002 to 2.3 million in 2012. (Saxena et al., 2010). In order to significantly suppress viral replication and reduce the establishment of drug resistance, antiretroviral therapy (ART) is based on the co-administration of medications that concurrently block numerous viral targets (Christian and Juergen, 2015/2016). Nucleoside/nucleotide reverse transcriptase inhibitors (NRTIs), non-nucleoside reverse transcriptase inhibitors (NNRTIs), protease inhibitors (PIs), fusion inhibitors, CCR5 antagonists, and integrase inhibitors (INIs) are the six classes of antiretroviral medications that are currently on the market (Gashaw et al., 2007). As previously said, a significant advancement has been achieved by the implementation of a therapy that blends various medications to reduce the likelihood of resistance developing. According to some research, using a protease inhibitor in addition to two NRTIs significantly decreased morbidity and death (Demeke and Sandy, 2014).

2.3. The current Status of HIV/AIDS

The Human immunodeficiency (HIV) is a global public health problem that takes the lives of people. By the end of 2019, an estimated 38.0 million individuals were living with HIV (Achamyeleh, et al; 2022). HIV/AIDS has a multifaceted and intricate impact. HIV and AIDS have gained prominence on the global health agenda since 2000 (UNESCO and MOE, 2012). Ethiopia is one of the majorly affected countries in sub-Saharan Africa, with huge number of people that are living with HIV/AIDS.

2.3. 1. HIV/AIDS in the World

A global health concern affecting millions of individuals globally is HIV/AIDS. Approximately 37.9 million individuals worldwide are coping with HIV/AIDS (Birssaw and Tilaye, 2021). With

1.1 million (940,000-1.3 million) AIDS-related fatalities and 2.1 million (1.8 million-2.4 million) new HIV infections in 2015 every year. Adults aged 15 and older make up more than 95% of those living with HIV/AIDS (UNAIDS, 2016). The number of people who contracted HIV annually decreased from 3.4 million in 2001 to 2.1 million (1.8–2.4 million) in 2015 because to prevention measures (UNAIDS, 2012).UNAIDS/WHO estimates suggest a 35% drop in incidence overall since 2000 (WHO, 2016). Antiretroviral therapy (ART) has significantly expanded, resulting in a 45% decrease in the number of deaths globally from HIV-related causes to around 1.1 million in 2015 (UNAIDS (b), 2016).Between 2001 and 2015, the number of new HIV infections fell from 3.4 million to 2.1 million, indicating the effectiveness of widespread access to antiretroviral therapy (ART), especially in sub-Saharan Africa (WHO, 2016). However, the unacceptable high incidence of new HIV infections worldwide highlights the need for innovative HIV preventive approaches. Furthermore, antiretroviral therapy (ART) has emerged as a critical component of prevention; yet, in the near future, it is unlikely to reduce the number of new HIV infections (Christian and Jorgen, 2015). The decline in new HIV infections among adults has slowed drastically in recent years. Every day, about 5700 new cases of HIV infections are reported, with sub-Saharan Africa accounting for 66% of these cases (Guzman I. and Bosch R., 2007). The rate of new HIV infections among persons aged 15 and older is high. 35% of the 5300 persons who get new HIV infections every day are young people between the ages of 15 and 24 (UNAIDS(c), 2016).

2.3.2. HIV/ AIDS in Africa

The HIV/AIDS pandemic is having a significant impact on eastern and southern Africa, according to UNAIDS reports. By 2015, there were 19.0 million (17.7–20.5 million) HIV/AIDS positive people living in those regions, 960,000 new HIV infections (830,000–1.1 million) and 470,000 AIDS-related deaths (390,000–560,000). About 6.5 million people in Western and Central Africa and 230,000 in the Middle East and North Africa, respectively, were estimated to be HIV/AIDS positive in other parts of Africa (UNAIDS(c), 2016).Although the prevalence of HIV started to decline by 4% in East African nations (UNAIDS (d), 2016), the overall number of individuals living with HIV/AIDS did not drop. Nearly 80% of young persons with HIV/AIDS reside in Sub-Saharan Africa. Globally, the infection rate among young women aged 15 to 24 is twice that of young males (CIA, 2016/2017). According to UNFPA (2012), young women account for 22% of all new HIV infections and 31% of new infections in Sub-Saharan Africa.

Sixty-six percent of new HIV infections worldwide occur in Sub-Saharan Africa (UNAIDS(c), 2016).

2.3.3. HIV/AIDS in Ethiopia

Ethiopia is one of the countries in the Horn of Africa where the HIV/AIDS epidemic is having the worst effects. HIV-1 subtype C is still the predominant form in Ethiopia and is transmitted through unprotected heterosexual contact (Sam, 2013). By 2014, there were 769,602 individuals in Ethiopia who were HIV/AIDS positive, 15,614 new HIV infections, and 35,578 deaths from the disease (EPHI and FMOH, 2014). Over 18 million Ethiopians are enrolled in TVETs and primary and secondary schools, making up over one-third of the country's youth and adolescents (MOE, 2011/12) forty-two per cent of young men and 44% of young women of school age were not enrolled in Ethiopian secondary schools. Stated differently, they were over 16 (UNESCO, 2014). Substance abuse, gender inequity, and HIV/AIDS are just a few of the complex and serious problems that the town's youth must deal with (FHAPCO and MOE, 2013). In an attempt to stop the virus from spreading, Ethiopia is home to a number of HIV-related projects that focus on providing services for prevention, care support, and treatment. The organization in charge of arranging those services is FHAPCO, which was established in 2002 (EPHT, 2014). According to Hath (2013), Ethiopia has an unmatched opportunity to improve HIV/AIDS prevention, care, and treatment services due to the rapid expansion of the ART program.

2.4. Current HIV plan of Ethiopia

Ethiopia's National Strategy Plans (NSPs) have incorporated the UNAIDS fast track targets since 2015 (UNAIDS (d), 2016). Ethiopia's current national strategy plan (NSP) for HIV 2021–2026, as reported by UNAIDS (c), 2016, aims to achieve statewide control of the HIV pandemic by 2026, with no new HIV infections and AIDS mortality rates of less than one per 10,000 people. During an attempt to achieve the stated goals, the World Health Organization (WHO) reinforced the enhanced HIV testing service (HTS) and implemented the treat-all strategy as a new treatment initiation criterion in 2016. In order to achieve the first 90s or 95s, a number of HIV testing strategies have been employed, including volunteer counseling and testing (VCT) and provider-initiated testing and counseling (PITC) (UNAIDS (a), 2016). In 2016, viral load testing was initiated on the top 20 difficulty sites in Ethiopia. The viral load test is the gold standard for monitoring treatment outcomes for HIV patients. Consequently, 90% to 95% of individuals on

antiretroviral medication are expected to experience viral suppression. Despite the fact that Ethiopia's government has previously introduced the nation's second HIV/AIDS national strategic plan (2021–2025), the Amhara regional state viewpoint did not assess the country's progress toward attaining the three 90s. This is because there isn't a "treat everyone" strategy and viral load testing is routinely used to track treatment results. (UNAIDS (b), 2016). In addition to providing baseline data for future comparisons, an understanding of the current situation makes it easier to create appropriate action plans for reaching three 95% of the targets during the next five years (UNAIDS (c), 2016).

2.5. Anti-Retroviral Therapy (ART)

Antiretroviral therapy, more commonly known as ART, is used to treat HIV; however, neither the virus nor the treatment itself is eradicated (FHAPCO and FMOH, 2011). Together, they can halt the infection's spread. When the virus does, HIV illness advances more slowly. Anti-retroviral treatment is referred to as ART. Combination ARV therapy, or c ART, is referred to as highly active ART (HAART) (WHO, 2016). The use of HIV medications to treat HIV infection is known as anti-retroviral therapy (ART) (Yemane, et al., 2008). People on antiretroviral therapy (ART) follow a daily prescription of HIV medications. By preventing HIV at various stages of the HIV life cycle, HIV medications strengthen the immune system (Yitayal, et al., 2011). HIV medications are classified into many pharmacological classes based on how they combat the virus (Zenebu, et al., 2015). ART is particularly successful at keeping HIV from multiplying because an HIV regimen comprises HIV medications from at least two different HIV classes. Having less HIV in the body also protects the immune system and keeps HIV from progressing to AIDS. Moreover, ART lowers the chance of HIV resistance. While HIV cannot be cured, medications for the virus can extend and improve the health of its patients. HIV medications also lessen the chance of HIV transmission, or the virus spreading to other people. HIV attacks CD4 cells in the immune system, killing them. The body needs CD4 cells, a type of white blood cell, to fight infection (EPHI and FMOH, 2014). Via the mechanisms of CD4 cells, HIV replicates (makes copies of itself) and spreads throughout the body. This seven-step or stage process is referred to as the HIV lifetime (UNLOM, 2018). The seven phases of HIV replication are binding, fusion, assembly, reverse transcription, replication, integration and budding.

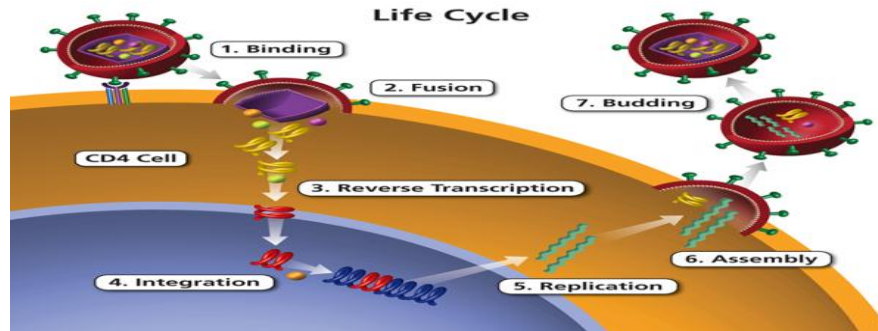


Figure 1: Life cycle of HIV (UNLOM,2018)

2.6. Seasonal HIV incidence

Demeke and Sandy (2014) state that temperature plays a critical role in the life cycle of the virus and that environmental conditions are the main factor determining HIV incidence. The HIV life cycle accelerates in warm weather because enzymes are more active for cellular functions (EPHI and FMOH, 2014). Seasons have an impact on HIV incidence. It is higher in the winter (dry season) than it is in the summer (rainy season) and other seasons, according to FHAPCO and FMOH (2007).

2.7. Comparison of prevalence and incidence HIV

As stated by Quan, et al. (2002), prevalence shows the cumulative burden of infections and takes into account new infections, migration out of a particular group, and mortality, while incidence counts the total number of illnesses that occur in a population over a given period of time. Thus, incidence quantifies the extent to which an illness has affected a community, while prevalence quantifies the severity of a condition (Le PHIA, 2017).

