

# KNOWLEDGE, ATTITUDE AND PRACTICES TOWARDS HIV/AIDS AMONG PEOPLE WHO LIVE IN STATE HOUSE IDPS AT RED SEA, JIG JIGA YAR, HARGEISA, SOMALILAND

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**Abstract:** HIV, the disease, whose mode of transmission is known and is largely preventable, but due to lack of knowledge and practices about HIV/AIDS in general population causes its rapid spread. The Acquired Immune Deficiency Syndrome (AIDS) epidemic is the greatest challenge to human kind in the 21st century. AIDS was first recognized in 1981 and is caused by human immunodeficiency virus (HIV) which was isolated in USA by the end of 1983. So, in this study we plan to assess and compare the knowledge, attitude and practices about HIV among those people who live in state house IDP's, Red Sea, Hargeisa city, Somaliland.

**Objective of the study** is to assess KAP towards HIV/AIDS among people who live in state house IDPs at red sea, Jig Jiga Yar, Hargeisa, Somaliland.

**Method:** A cross-sectional descriptive study design was conducted from March 26- October to assess knowledge, attitude and practice towards HIV/AIDS transmission, prevention and control. A date was collected 138 respondents who live in State House IDP's by using Questionnaire. This method was used because to enable the researcher together the necessary data within limited time available to complete the project.

**Results:** Majority of the respondents 110 (79.7%) knew that HIV/AIDS is transmitted through sexual intercourse. The study showed that 53(38.4%) said that HIV/AIDS can be prevented and controlled by having one partner, 34(24.6%) increasing community awareness, 22(15.9%) providing health education can contribute HIV/AIDS prevention and control while 12(8.7%) said it can be prevented and controlled through abstinence from sex and 2(1.4%) said by using condom. Regarding respondents attitude 54(39.1%) of them said that HIV/AIDS infected person would not be discriminated while in terms of their practice of prevention and control 87(63.0%) of the respondents would like to practice measures to prevent and control HIV/AIDS from being infected people

**Conclusion:** Understanding the KAP about HIV/AIDS of people who live in state house IDP's and in general populations will help us in formulating strategy for prevention and control.

**Keywords:** KAP, HIV/AIDS transmission, prevention and control.

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## 1. INTRODUCTION

The Acquired Immune Deficiency Syndrome (AIDS) epidemic is the greatest challenge to human kind in the 21st century. AIDS was first recognized in 1981 and is caused by human immunodeficiency virus (HIV) which was isolated in USA by the end of 1983. There are two types, namely HIV-1 and HIV-2. HIV-1 is more common, infects people worldwide and causes AIDS. HIV-2 though less aggressive and found mainly in West Africa causes a similar illness. In 2009, around 400,000 children below 15yrs became infected with HIV. <sup>(1)</sup>

Over half of all new infections worldwide were among young people between the ages of 15 and 24. Every day, 6,000 young people become infected with HIV- more than five every minute. <sup>(2)</sup>

In the United States alone, half of all new infections are estimated to be among people under age 25 years and the majority of young people are infected sexually. <sup>(3)</sup>

Demographic health surveys of many countries have prevailed that adolescents in now a days are experienced puberty at younger age than the previous generation. As result, they are involved in early initiation of sexual intercourse; most of it is being unsafe, unplanned and exposing them to unwanted pregnancy, abortion and sexually transmitted disease. <sup>(4)</sup>

Risk behaviors like unprotected sex, multi partnership, no or inconsistence use of condoms and drug of abuse are extremely determinate to health of adolescents and young adults putting them at high risk to HIV/AIDS and other Sexual transmitted diseases (STDs). <sup>(4)</sup>

The human immune deficiency virus (HIV) is a retrovirus that infects cells of the immune system, destroying or impairing their function. As the infection progresses, the immune system becomes weaker, and the person becomes more susceptible to infections. The most advanced stage of HIV infection is acquired immune deficiency syndrome (AIDS). It can take from 10-15 years for an HIV infected-person to develop AIDS. Antiretroviral therapy can slow down the progress even further. <sup>(5)</sup>

HIV is transmitted through unprotected sexual intercourse (anal or vaginal), transfusion of contaminated blood, sharing needles and between mother to her infant during pregnancy, childbirth and breastfeeding. <sup>(6)</sup>

Almost all of MTCT infections occurred in Sub Saharan Africa, and more than 90% are as a result of mother-to-child transmission (MTCT) during pregnancy, labour/delivery, and breastfeeding. Transmission during pregnancy is about 5 – 10%, during labor and delivery is 10 – 20% and during breastfeeding is 10 – 15% Without interventions, there is a 20-45% chance that a baby born to an HIV-infected mother will become infected. <sup>(7)</sup>