2.8. Conceptual framework

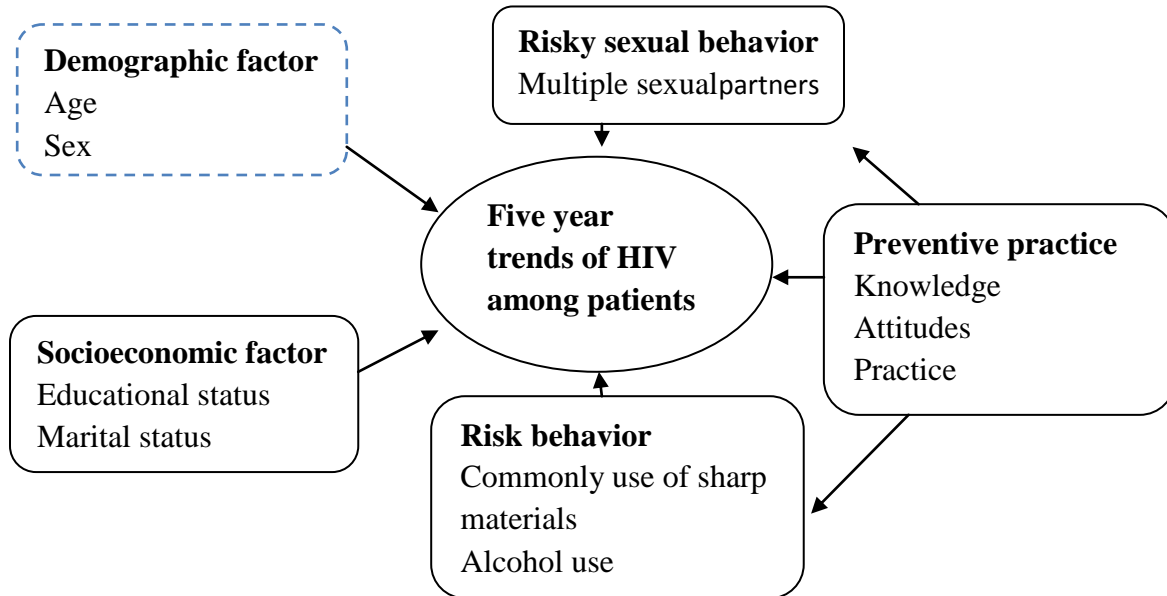


Figure 2: Conceptual framework adopted from different literature

3. MATERIALS AND METHODS

3.1. Description of the study area

3.1.1. Location

The study would be conducted in Wogeltena town. Wogeltena is the capital city of Delanta Woreda which is located in South Wollo Zone North east part of Amhara region, the Woreda is bordered with Wadla and Gubalafto Woreda in the north direction; with Dawunt Woredain the west direction; border with, TentaWoreda in the South; and AmbaselWoreda in the East direction. Geographically, it is located $11^{\circ}25'0''$ N- $11^{\circ}50'0''$ N latitude and $39^{\circ}0'0''$ E- $39^{\circ}30'0''$ E longitude. The main town of this Woreda is known Wogeltena located about 98 km and away from Dessie (the main town of South Wollo zone) and 180 km away from Woldia (the main town of North Wollo Zone) and 322km distance away from Bahirdar (the main town of Amhara region) in the east direction and 499km away from Addis Ababa to the north east direction. Administrational, this Woreda was part of North Wollo until 2000 E.C. After 2001E.C the Woreda became under south Wollo zone administration. Currently the Woreda has 31 rural Kebele's and 2 urban Kebele's totally it has 33 Kebele's (DelantaWoreda communicationoffice, 2021)

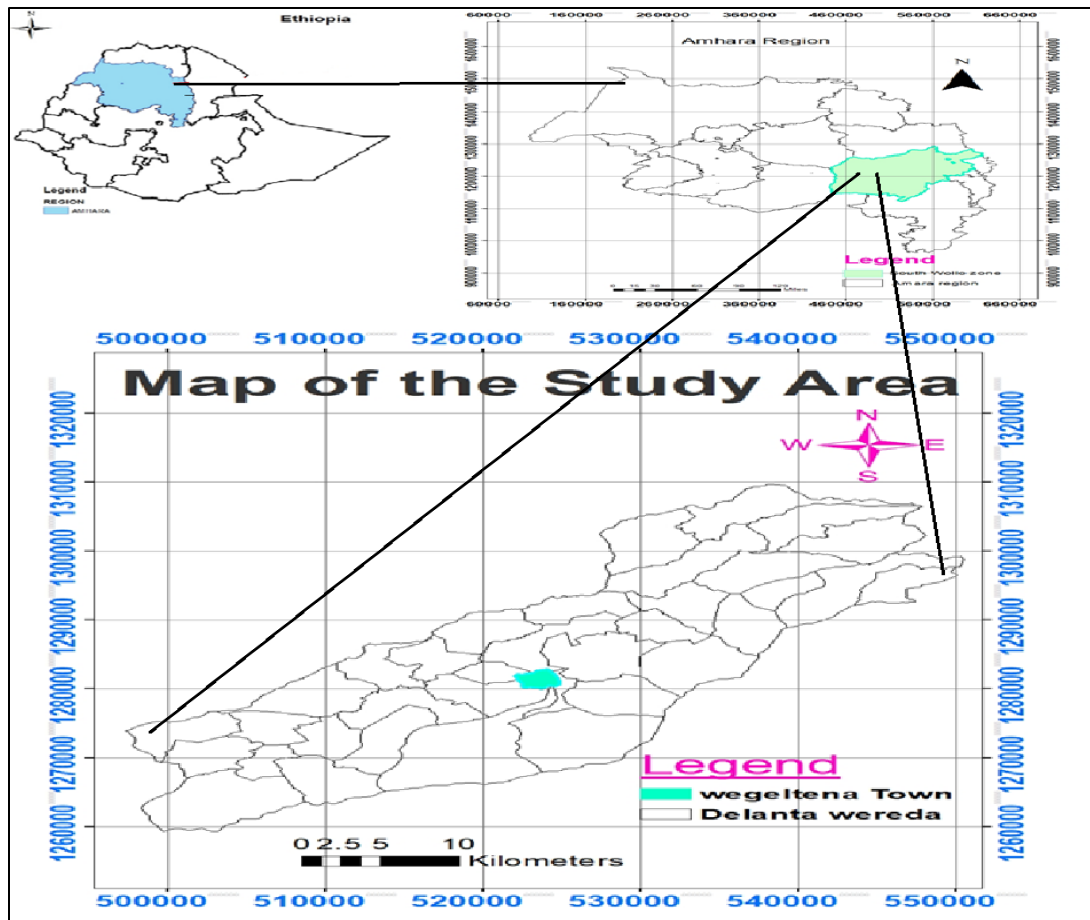


Figure 3: Map of study area

3.1.2. Demographic features

According to Delanta Woreda plan office (2021), the total population of the Woreda is 204798 out of which 99528(48.6%) are males and 105270 (51.4%) are females. Delanta has high rate of population growth that has caused crowded population settled over scarce land. The majority of the inhabitants practice Ethiopian orthodox Christianity with 90.78% reporting that as their religion, while 9.2% of the population they were Muslim. The area is densely populated due to increasing number of human population pressure. As a result, food deficiencies and meaningful resource degradation are continuously occurring furthermore aggravating land degradation; soil erosion and shortage of water supply are common problems. In general loss of forest resources, land degradation from agriculture, loss of habitat and biodiversity are the result of high population density in the region (DelantaWoreda communication office, 2021).

3.2. Sample Design

The sample design may also dictate the quantity or size of the objects to be included in the sample. In this study, the researchers used systematic sampling for HIV positive people from Wogeltena health center medical staff. A comparative cross-sectional study was conducted on HIV positive patients at Wogeltena Health center ART clinic. The study population included all HIV positive patients visiting Wogeltena Health center ART clinic.

3.2.1. Study Population

Delanta Woreda have one primary Hospital and seven health centers that contains many health professionals. In Wogeltena health centers there are about 24 totals of health professionals that researchers get in the study that consists of different tasks. All of the 550 HIV positive who were registered, attended and also currently operating in Wogeltena health center were included in the study.

3.2.2. Sampling Size.

Wogeltena Health center is available for large number of people in the Woreda and gives long term service for the community. Thus, most people used and therefore, this health center would be selected for study. According to Delanta Woreda health Office, the total numbers of HIV positive who were registered, attended and also currently operating were 550.

3.2.3. Selection of Respondents

Considering the cost to be incurred and the time available, sample size for questionnaire survey was determined using Cochran's (1977) formula, with sampling error of 10%, using the formula the sample size was:-

$$n = N / (1 + N(e^2))$$
$$n = \frac{550}{1 + 550(0.01)} = 84$$

Where, n = designates the sample size the research uses;

N = designates total number of the sample frame.

e = designates maximum variability or margin of error 10% (0.01);

1 = designates the probability of the event occurring.

Therefore; $N = 550$ and $n = 84$

The number of sample respondents from each HIV positive was calculated using, $n = E_n (N_i/N)$ formula used for proportional allocation of respondents from sample frame of 550 participants, where n is required proportional sample size from each HIV positive, N_i is total target population or sample frame, and N is total sample respondents.

Table 1: Sample size for respondents

No	Status	Affected Samples (N_i)	Proportional allocation of samples ($P_i = N_i/N$)	Sample size per each status ($n_i = p_i(n)$)	Sampling technique
1.	HIV positives	550	$P_1 = 550/550 = 1$	$1 \times 84 = 84$	Systematic sampling
2.	Total	550	1	84	

Following this systematic selection of sample respondents, sample participant units were selected in clear sequence at equal spacing after randomly selecting the first sample. Sample interval was determined using the formula;

$$K = N/n,$$

Where, K = sample interval;

N = sample population and;

n = sample respondents;

Therefore, $550/84 = 6$, thus after selection of the first sample randomly every 6th member of the sample frame were selected until it reached 84 for questionnaire survey. Whereas for better understanding of the issue and to get reliable information about the five year trends of HIV AIDS among patients from 2011 E. C to 2015 E. C in the study health center, and to cross check the facts and the validity knowledgeable, respondents were selected purposefully. The questionnaires were distributed to 84systematically selected HIV positives from Wogeltena health center in proportional allocation and 95.23 % of the questionnaires were collected. Almost all these respondents answered the questionnaires completely, except numerical data and opinion related questions that were not answered by some respondents.

3.3. Data Collection Techniques

Primary data collection techniques and secondary data collection techniques or institution-based, retrospective cross-sectional study was conducted in Wogeltena town health center, Amhara Region in Ethiopia. Five-year data and records of individual HIV/AIDS cases would be reviewed

from the health facility. Data collection was by using questionnaires, observation, and a standard checklist adapted from previous publication. Relevant data such as socio demographic characteristics of patients and HIV status would be abstracted from patient records.

3.3.1. Primary Data Collection

3.3.1.1 Questionnaire

This methodical technique to data collection is rather typical, particularly for extensive investigations. The questionnaire was given to the respondents, who then have to read it, understand the questions, and fill in the appropriate spaces on the form with their responses. For this reason, the study included both closed-ended and open-ended questionnaires. The questionnaire was made by the researcher and used to collect data from certain HIV positives. The respondent is free to choose the focus, level of detail, and length of his or her response while using open-ended questions. It helps the responders to communicate flexibility in their decision-making and to present their argument in a more appropriate manner. Conversely; the purpose of the closed-ended questions is to limit the questionnaire's length, which promotes response and validity in terms of the returns' representativeness. It also makes it simpler for the researcher to tabulate and evaluate data. The survey comprises fundamental inquiries that can effectively address the study concerns and objectives. The Amharic translation of the English questionnaire was done. This explains why the majority of responders do not speak English fluently. Furthermore, the questionnaire was evaluated in the same demographic prior to its official distribution.

3.3.1.2 Observations

One method of gathering data for this study was observation. The researcher saw firsthand how HIV patients were treated in the health center and was aware of the circumstances.

3.3.2. Secondary Data Collection

Secondary data refers to information that has already been gathered and examined by another party; in other words, it is already available. For this study, secondary data were utilized by the researcher. The Delanta Woreda health office's yearly reports, books, were the sources of the secondary data.

3.4. Study variables

Dependent Variables:

- Five year HIV trends among patients.

Independent variables

- Socio-demographic factors: age, sex, marital status, residence, educational status of the patients, religious.
- Risky sexual behaviors.
- HIV/AIDS, care and social, health education

3.5. Processing and analysis of the data

3.5.1. Quantitative Data Analysis

The quantitative data that have been collected from the respondents have categorized, coded, and analyzed using Statistical Package for Social Sciences (SPSS) Version 16 software. Finally, the result of descriptive analysis presented using tables and graphs with percent.

3.6. Ethical clearance

Ethical clearance was obtained from the Ethical Committee of the College of Natural Science of Addis Ababa University and given to Wogeltena health center and in turn permission letter was obtained from the head of the health center. The participants were informed about the aims, methods and anticipated benefits of the research.

4. RESULT

The main concern of the study was to present, analyze and interpret the collected data on the five-year trend of HIV/AIDS among patients, attending in Wogeltena Health Center, south Wollo zone of Amhara regional state, Ethiopia. In this study the data gathered by quantitative method were analyzed according to the objectives of the research, problem statement and research questions. There were about 84 respondents (44 of them were males and 40 of them were females), who were fully involved during data collection. The questionnaire was distributed to all 84 respondents, but only 80 questionnaires were returned, 4 respondents did not respond the questionnaire. A response rate of 95.23 % was achieved.

4.1. Demographic characteristics of the patients

The first section of the questionnaire consists of different items about demographic characteristics of the patients such as: sex, age, academic qualification, marital status, religious, and residence of the to help the categorized HIV positives and selected. The following table summarized the data pointed out certain of the patients.

Table 2: Demographic characteristics of the patients

No	Chara cterist ics	Status	HIV positives	
			No of patients	Percent
1	Sex	Male	208	37.81%
		Female	342	62.18%
		Total	550	100%
2	Age	0-14 Years	36	6.54%
		15-24 Years	145	26.36%
		25-34 Years	163	29.63%
		35-44 Years	119	21.63%
		45-54 Years	61	11.09%
		55-64 Years	20	3.64%
		65 and above	6	1.09%
		Total	550	100%

3	Educa tional status	Illiterate	314	57.07%
		Elementary	157	28.5%
		High school	44	8%
		1 st degree	–	–
		Diploma	–	–
		Certificate	35	6.36%
		Total	550	100%
4	Marita l status	SinglSingle	369	67.09%
		Married	181	32.9%
		Separated	0	0%
		Widowed	0	0%
		Divorced	0	0%
		Total	550	100%
		5	Resid ence	Urban
Rural	156			28.36%
Total	550			100%
6	Religi ous	Orthodox	500	90.01%
		Muslim	50	9.99%
		Total	550	100%

4.1. 1. Gender and age composition of retrospective data

According to Delanta/Wogeltena health center from 2011 E. C to 2015 E. C a total of 550 individuals were recorded HIV/AIDS positive. Among these 208 (37.81%) were males and 342 (62.18%) were females. There was variation in age categories between recorded patients; thus, 36 (6.54%) were from 0 to 14, 145 (26.36%) were from 15 to 24, 163 (29.63 %) were from 25-34, 119 (21.63%) were from 35 to 44, 61(11.09%) were from 45 to 54, 20(3.64) were from 55 to 64 and, the other rest 6(1.09%) were greater than 65. The highest incidence was recorded in the age group of 25 - 34 years old which is the productive age; and the lowest incidence was in the age group of greater than 60 years old. According to the data recorded at the health center

females were more prone to HIV/AIDS than males. In all age categories the patient record showed that the numbers of HIV positive males were lower than that of females. This study revealed that HIV tends to affect young and middle age adults, when they are in the most productive part of their lives. The incidence and prevalence of HIV among youth are generally higher relative to the cases in others.

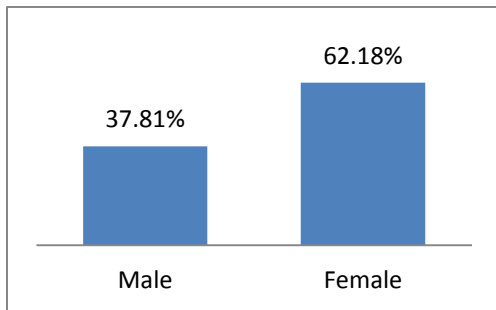


Figure 4: Gender composition of retrospective data

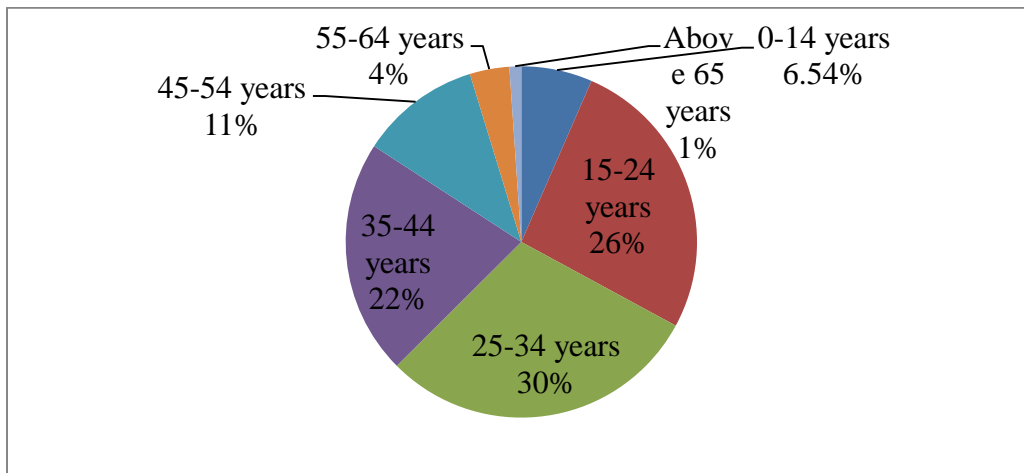


Figure 5: Age composition of retrospective data

4.1.2. Gender incidences of HIV/ AIDS in Wogeltena health center from 2011 E. C to 2015 E.C

As the health center ART clients' document showed the incidence of HIV/AIDS has increased from year to year, 494(18.7%) in 2011, 517(19.64%) in 2012, 532(20.2%) in 2013, 539(20.48%) in 2014 and 550(21%) in 2015.

Table 3: Sex of patients with in the year recorded data

Year (E. C)	Sex		Total; N (%)
	Male; N (%)	Female; N (%)	
2011	185(7.03)	309(11.74)	494(18.7)
2012	200(7.6)	317(12.4)	517(19.64)
2013	197(7.48)	335(12.73)	532(20.2)
2014	202(7.67)	337(12.8)	539(20.75)
2015	208(7.90)	342(12.99)	550(21)

As the data shows in the table 4 the percentage of infected males and females varied in each year but the sex based difference was insignificant (P-value = 0.00).

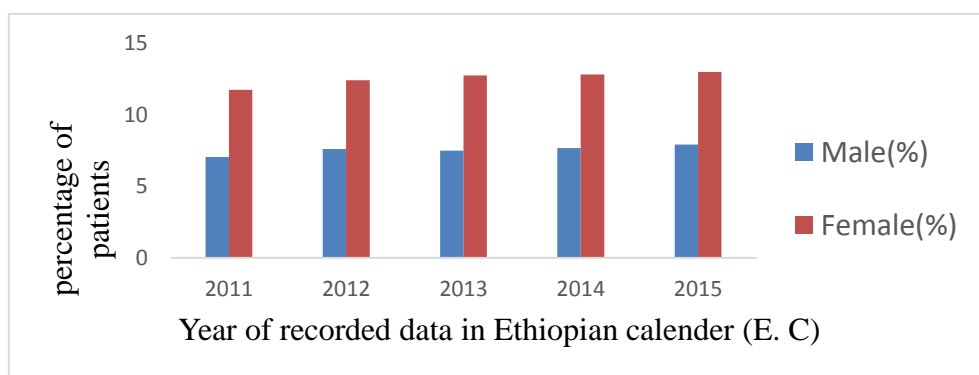


Figure 6: Sex of recorded data from 2011 E.C to 2015 E.C

4.1.3. Residence characteristics of patients from retrospective data

A total of 550 patients were participated in this study among Wogeltena health center 208 (37.81) were male and 342 (62.18%) were females. Of the patients 394 (71.6%) came from urban and 156 (28.36%) were from rural.

Table 4: Residence of the patients

Residence	Sex		
	Male	Female	Total
Rural	38(6.9%)	118(21.45%)	156(28.36%)
Urban	170(30.9%)	224(40.72%)	394(71.6%)
Total	208	342	550

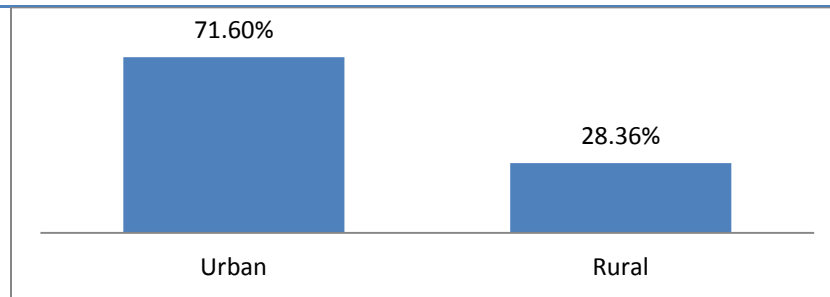


Figure 7: Residence of the patients

Urban residents were highly infected than rural residents. Residence is significant for HIV prevalence (p -value= 0.04). Distribution of sex in the town is not stable. Approximately, females are covered the larger percentages of males.