The overall prevalence of HIV/AIDS in Somalia is estimated around 0.9%, which is considered to be low compared with the incidence in surrounding countries. However, many factors could aggravate the situation. The current drought situation in South Central Somalia, and war and armed conflict, resulting in forced displacement, collapse of social structures and breakdown of rule of law put people at much greater risk of HIV infection. Moreover, Somali society is polygamous, and divorce and remarriage happen frequently. <sup>(8)</sup>

WHO HIV Surveillance fact sheet showed the following information in Somaliland:

Somaliland	Number Tested	Number Positive	Percentage Positive
<b>Hargeisa</b>	499	8	1.6
<b>Berbera</b>	350	8	2.29
<b>Borama</b>	362	4	1.10
<b>Burao</b>	350	2	0.57
<b>Mean Somaliland</b>	1561	22	1.41

## 2. LITERATURE REVIEW SUMMARY

The statistics about the impact of HIV/AIDS world-wide are overwhelming. Estimates of the United Nations Agency for AIDS (UNAIDS) indicate the over 40 million people were living with HIV/AIDS in 2001, that nearly 25 million people have died of AIDS since the disease was first discovered in the early 1980's, and the more that more than 15.6 million children under 15, have lost either their mother, their father, or both parents as a direct result of AIDS (UNAIDS, 2001). While every nation has in some way been affected by this pandemic, it is in Africa that the grip of HIV and AIDS has been, by far, the deadliest. Twenty-eight million people in Africa are living with HIV/AIDS and southern Africa has the highest HIV adult prevalence in the world. Well over two thirds of the HIV/AIDS related deaths (18 million, or 72%) are from Africa (World Bank, 2002) and almost one in every ten adults and sub-Saharan Africa are HIV positive, although infection rates in individual countries such as South Africa, Botswana, Malawi and Swaziland are much higher (UNESCO, 2002).

The magnitude of the problem becomes clear when one considers that well over one third (39 percent) of adults in Botswana, and one in every five (20 percent) adults in South Africa, are estimated to be HIV positive (NIC, 2002).

At human level, the financial burden of HIV/AIDS is at least 30% greater than deaths from other causes, because it affects the most productive age group (young adults), and because the costs of medication and caring for the sick are staggering and can be prolonged (Coombe, 2002).

In low and middle-income countries, it is estimated that two million PLWHA were receiving treatment by the end of 2006, representing 28% of the seven million in need. In spite of international initiatives to scale-up treatment, coverage of ART varies by region with a low of 6% in North Africa and the Middle East, 15% in Eastern Europe and Central Asia, 19% in Southeast Asia, 28% in sub-Saharan Africa (up from just 2% in 2003), to Latin American and the Caribbean at 72% overall.<sup>(11)</sup>

Defining the costs of scaling-up services for HIV/AIDS is challenging. Achieving the WHO/UNAIDS ART “3 x 5” goal of three million people on ART by 2005 was estimated to cost between US\$ 5 billion and US\$ 6 billion over two years for drugs, support programs, administrative and logistic costs. Support program estimates include training of existing clinical personnel, supervision of ART delivery, and remuneration of volunteers who provide ART adherence support.<sup>(12)</sup>

The U.N. estimates that US\$ 8.3 billion was spent on HIV/AIDS programs in low and middle-income countries in 2005. However, the search for a global figure that can be consistently applied to a more meaningful national or local level remains elusive.<sup>(13)</sup>

One systematic review of the literature by Johns and Torres (2005) on the costs of scaling-up health interventions found that typical cost projections are difficult to determine due to the scarcity of cost data, varying staffing and infrastructure levels across countries, differences in purchasing power parity exchange rates, and inconsistencies in how fixed, semi-fixed, and variable costs are determined and measured. The costs of scaling-up an intervention are specific to both the type of intervention as well as its particular setting. Therefore, some experts advocate for moving away from specific global estimates to the use of simple costing methods using country-level or regional data based on local factors such as training costs, transportation expenses, use of various technologies, and availability and capacity of human resources.<sup>(14,15)</sup>

However, some studies have estimated annual costs per person per year for HIV/AIDS services. Bertozzi (2004) found the cost of testing, prophylaxis, treatment, drug costs and laboratory monitoring to be US\$ 913 for low-income countries and US\$ 4743 for middle-income countries (constant 2000 US\$).<sup>(16)</sup>

A study in Mexico by Bautista-Arredondo, Mane, and Bertozzi (2006) found average annual drug costs per patient to be between US\$ 2430 and US\$ 4270 (prior to the availability of generic drugs). Binswager (2000) determined that in a district with 300,000 people and a HIV prevalence rate of 5-10%, a comprehensive HIV prevention program (controlling STDs, providing intensive health education, offering youth activities, promoting and distributing condoms, training HCWs, and maintaining a safe blood supply) would cost US\$ 350,000 or US\$ 1.16 per person. These extreme cost variations support the notion that costs reflect national and regional differences and are difficult to consistently measure.