4.1.4. Educational Level of patients from retrospective data

Of the patients, 314 (57.09%) were illiterate, 35(6.36) were certificate, 44(8.0%) were high school level and 157(28.5) were attended their elementary school; as the educational status increased the frequency of HIV positivity decreased; thus, education was insignificant for HIV incidence (p -value<0.05).

4.1.5. Marital status of patients from retrospective data

The overall percentage of patients who had marriage was 181(32.9%). Most of the patients, 369 (67.09%) remain unmarried. The marital status of patients indicated, marriage is nearly doubled among females. Single patients were highly infected with HIV than the married one. Thus, marital status is significant for HIV incidence (p-value=0.01).

4.1. 6. Religious status of patients from retrospective data

According to Delanta/Wogeltena health center from 2011 E. C to 2015 E. C a total of 550 individuals were recorded HIV/AIDS positive. Among these 500 (90.01%) were Christians (Orthodox tewahido followers) and 50 (9.99%) were Muslims.

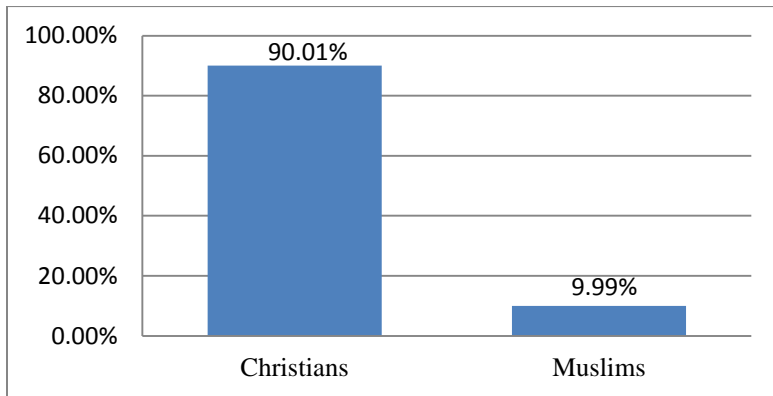


Figure 8: Religious composition of retrospective data

4. 2. Means of being infected with HIV

As shown in the table below, the study revealed that they infected with HIV due to unprotected sex about 62.5%, unsafe blood transfusion about 12.5%, contaminated sharp materials about 6.25% and mother to child about 18.75%. The study that was conducted on knowledge, attitude and practice of the respondents shows that they have good knowledge about HIV, but relating to sexuality they have risky sexual behavior.

Table 5: Means of HIV transmission of the respondents

Means of HIV transmission	Sex in percentage		
	Male	Female	Total
Un protected sex	30(75%)	20(50%)	50(62.5%)
Un safe blood transfusion	5(12.5%)	5(12.5%)	10(12.5%)
Contaminated sharp materials	–	5(12.5%)	5(6.25%)
Mother to child	5(12.5%)	10 (25%)	15(18.75%)
Total	40	40	80

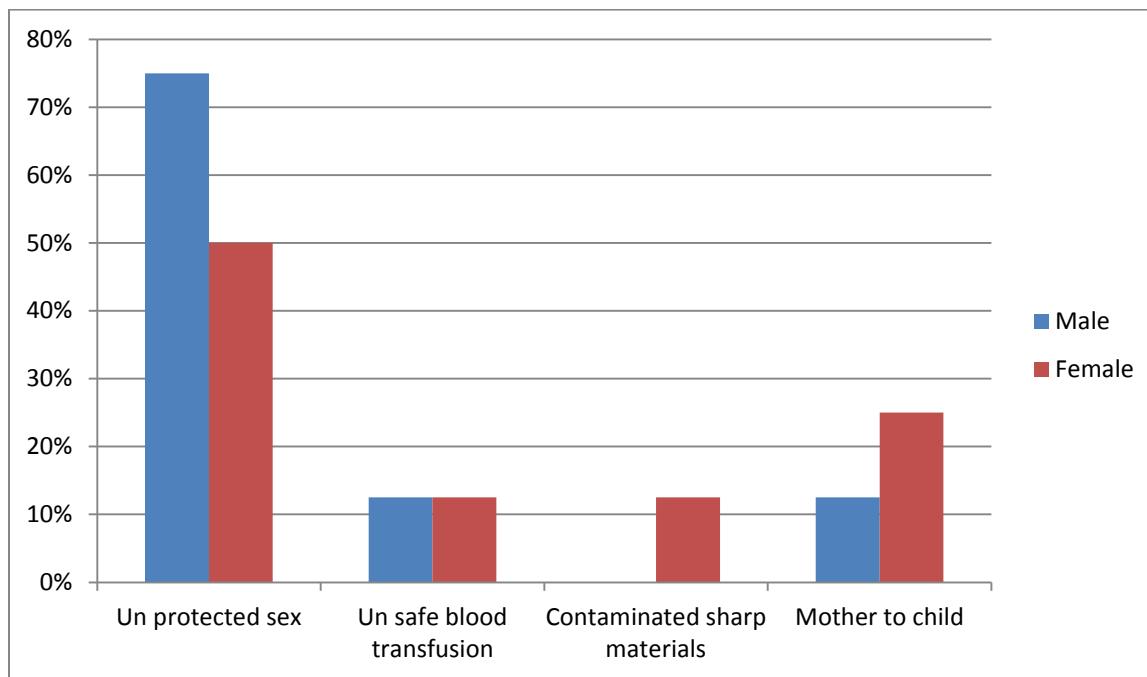


Figure 9: Means of HIV transmission of the respondents

Table 6: HIV prevalence reduction methods among the respondents

HIV prevalence reduction methods	Sex		
	Male	Female	Total
Abstinence	10(25%)	5(12.5%)	15(18.75%)
Faithfull	30(75%)	25(62.5%)	55(68.75%)
Use condom	–	10 (25%)	10(12.5%)
Total	40	40	80

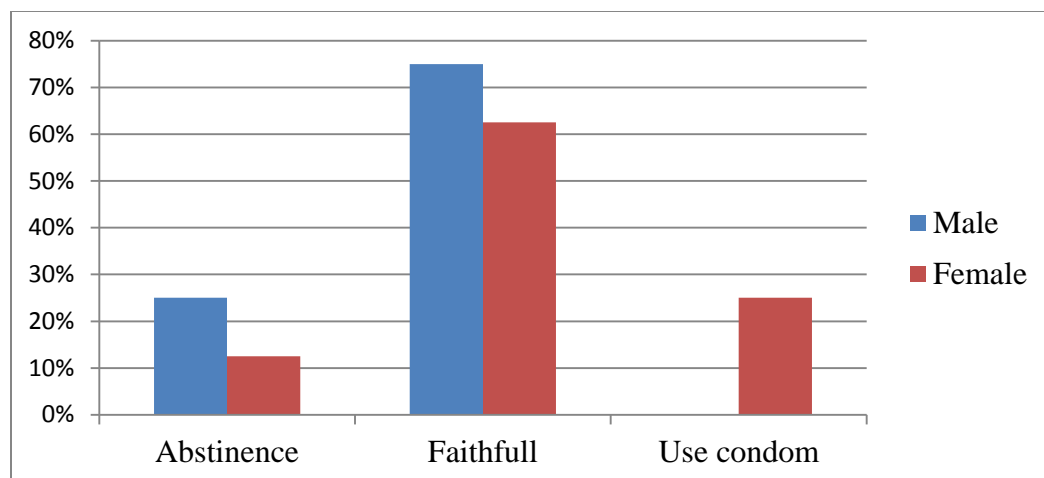


Figure 10: HIV prevalence reduction methods among the respondents

4.3. ART and HTS coverage in the area

In the current study, the trend of ART coverage was shown to have an improved pattern; from 400 (13.74%) in 2011 E. C to 550 (21%) in 2015 E. C. The following are the yearly trends of HTS, access to ART or linkage to care and treatment.

Table 7: ART and HTS coverage of patients of in Wogeltena health center

Year (E. C)	HTS coverage	ART coverage
	N (%)	N (%)
2011	494(18.7)	400(13.74)
2012	517(19.64)	450(15.88)
2013	532(20.2)	500(18.16)
2014	539(20.75)	510(18.8)
2015	550(21)	550(21)

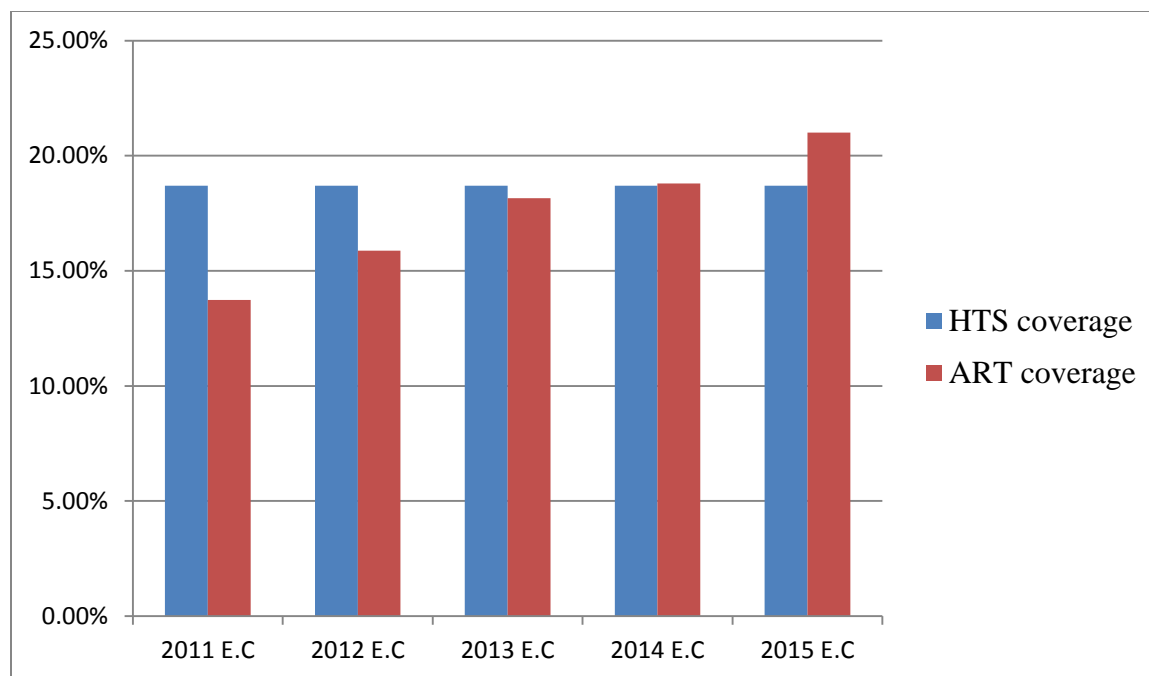


Figure 11: ART and HTS coverage of patients of in study area

As the data showed, the percentage of HTS and ART coverage in each year is increased in each year, the coverage was significant (P-value = 0.05).

5. Discussions

HIV medications lower the quantity of HIV in the body, also referred to as the viral load, by preventing HIV from replicating (producing copies of itself). A lower level of HIV in the body promotes immune system recovery and increases CD4 cell production. According to this study most of the respondents showed that, they were infected with HIV due to the harmful gender norms and inequalities, insufficient access to education and poverty.

5.1. Five year incidence rates of HIV patients

Table 8: Incidences of patients with in the year recorded data

Age group	Year (E. C)			
	2012	2013	2014	2015
0-14 Years	4	2	1	1
15-24 Years	7	4	2	4
25-34 Years	9	6	3	5
35-44 Years	2	1	1	1
45-54 Years	1	2	0	0
65 and above	0	0	0	0
Total	23	15	7	11

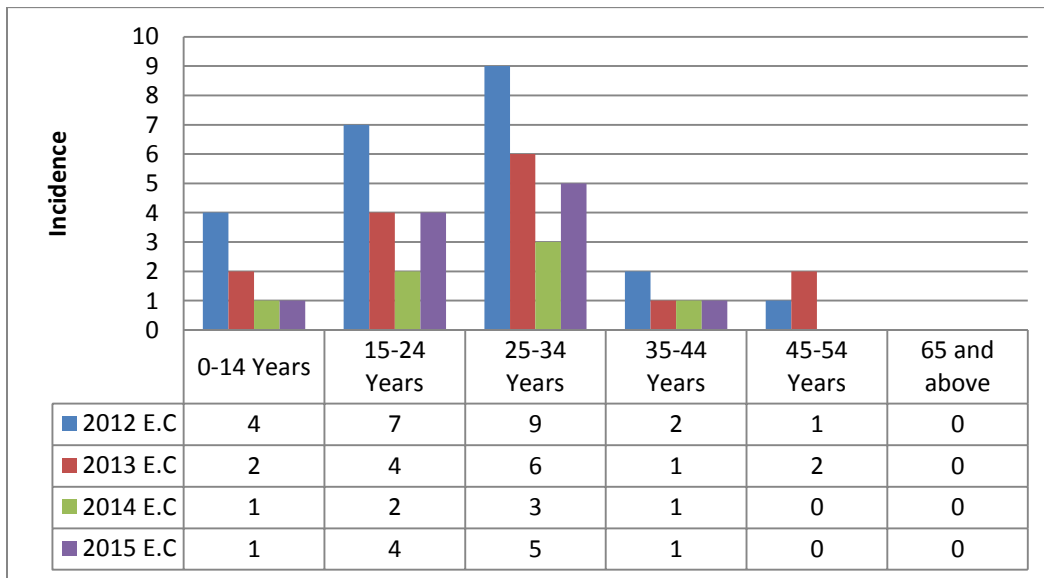


Figure 12: Incidences of patients with in the year recorded data

As the data shows in the Table 7 the number of being infected was higher in 2012 E. C, get reduced in 2013 E. C and 2014 E. C and get increased in 2015 E. C.

5.2. Five year death rates of HIV patients

Table 9: Death rates of patients with in the year recorded data

Age group	Year (E. C)				
	2011	2012	2013	2014	2015
0-14 Years	0	2	2	1	1
15-24 Years	0	2	1	0	0
25-34 Years	0	1	0	0	1
35-44 Years	0	0	0	1	1
45-54 Years	0	0	0	0	0
65 and above	0	0	0	0	0
Total	0	5	3	2	3

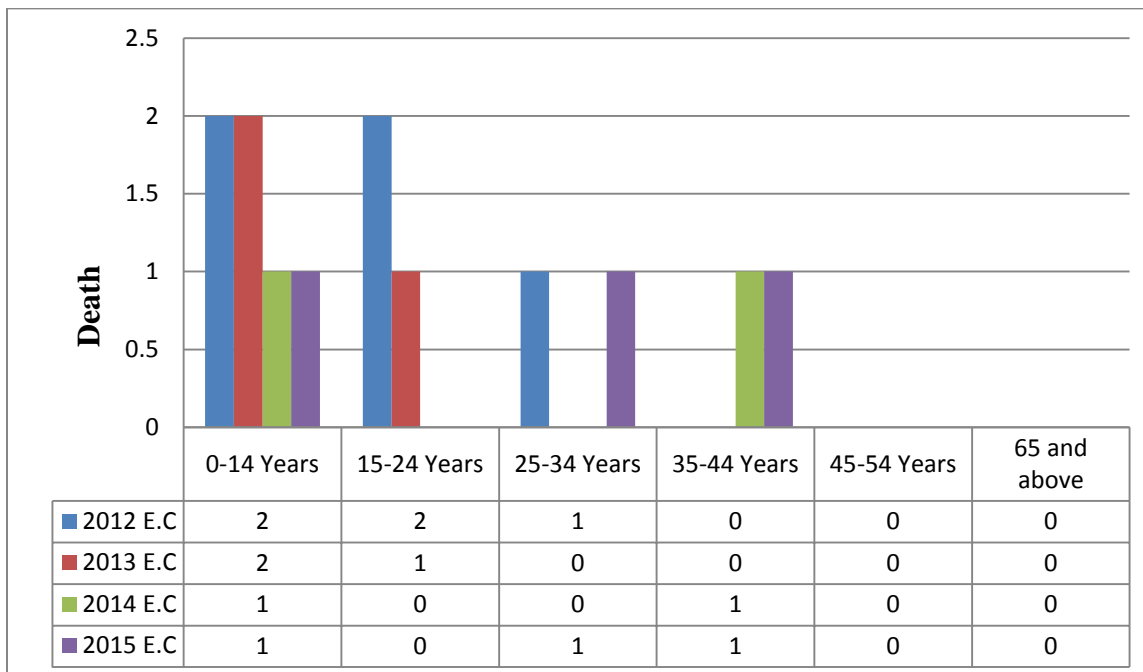


Figure 13: Death rates of patients with in the year recorded data

As the data showed, the number of death was higher in 2012 E. C, get reduced in 2013 E. C and 2014 E. C. The higher number of death was registered in the age group of 0-14 due to mother to child transmission. The incidence was consistent in each year and it was significant (P-value = 0.04).

5.3. Current trends of HIV in the Study area

This study designed to show the trend of HIV, testing service utilization and linkage to care and treatment among patients for the last five-year period in Wogeltena health center, Delanta Woreda. The coverage of HTS has increased in the last five years in both the VCT and PITC approaches. In the current study both volunteer counseling and testing (VCT) and provider-initiated testing and counseling (PITC) service coverage also showed an increment trend. With regard to the trend of HIV test positivity, or yield, it has been increasing since 2011 E. C, peaking at 18.7% in 2011 E. C and increasing to 21% in 2015 E. C. The trend of HIV-positive clients being associated to care and treatment after discovering their positive status has improved over time. This is critical in meeting of the Delanta Woreda health office goal (DWHO, 2023), which states that more than 90% of positive clients should have access to HIV care and treatment. The Delanta Woreda health office has made good progress toward its goal. A large number of patients were enrolled in HIV care and treatment in 2015 E. C. This was due to Ethiopia's full implementation of the new ARV treatment initiation criteria, particularly in the Amhara region. As a result, in 2015 E. C, all newly diagnosed HIV cases and all pre-ART cases received antiretroviral therapy. The overall trend of linkage to care and treatment following HIV positive results has shown a slightly increased pattern since 2015 E. C. The highest peak of linkage to care and treatment was observed in 2015 E. C and the lowest was in 2011 E. C. Similarly, antiretroviral treatment adherence was positively correlated with the number of adherence counselors.

5.4. Protection or HIV prevalence reduction trends in the Study area

According to this study, 18.75% of respondents in a research done at the Wogeltena Health Center in Delanta Woreda HIV positivity, refraining from sexual activity can effectively lower the prevalence of HIV/AIDS. In addition to this, 68.75% of them stated that being faithful, 12.5% of them knew that using condom. While high percentage of males (75%) and females (62.5%) of the respondents have had experienced faithful sexual partners.

6. CONCLUSION AND RECOMMENDATIONS

The conclusion part is drawn from the findings of the results, and the recommendation part of the study contains the researcher suggestion based on the findings about five-year trend of HIV /AIDS among patients, attending in Wogeltena Health Center, south Wollo zone of Amhara regional state, Ethiopia.

6.1. Conclusion

The fight between human and viruses in on and both are rapidly improving the strategies of attacking and defense. In recent years, there has been tremendous progress in understanding the genetic basis and molecular mechanism of diseases. Various new drugs have been formulated and the development of a lot more is in underway. The better understanding about viruses will make it possible to establish useful measures for fighting against the viral diseases and the researchers around the globe are putting their possible efforts to control the spread of viral diseases and we hope that we live in the world free from viral diseases. The study revealed that they infected with HIV due to unprotected sex about 62.5%, unsafe blood transfusion about 12.5%, contaminated sharp materials about 6.25% and mother to child about 18.75%. This study shows that 18.75% of respondents reported avoiding of sexual intercourse as an effective reduction of the prevalence of HIV/AIDS. In addition to this, 68.75% of them stated that being faithful, 12.5% of them knew that using condom. While high percentage of males (75%) and females (62.5%) of the respondents have had experienced faithful sexual partners. A large number of patients were enrolled in HIV care and treatment in 2015E. C. This was due to Ethiopia's full implementation of the new ARV treatment initiation criteria, particularly in the Amhara region. As a result, in 2015 E. C, all newly diagnosed HIV cases and all pre-ART cases received antiretroviral therapy. The overall trend of linkage to care and treatment following HIV positive results has shown a slightly increased pattern since 2015 E. C. The highest peak of linkage to care and treatment was observed in 2015E. C and the lowest were in 2011 E. C. Similarly, antiretroviral treatment adherence was positively correlated with the number of adherence counselors. With regard to the trend of HIV test positivity, or yield, it has been increasing since 2011 E. C, peaking at 18.7% in 2011 E. C and increasing to 21% in 2015 E. C. In the current study, the trend of ART coverage was shown to have an improved pattern; from 400 (13.74%) in 2011 E. C to 550 (21%) in 2015 E. C. The following are the yearly trends

of HTS, access to ART or linkage to care and treatment. The study revealed that, the prevalence of HIV/AIDS among youths was higher than the general population and high proportion of them were engaged in risky sexual behaviors such as multiple sexual partners, unprotected sex and inconsistent use of condom, there was considerable gap in Knowledge, attitude and practice regarding HIV/AIDS preventive practice.