The HIV/AIDS pandemic disproportionately affects woman who already carry a very hand burden in many African countries. From a physiological and medical perspective woman are at a greater risk of getting infected. In addition, they are often solely responsible for the household and the children, and have less financial and material reserves to fall back on. Women also face the risk of abandonment or abuse at the hand of their partners when HIV/AIDS strikes. And when family members fall sick as a result of HIV, it is most often the girls who will be removed from schools to take care of those who are sick. This increases their susceptibility to poverty and to the disease because they will probably marry younger and will not have the benefits of an education. (Barnett & Whiteside, 2002).

HIV/AIDS represents not only a tragedy at a human level but also heavily affects the economic development of countries, many of which are already severely strained for resources. The weight on the health system is tremendous and the loss of productive workforce has implications for the economy. Cross country analyses conducted by the World Bank suggest that the region of Southern Africa is losing an estimated 0.7 to 1.0 percent per capital growth per year as a direct result of HIV and AIDS and that by the year 2010 it may have reduced the aggregate output by between 15 to 20 percent (World Bank, 2002), by some estimates between 50 and 80 percent of hospital beds in Southern Africa are occupied by people with HIV related infections (UNAIDS Press Release, 2001).

The HIV/AIDS epidemic is taking its heaviest toll at household and community level (17). Economic factors are crucial in determining the responses of the extended family to provide care for orphans. The care of children affected by HIV/AIDS in developing countries is falling on poorer people within communities, especially women. In Kenya, most families that agreed to take in foster children were living below the poverty line, whereas wealthier relatives tended to maintain minimal links with orphans (18).

In Uganda, orphan household *per capita* income was 15% less than non-orphan household income (19). Death of a father within a household often has deleterious economic consequences for children because of high treatment and funeral costs, loss of the father's income and property grabbing. (20)

In Zimbabwe, 89% of families relied on women as the breadwinner and only 3% of orphan households had a member who was a breadwinner in employment (21). The situation of children living in child headed households was particularly dire with average monthly incomes of \$8 compared to \$21 in non-orphan neighbors (22). Private transfers of assets within families and communities are traditional mechanisms for alleviating distress (23). In Tanzania, less than a quarter of orphans received support from the one parent who was still surviving and under 10% received support from other relatives or elsewhere (24).

In desperate circumstances when there are no other sources of income, poor households may sell off assets such as oxen which provide draught power to provide desperately needed revenue at the cost of long-term development (25). One way to gauge the strength of community coping mechanisms in the face of the impact of AIDS is to measure the strength of community responses. Seeking relief from family, friends and neighbors is a common response to economic crises which result from disasters (26).

In Tanzania, assistance from government or non-governmental organization sources was considerably less than transfers from community members (27).

This community safety-net is being weakened as a result of the steadily growing impact of the AIDS epidemic. Better-off families find their economic reserves depleted because of continual demand from relatives affected by AIDS. They become less able to contribute in cash, kind or the provision of work to destitute families in need. As the number of families falling from poverty into destitution increases as a result of AIDS, the amount of relief that can be provided per destitute family decreases. There is a growing recognition that mobilising and strengthening community-based initiatives such as caring for the sick and orphans are as urgent as preventing the further spread of HIV (28) (29) (30).

Often, the groups best placed to strengthen family and community capacity are small grass-roots organizations, supported by non-governmental organizations (31) (32).

Community-based child support initiatives have a demonstrable ability to target small amounts of material support to large numbers of destitute orphan households (33) (34).

One of the less obvious economic impacts of the epidemic is an increase in the amount of work performed by children, sometimes as young as five years old. The workload of children affected by HIV/AIDS starts when parents become sick and increases when children become orphaned; workload of orphans may be greater than non-orphans living in the same household. Increased domestic workload is often disproportionately greater on girls than boys. In order to generate an income, adolescents may leave orphan households to seek work in towns, as agricultural labourers for more prosperous farmers and as domestic labourers; some girls become involved in commercial sex or enter into marriage as girl brides in order to provide for the needs of younger children in their household. (35)

UNAIDS (2003) warns that unless drastic action is taken, the damage that has already taken place is very likely to be minor compared to what is still to come. In fact, as Kelly (2003) notes, all predictions to date have proven to be conservative at best with dire projections about the progression of the pandemic needing to be revised every year because they are inevitably short of the mark.