6.2. Recommendation

The existing HTS service lacks identification of high-risk HIV clients. Hence, alternative and high-yield HIV testing services should be strengthened. High-yield case finding modalities include index case testing and partner notification, social network services, and PITC using an HIV risk screening tool at the health facilities. HIV positive cases from HTS towns have a good referral linkage, whether intra or inter-referral linkage. Having high viral suppression after initiation of ARV implies a significant number of HIV patients would have a better quality of life, immunological and clinical outcomes, as well as at a public level, it decreases the chance of HIV transmission even from mother to child after initiation of ARV. Alternative molecular testing HIV testing modalities should promptly adopt and implemented in order to improve HIV case finding, the implantation of targeted HIV testing service using high risk identification tools should be enhanced in order to improve yield of PITC service, the viral load testing coverage service should also improve well.

7. REFERENCES

- Asiri YI, Alsayari A, Muhsinah AB, et al. (2020). Benzothiazoles as potential antiviral agents. *Journal of Pharmacy and Pharmacology* 72: 1459–1480.
- Balloux F and van Dorp L (2017). What are pathogens, and what have they done to and for us? *BMC Biology* 15: 1–6.
- BazzeewB.andAscheneke B.,(2012).Assessment of HIV/AIDS awareness among grade 9th and 10th students; case study of Jimma University Community high school, Jimma, Ethiopia
- Champe HRAPC and Fisher BD (2007) Lippincott's Illustrated Reviews: Microbiology. Philadelphia: Lippincott Williams & Wilkins, 19-36.
- Christian H. and Juergen R., (2015/2016).HIVbook 2015/16 Complete, MedizinFokusverlag, Hamburg. 3rd edition, 276-315, Available from: <http://hivbook.com>
- CIA, (2016/2017).Ethiopian People 2017, CIAWorld Fact book Mortality due to AIDS. Available at: www.theodora.com >wfbcurrent>ethioCSA and ICF, (2016).Ethiopia Demographic and Health Survey 2016: key Indicators. Report Addis Ababa, Ethiopia and Rock Ville, Maryland, USA, 49-87.
- Cochran, W. G. (1977). Sampling techniques(3rded.), 25-73.
- Connolly SA, Jackson JO, Jardetzky TS, et al. (2011). Fusing structure and function: a structural view of the herpesvirus entry machinery. *Nature Reviews Microbiology* 9: 369–381.
- De Clercq E and Li G (2016) Approved antiviral drugs over the past 50 years. *Clinical Microbiology Reviews* 29: 695–747.
- Delanta Woreda communication office, (2021). Annual reports on the prevalence and prevention status of HIV AIDS in Delanta Woreda, Ethiopia.
- Delanta health office, (2023). Half year reports on HIV/AIDS trend in Wogeltena town administration, Delanta Woreda, Ethiopia.
- Demeke GD. and Sandy PT., (2014).Factor influencing sexual risk behavior among senior secondary school youth in Enemay Woreda, East Gojjam, Ethiopia, *International journal of scientific and research publication*, 4:9- 20

- EPHI and FMOH, (2014).HIV Related Estimates and Projections for Ethiopia, Addis Ababa, Ethiopia Young, Adult Survey; A study in Seven Regions Population Council 2010: available from www.popcouncil.org .
- FHAPCO and FMOH, (2007).Guidelines for HIV Counseling and Testing in Ethiopia, , the Ethiopian Ministry of Health, Addis Ababa, Ethiopia, 12-32.
- FHAPCO and FMOH, (2011).HIV Prevention Package: MARPs and Vulnerable groups.
- FHAPCO and MoE, (2013).HIV/AIDS and Sexual Reproductive Health Minimum Interventions Package for Schools in Ethiopia (primary, secondary and TVTs), Addis Ababa, Ethiopia, 2-66.
- FHAPCO/FMOH, (2010/11-2014/15).Strategic Plan II for Intensifying Multispectral HIV and AIDS Response in Ethiopia, Federal HIV/AIDS Prevention and Control Office, Addis Ababa, Ethiopia, 45-49.
- FMOH, (2005).HIV/AIDS in Ethiopia; where is the epidemic heading files, 34-56.
- GAC, (2004).Progress Report on Monitoring and Evaluation Plan:2001-2003.Accra, Ghana.
- Gashaw A., Afework K., Feleke M., Yigzaw K.,Molla G., Fissaha W., Atinafa A., Berhan A., and Solomon A., (2007).Low prevalence of HIV infection and knowledge, attitude on HIV/AIDS among high school students in Gonder Northwest Ethiopia *Ethio J. Health Dev.*, 21(2):179 -182.
- Guzman I. and Bosch R., (2007).High risk behaviors among youth, Adolescence and youth Kauffman
- HeH (2013). Vaccines and antiviral agents. *Current Issues in Molecular Virology: Viral Genetics and Biotechnological Applications*, 239–250.
- Heath K, Levi J, Hill A (2021). The Joint United Nations Programme on HIV/AIDS 95–95–95 targets: worldwide clinical and cost benefits of generic manufacture, *35(1):S197–S203*. doi:10.1097/QAD.0000000000002983
- L., Orbe M., Johnson A., Cooke-Jackson A., (2013).Memorable Familial Messages about sex: A Qualitative Content Analysis of College Student narratives. *Electronic journal of human sexuality*, 16:3 - 6

- LePHIA, (2017).Lesotho population based HIV impact assessment, LesothoLissan S., (2004).Socio-demographic andClinical Profiles of AIDS Patientsin Jimma Referral Hospital, South West Ethiopia, 18:203 - 207
- Mariam S., (2015).Students Talk about TheirHIV/AIDS Education Courses: a case of Addis Ababa, Ethiopia. Journal of international education research,11(1):43 - 44.
- Marianne P., (2014).Health Literacy: Investigating the knowledge and attitude of HIV/AIDS among students in southern Ethiopia. Health Tomorrow, 2:6 - 9
- Mazengia F., and Worku A., (2009).Age atSexual Initiation and Factors associated with it among youths in north east Ethiopia. Ethiop J Health Dev23:2-5.
- MDHS, (2004).National Statistics Office,Seasonal Assessment of HIV/AIDS,Zomba, Malawi
- Modi RA., (2018). *HIV Disclosure, Retention in HIV Care, and Viral Load Suppression: A Study Among New to HIV Care Patients*. The University of Alabama at Birmingham.
- MoE, (2011/2012).Education Statistics; AnnualAbstract, Addis Ababa,Ethiopia
- MOH, (2002).AIDS in Ethiopia: Diseaseprevention and control department, 4th ed,Addis Ababa, Ethiopia
- Mohamed AY., Tefera TB, Ahmed MB,(2015).Knowledge, Attitude and practiceon HIV/AIDS Prevention among BatuTerarapreparatory school students inGoba Town, Bale Zone, South East Ethiopia. Primary health care 5:192
- Parks JM and Smith JC (2020). How to discover antiviral drugs quickly? The New England Journal of Medicine 382(23): 2261–2264.
- Pinsky L, Douglas PH., (2009). Handbook on HIV and AIDS in Columbia University. Women's Health Care, an open access journal ISSN, 7(2): 2167-0420
- Ryu W-S (2017). Virus life cycle, Molecular Virology of Human Pathogenic Viruses 2017: 31–45.
- Sam D., (2013).Challenges of containing newHIV Infection in Ethiopiaunacknowledged Transmission Route CapstoneCollection, Addis Ababa, Ethiopia

- SARDP, (2010).Building Ethiopia's Future: The Sida Amhara Rural Development Program. Sida Amhara Rural Development, Bahir Dar, Ethiopia
- Saxena SK, Saxena S, Saxena R, et al. (2010). Emerging trends, challenges and prospects in antiviral therapeutics and drug development for infectious diseases. *Electronic Journal of Biology* 6: 26–31.
- Shabbir I., Getnet M. and Damen H.,(2002).HIV/AIDS: for the Ethiopian Health Center Team: The carter center, the Ethiopian Ministry of Health and Ministry of Education. Ethiopian Public Health Training Initiatives, Addis Ababa
- Shin W-J and Seong BL (2019). Novel antiviral drug discovery strategies to tackle drug-resistant mutants of influenza virus strains. *Expert Opinion on Drug Discovery* 14: 153–168.
- Turnbull SP., (2010).Adolescents' preference regarding sex education and relationship education. *Health educational journal* 69(3):277-286
- U.S.A. Census Bureau, (2002).Centers for Disease Control and Prevention2001 U.S.A. HIV and AIDS; Report 132-2
- UAC, (2014).HIV and AIDS Uganda Country Progress Report 2014, Kampala
- UNAIDS (a), (2016).Global AIDS: Enormous gains, persistent challenges, Geneva, UNAIDS/2016. Available from [www.unaids.org.>files>media/asset>g](http://www.unaids.org/>files>media/asset>g)
- UNAIDS (b), (2016). Prevention Gap Report July2016, Documents available from www.unaids.Org.>documents
- UNAIDS (d), (2016).Review of data from PLHA Stigma Index Surveys conducted in more than 165; countries
- UNAIDS(c), (2016).AIDS by the numbers fast track targets: ending the AIDS epidemic by 2030: as part of the sustainable development goals: UNAID Sspecial analysis, Geneva
- UNAIDS, (2004).Report on Global, HIV/AIDS Sepidemic, USA
- UNAIDS, (2005).AIDS Epidemic Update, World Health Organization, Geneva, 71-82.

- UNAIDS, (2008).Ministry of Health Vietnam, The third country report on the following up the implementation to the declaration of commitment on HIV/AIDS: Regional summary, Latin America
- UNAIDS, (2012).Report on Global HIV/AIDS Epidemic
- UNAIDS, (2014).Global AIDS Response: progress reporting 2014: UNAIDS, available from www.unaids.org.>files>media-asset
- UNESCO and MoE, (2012).Education sector response to HIV/AIDS: Learning from good practices in Ethiopia.
- UNESCO, (2014).UNESCO Institute for statistics: educational policy and datacenter (EPDC); low income countries in Sub-Saharan Africa, National education profile: 2014 update.
- UNFPA, (2012).Adolescent and Youth Strategy: 2012-213, UNFPA Report the Executive Director, August, 20-34.
- UNICEF, (2010).Children and AIDS - UNICEF, available from<https://www.unicef.org>.>aids>files>ch
- UNLOM, (2018).offering information on HIV/AIDS Treatment, Prevention and Research, 9-19.
- Viktor P. Effective AIDS treatment with resonance medicine (2022). *World J AIDS*, 12(2):111–119.
- Wang Y, Kiwuwa-Muyingo S, Kadengye DT (2019). Understating the barriers to achievement of the UNAIDS 90–90–90 goal in Tanzania using a population-based HIV impact assessment survey 2016–2017. *AIDS Care*, 34(6):797–804.
- WHO, (2016).Progress report; Prevent HIV and Treat All, World Health Organization, Geneva, Switzerland 24:12-21.
- Williams and Wilkins, (1985): Mellonis -Illustrated Medical Dictionary,2nd edition, Available from <http://www.Coursehero.com> > file > AID www.wikipedia/debaytilatgin
- Yemane B., Yared M., Eleni S., Lawrence and David W., (2008). HIV/AIDS in Ethiopia: An Epidemiological Synthesis; HAPCO and GAMET, HIV/AIDS Prevention and Control office, Addis Ababa, Ethiopia
- Yitayal S., Agersew A., Amanuel G., Afera G.,Andarge K., AlemayehuG.,Abebe A., Takele T., and Baye G., (2011).Assessment of knowledge, attitude and risk behaviors towards

HIV/AIDS and other sexual transmitted infections among preparatory students of Gondar town, Northwest Ethiopia, BMC 4:505.

Zenebu BB., Ebisa N., Geremew T. and Belayneh K., (2015). Factors that Influences School Youth; Exposure to, HIV/AIDS, in Metu Town, south west Ethiopia: Journal of Community Medicine and Health Education; 5:3-6.

Zhang, M.Z.; Chen, Q.; Yang, G.F (2015). A review on recent developments of indole-containing antiviral agents. *Eur. J. Med. Chem.*, 89, 421–441.

APPENDIX I
ADDIS ABABA UNIVERSITY
COLLEGE OF NATURAL AND COMPUTATIONAL SCIENCE
DEPARTEMENT OF ZOOLOGICAL SCIENCE

A FIVE-YEAR TREND OF HIV/AIDS AMONG PATIENTS, ATTENDING AT WOGELTENA HEALTH CENTER, SOUTHWOLLO ZONE, AMHARA REGION, NORTH EAST ETHIOPIA

BY: AMISAL ARAGIE

QUESTIONNAIRE

Dear Respondent: the main aim of this questionnaire is to collect data as an input for the study in the title “a five-year trend of HIV /AIDS among patients, attending at Delanta Woreda Health Center, SouthWollo Zone, Amhara Region, North East Ethiopia” in pursuance of master of biology. The purpose is only academic, please feel free to give the facts and your opinion genuinely, I can assure you that each of the information collected via this tool are to be very much confidential except for the purpose pointed out here above. For this reason you are politely requested to respond the correct information by putting ‘X’ mark in the appropriate box or encircle your best alternatives.

Part one: Background information.

I. Name of health center _____

II. Sex: Male Female

III. A 0-14 15-24 25-34 35-44 45-50 Above 65

IV. Educational qualification:

Elementary High school Certificate Diploma 1st degree
 2nd degree & above

V. Maritastatus

Separated Widowed Divorced
 Single
 married

Part two: Part two:

1. Have you ever discussed about HIV/AIDS with friends or family members? Yes No
I am not sure
2. What is/are the way/s of knowing one's HIV status?
 - a) Observation of the person's physical conditions
 - b) Blood testing
 - c) Other/please specify
 - d) Don't know
3. Had you a constant sexual partner? Yes No
4. Have you observe any form of behavioral change to protect themselves from HIV/AIDS in your neighbor's? Yes No
5. Have you used condom during sexual intercourse? Yes No
6. If "yes" to the question above, what is the reason of condom use?
 - a) To avoid pregnancy
 - b) To prevent HIV/AIDS
 - c) Prevent other STI
 - d) By friend interest
 - e) Unknown reason
7. As you, which age has to be sexual intercourse preparation period?
 - a) At the age of 0 to 14
 - b) At the age of 15 to 24
 - c) At the age of 25 to 34
 - d) At the age of 35 to 44
 - e) At the age of 45 to 54
 - f) Don't know
8. How often do you check your health condition?
 - a) Quarterly a year
 - b) Every six months
 - c) Once a year
 - d) Every two years
 - e) No specific schedule
9. Have you ever attended any HIV/AIDS Education? Yes No
10. Which gender do you make vulnerable with HIV currently?
 - a) Only males
 - b) Only female
 - c) With both sexes
11. In your opinion which one of the following is a means of HIV transmission?

- a) Unprotected sex
 - b) Unsafe blood transfusion
 - c) Contaminated needles
 - d) Mother to child
 - e) Mosquito bite
 - f) All
12. In your opinion which one of the following are the main pillars of HIV programming?
- a) Prevention b) Mitigation c) Main streaming care and support d) All
13. Which HIV prevention method you frequently used?
- a) Abstinence
 - b) Having constant friend
 - c) Avoid alcohol drinking
 - d) Properly use condom
 - e) Avoid sharp materials sharing
14. How do you level the implementation of the new ARV treatment initiation in Wogeltena health center?
15. Which opportunistic disease is the main one that manifests in HIV/AIDS?
- TB Pneumonia Typhoid STIs Cholera
- a) Very poor
 - b) Poor
 - c) Average
 - d) Good
 - e) Very good
 - f) Excellent
16. Why peoples in your town get infected in HIV AIDS?
- a) Harmful gender norms and inequalities b) Insufficient access to education c) Absence of awareness creation by stakeholders d) All e) Others, specify
17. When the highest HIV positivity yield from HTS approaches was found in VCT?
- A. 2011 E.C B. 2012 E. C C. 2013 E. C D. 2014 E. C E. 2015 E. C
18. When the lowest HIV positivity yield from HTS approaches was found in VCT?
- A. 2011 E.C B. 2012 E. C C. 2013 E. C D. 2014 E. C E. 2015 E. C

19. Do you believe that the trend of HIV testing services is improved? Yes No
20. How do you see the implementation of the risk screening service for HIV testing in Wogeltena health center? Low Moderate High Excellent
21. How do you level the overall trend of linkage to care and treatment following HIV positive results in the center? Low To some extent Very good Excellent
22. How do you see the trend of HIV positive clients being associated to care and treatment after discovering their positive status?
Improved Remain the same Decreased Promising
23. How do you level the trend of HIV test positivity?
Low Moderate High Very bad
24. Who is, as to you, a responsible body to decrease the prevalence of HIV in Delanta Woreda?
A. Each individuals B. Delanta Woreda top cabinets C. Wogeltena health center staff members D. Ethiopian government E. All

25. Different assessments on the status of five year trends of HIV among patients;

No	Item	Strongly agree	Agree	Undecided	Disagree	Strongly disagree
1.	There was good volunteer counseling testing (VCT) and provider-initiated testing counseling (PITC) service coverage					
2.	The trend of HIV test positivity was improved					
3.	The trend of HIV testing services is increased from year to year					
4.	There was a significant improvement in viral load coverage and suppression rates					
5.	It is very promising that if there is an alternative molecular testing HIV testing modalities adopt and implemented					

6.	Top managements are committed to reduce HIV AIDS in Delanta woreda?					
7.	Wogeltena health center has available resources for supporting and counseling HIV positives.					
8.	HIV positives in the health center are satisfied with the overall aspect and collaboration of the center community.					
9.	Abstain from sex to prevent HIV					
10.	People should use condom to prevent themselves from HIV					
11.	People should be faithful to one uninfected partner to prevent HIV					

Thank you for your genuine information and cooperation!

APPENDIX II
ADDIS ABABA UNIVERSITY
COLLEGE OF NATURAL AND COMPUTATIONAL SCIENCE
DEPARTEMENT OF ZOOLOGICAL SCIENCE

BY AMSAL ARAGIE

A FIVE-YEAR TREND OF HIV /AIDS AMONG PATIENTS, ATTENDING AT DELANTA WOREDA HEALTH CENTER, SOUTHWOLLO ZONE, AMHARA REGION, NORTH EAST ETHIOPIA

OBSERVATION CHECK LIST

A research observation check list on “assessing a five-year trend of HIV /AIDS among patients, attending at Delanta Woreda health center, SouthWollo Zone, Amhara Region, North East Ethiopia”.

- Name of the health center _____
- Topic of the study _____
- Place of observation _____
- Length of observation period _____

No	Focusing ideas during observation	Very good	Good	Satisfactory	Low
1.	The ART, facility and budget	Quantity			
		Availability			
		Organization			
2.	Interest and motivation of HIV positives towards teaching the communities				
3.	Awareness creation about the impact of HIV epidemic, need of pre-tasting etc.	Appropriateness			
		Time management			
		Correction of error			
		Manageability			
4.	Collaboration of Wogeltena health center with co-worker's and stalk holders	Conducive working conditions			
		Budget allotment			
		Encouragement and appreciation			
		Linkage (integration) with supporting institutions and co-worker's			

APPENDIX III

DUMMY TABLE: Dummy table for socio-demographic characteristics of trend -study in relation to HIV/AIDS.

Ser.no	Variables	ART service users			HIV Positive people by (%)			Age for each given	Remark
		Males	Females	Total	Male	Female	Total		
1	Age : 0-14								
	15-24								
	25-34								
	35-44								
	45-54								
	>55								
	Sub total								
2.	Sex:								
	Male								
	Female								
	Subtotal								
3.	Occupation:								
	Governmental employee								
	Merchant								
	House wife								
	Daily laborer								
	Farmer								
	Student								
	Teachers								
	Soldier								
	Commercial								

	sex worker								
	Non-governmental employee								
	Sub total								
4.	Residence:								
	Rural								
	Urban								
	Sub total								
5.	Marital status:								
	Single								
	Married								
	Divorced								
	Widowed								
	Sub total								
6.	Educational status:								
	Illiterate								
	Elementary School								
	High school								
	Certificate and above								
	Sub total								

APPENDIX IV
አዲስአበባ ዩንቨርሲቲ

በአማራ-ብሄራዊክልላዊመንግስትበደቡብወሎዞንደላንታወረዳየመጀመሪያጤናጣቢያባሉየኤችአ
ይቪኤድስተጠቂዎችየ5 አመትአካሄድየጥናትዳሰሳየሚሞላመጠይቅ

አምሳልአራጌየድሀረምረቃተማሪ

አላማ:-

የዚህመጠይቅዋናዓላማበደላንታወረዳየመጀመሪያጤናጣቢያውስጥእየተከታተሉላሉኤችአይቪ
ተጠቂዎችየ5 ዓመትዳሰሳጥናትለማድረግግብዓትየሚሆንመረጃለመስብሰብነው::

ሚስጥራዊነቱ:

በዚህመጠይቅአማካይነትከእርስዎየሚሰበሰበውመረጃለታለመለትዓላማብቻየሚያገለግልነው::

ሚስጥራዊነቱበከፍተኛደረጃየተጠበቀነው፣ የሚሰጡትመረጃበጥንቃቄየሚቀመጥሆኖ፣

ለትምህርታዊጉዳይብቻይውላል፣ ለሌላሶስተኛወገንተላልፎአይሰጥም::

ከዚህበታችለተጠየቁትጥያቄዎችለሚሰጡትትክክለኛምላሽየእርስዎትብብርለዚህጥናትውጤታ
ማነትእጅግከፍተኛነው::

ይህንንመጠይቅበመሙላትስለተባበሩኝእጅግበጣምአመሰግናለሁ::

አባከዎንምላሽዎንበሳጥኖቼውስጥይህንንምልክት (x) ያድርጉወይምያክብቡ::

ክፍልአንድ: እርስዎንየተመለከቱጥያቄዎች

1. የጤናጣቢያዉስም-----

2. ምታ ሴት ወንድ

3. እድሜ: 0-14 15-24 25-34 35-44 45-55 ከ55
በላይ

4. የትምህርትደረጃ
የመጀመሪያደረጃ 2ኛደረጃ ሰርቲፍኬት ድፕሎማ
የመጀመሪያዲግሪ ማስተርስዲግሪናበላይ

4. የትዳርሁኔታያላገባ ያገባ የተፋታ

ክፍልሁለት፡

1. በየኤችአይቪኤድስዙሪያከጓደኞቻችሁጋርተወያይይታችሁታወቃላችሁ? ሀ. አዎ ለ. አላወቅም
2. ስለአንድሰወያኤችአይቪኤድስተጠቂነትሁኔታእንዴትማወቅይቻላል?
ሀ. የሰዎችንቁመናበማየት ለ. ደምበመመርመር ሐ. ሌላካለይግለጹ መ. አላወቀውም
3. ቋሚ የሆነ የፍቅርጓደኛ አሎዎት? ሀ. አለኝለ. የለኝም
4. በአካባቢያችሁሰዎችራሳቸውንከኤችአይቪኤድስሲጠብቁአስተወላችሁታወቃላችሁ?
ሀ. አዎለ. የለም
5. በግብረ-ስጋግንኙነትጊዜኮንዶምይጠቀማሉ? ሀ. አዎለ. አልጠቀምም
6. ከላይላለውጥያቁአዎከሆነመልሶኮንዶምመጠቀመዎምክንያቱምንድንነው?
ሀ. እርግዝናንለመከላከል ለ. ኤችአይቪኤድስንለመከላከል ሐ. ሌሎችተላላፊበሽታዎችንለመከላከልመ. ለጓደኞችንደስታሰ. ምክንያቱአይታወቅም
7. እንደአንተ/ች፣ለግብረ-ስጋግንኙነትዝግጁየምትሆንበት/የምትሆኝበትጊዜየቱነው? ሀ. ከእድሜ 10-14 ለ. ከእድሜ 15-20 ሐ. ከእድሜ 21-25 መ. ከእድሜ 2-30 ሰ. አላወቀውም
8. የጤናዎንሁኔታበምንያክልጊዜቸክያደርጋሉ? ሀ. በአመት 4 ጊዜለ. በየ6 ወርሐ. በአመት 1 ጊዜመ. በ2 አመት 1 ጊዜ
9. ስለኤችአይቪኤድስትምህርትወስደውያወቃሉ?ሀ. አዎለ. አላወቅም
10. ማንኛውጸታለኤችአይቪኤድስተጋላጭነው?ሀ. ወንዶችብቻለ. ሴቶችብቻሐ. ሁሉምጸታዎች
11. በእርሶአመለካከትየኤችአይቪኤድስመተላላፊያመንገድየቱነው?ሀ. ጥንቃቄየጎደለውግብረ-ስጋግንኙነትለ. በደምንክኪሐ. በስለታማመሳሪያመ. ከእናትወደልጅሰ. በትንኝንክሻረ. ሁሉም
12. በእርሶአመለካከትየኤችአይቪኤድስመከላከያምሶሶየቱነው?ሀ. ጥንቃቄማድረግለ. መጠቀምሐ. ሁሉም
13. ብዙጊዜየሚጠቀሙትየኤችአይቪኤድስመከላከያመንገድየቱነው?ሀ. መታቀብለ. ቋሚጓደኛመያዝሐ. አልኮልአለመጠቀምመ. ኮንዶምበአግባቡመጠቀምሰ. ስለታምመሳሪያንበጋራአለመጠቀም

14. አዲሱን የኤችአይቪ ኤድስ ኤድስ አርቲመድህኒት ህክምና ትግበራ በመ/ቤቱ እንዴት ያዩታል?
 ሀ. በጣም ዝቅተኛ ነው። ሀ. ዝቅተኛ ነው። መካከለኛ ነው። ጥሩ ነው።
 በጣም ጥሩ አይደለም
15. ማንኛውን ስነ-ምግባር ያዩ ነት ኤችአይቪ ኤድስን ይገልጻል?
 ሀ. ቲቢ. ሳንባ. ታይፎይድ. በግብረ-ሰው ግንኙነት የሚመጣበት ስለሆነ። ኮሌራ
16. በአካባቢ ያለው የኤችአይቪ ኤድስ ለምን ተጠቂ ይሆናል?
 ሀ. ንጅጃታ ዊሁኔታ. የትምህርት ተደራሽነት አለመኖር. በባለድርሻ አካላት የግንዛቤ ፈጠራ አለመኖሩ. ሁሉም
17. በቪ.ሲ.ቲ ከፍተኛ የኤችአይቪ ኤድስ ተጠቂነት የነበረው መቼ ነው?
 ሀ. 2011 ዓ. ምሉ. 2012 ዓ. ምሐ. 2013 ዓ. ምመ. 2014 ዓ. ምሰ. 2015 ዓ. ም
18. በቪ.ሲ.ቲ ዝቅተኛ የኤችአይቪ ኤድስ ተጠቂነት የነበረው መቼ ነው?
 ሀ. 2011 ዓ. ምሉ. 2012 ዓ. ምሐ. 2013 ዓ. ምመ. 2014 ዓ. ምሰ. 2015 ዓ. ም
19. በእርሶ አመለካከት የኤችአይቪ ኤድስ ምርመራ አገልግሎት ተሸሽጎልብለው ያምናሉ?
 አዎ. አላምንም
20. በደላንታ ወረዳ የመጀመሪያ ጤና ጣቢያው ስጥ የኤችአይቪ ኤድስ ተጠቂዎችን በማግራት የምርመራ አገልግሎት ትግበራ እንዴት ያዩታል?
 ሀ. ዝቅተኛ ነው። መካከለኛ ነው። ጥሩ ነው። በጣም ጥሩ ነው
21. በደላንታ ወረዳ የመጀመሪያ ጤና ጣቢያው ስጥ የኤችአይቪ ኤድስ ተጠቂዎችን ክትትልና እንክብካቤ ቁርኝት እንዴት ይፈርጃል?
 ሀ. ዝቅተኛ ነው። መካከለኛ ነው። ጥሩ ነው። በጣም ጥሩ ነው
22. በደላንታ ወረዳ የመጀመሪያ ጤና ጣቢያው ስጥ የኤችአይቪ ኤድስ ተጠቂዎችን እንክብካቤ እንዴት ያዩታል?
 ሀ. ተሻሽሏል. ባለበት ነው። ቀንስ ዋል. በጣም ጥሩ ነው
23. በደላንታ ወረዳ የመጀመሪያ ጤና ጣቢያው ስጥ የኤችአይቪ ኤድስ ምርመራ አገልግሎት እንዴት ያዩታል?
 ሀ. ዝቅተኛ ነው። መካከለኛ ነው። ጥሩ ነው። በጣም ጥሩ አይደለም
24. በእርሶ አመለካከት በደላንታ ወረዳው ስጥ የኤችአይቪ ኤድስን መከላከል ያለበት ማን ነው?
 ሀ. ማንኛውም ግለሰብ. ከፍተኛ የወረዳ ወ.አ.መ.ራ.ር.አ. ደላንታ ወረዳ የመጀመሪያ ጤና ጣቢያ ሰራተኞች. የኢትዮጵያ መንግስት. ሁሉም
25. በ5 አመቱ የኤችአይቪ ኤድስ ተጠቂዎች ዙሪያ የተደረጉ የተለያዩ መጠይቆች፤

	መጠይቆች	በጣም አል ስማማም	አልስ ማም	መልስ የለ ኝም	እስማማለ ሁ	በጣም እስ ማማለሁ
1	በኤችአይቪ.ኤድስ ዘርፍ ለሆነ የሆነ የማማ ክርክር ለግሎት ሽፋን አለ					
2	በኤችአይቪ.ኤድስ የመያዝ ሁኔታ ዕድል ተሰጥቶ ሰ/ እተሸሻለኝ					
3	የኤችአይቪ.ኤድስ የምርመራ አገልግሎት ከአመት አመት እተሸሻለኝ					
4	የኤችአይቪ.ኤድስ ሻይረስ ጫናና መጠኑ ቀንሶታል					
5	ረቀቅ ያለ የኤችአይቪ.ኤድስ ሻይረስ ምርመራ ቢኖር ተቀናቅኜ					
6	የደላን ታወረዳኝ ከፍተኛ አመራሮች የኤችአይቪ.ኤድስ ሻይረስ መስፋፋትን ለመቀነስ ቁርጠኛ ነኝ					
7	በደላን ታወረዳኝ የመጀመሪያ ጤና ጣቢያ የኤችአይቪ.ኤድስ የምርመራ ፍርዳታ አገልግሎት ለመስጠት በቁራን ተሰጥቶ አለኝ					
8	በደላን ታወረዳኝ የመጀመሪያ ጤና ጣቢያ ውስጥ የኤችአይቪ.ኤድስ ተጠቂዎች ባለው ክትትል ላይ እንክብካቤ ተደስተኛ ነኝ					
9	ኤችአይቪ.ኤድስን ለመከላከል መታቀብ የግድ ነው					
10	ኤችአይቪ.ኤድስን ለመከላከል ኮንዶም መጠቀም የግድ ነው					
11	ኤችአይቪ.ኤድስን ለመከላከል አንድ ለአንድ መወሰን የግድ ነው					

ስለ ትብብርዎ እና መሰጠትዎ::