There are several modes of HIV transmission and the most common is through heterosexual and homosexual intercourse. Perinatal transmission from mother to child and transfusion of blood and blood products are also other modes of transmission. Intravenous drug use is a common source of HIV transmission in the developed world while injections and accidental needle stick injuries account for a small proportion of AIDS cases. In sub Saharan Africa the most common is through heterosexual intercourse. The risk of infection increases with the number of sexual partners. High rates of partner exchange, the practice of certain types of sexual intercourse and the presence of anal or genital lesions combine to increase the risk of HIV infection, (Akol et al, 2000).

Populations at risk of HIV infection and AIDS vary by geographical region. In North America, Western Europe and parts of South America homosexual males and IV drug users have the highest prevalence of AIDS. In Africa and most parts of the Caribbean the highest prevalence levels are found among heterosexual persons, especially those with numerous sexual partners (Palloni and Glicklich, 1989).

Globally, there are approximately 33 million people living with HIV/AIDS (PLWHA) and two million die each year from the disease. Efforts to scale-up ART for HIV/AIDS are expanding access and 700,000 people received ART for the first time in 2006. However, although progress has been made, seven million PLWHA who needed treatment in 2006 did not receive ART.<sup>3</sup> As a result, efforts such as the President's Emergency Plan for AIDS Relief (PEPFAR), the Global Fund, the WHO 3 x 5 initiative, World Bank programs, and the Millennium Development Goals (MDGs) are directed toward expanding HIV/AIDS services. In addition, the General Assembly of the United Nations (U.N.) has committed itself to providing universal access to HIV/AIDS care by 2010<sup>[36]</sup>.

Sub-Saharan Africa has the highest HIV prevalence worldwide with 23 million PLWHA.<sup>5</sup> Sixty-seven percent of all people on ART live in sub-Saharan Africa and almost 90% of the two million children under the age of 15 in this region are in need of treatment for HIV/AIDS.<sup>6</sup> World Health Organization, UNAIDS, UNICEF "Towards Universal Access: Scaling up Priority<sup>[37]</sup>.

The elderly population in Africa above 60 years in age is currently estimated to number slightly over 38 million, and is projected to reach between 203 and 212 million by 2050 (Help Age International 2002). Over the last decade the human immunodeficiency virus (HIV) and acquired immune deficiency syndrome (AIDS) epidemic has had a devastating impact on older women and men, especially in sub-Saharan Africa; with about two million deaths recorded annually and at least 13 million children have lost one or both parents (Alpaslan & Mabutho 2005:276). The rapid growth of population ageing in Africa and the impact of HIV and AIDS add another dimension to the role of older persons. HIV and AIDS affects older people in two main ways: the elderly are themselves infected with HIV, making them vulnerable to many health and socio-economic challenges (Waysdorf 2002:51; Ramos Rodriguez, Baney, Morales, Parham & Lago 2000:13), and it places a burden on them as carers since many have to care for their sick children and are often left to look after orphaned grandchildren who are also infected (Rajaraman, Earleb & Heymann 2008:2; Lalthapersad-Pillay 2008:151; Van Dullemen 2006:101). The extended family used to be relied upon to provide subsistence and care for older persons.

The issue of the HIV and AIDS pandemic has generated a new focus on the changing role of the elderly in communities affected by AIDS. An estimated 22 million adults and children were living with HIV in sub-Saharan Africa at the end of 2007, and during that year an estimated 1.5 million Africans died from AIDS. The epidemic has left behind some 11.6 million orphaned African children (AVERT 2009). HIV and AIDS have resulted in a reversal of roles, where older persons are now providing subsistence and care to younger generations (Makiwane, Schneider & Gopane 2004:12; Kimuna & Makiwane 2007:97). The African extended family has traditionally nursed its sick and absorbed its orphans without legal process (Alpaslan & Mabutho 2005: 276). Many governments and major international donors have therefore reacted to growing evidence of the impact of HIV and AIDS on households by suggesting that 'traditional' coping mechanisms would minimise the impact and allow households and communities to absorb the loss of members (Economic Commission for Africa 2009). However, this is yet to be demonstrated, since there is growing evidence of multiple crises faced by those families now being headed by the elderly in Africa (Makiwane *et al.* 2004:9).

Whilst the global community is preoccupied with combating the HIV and AIDS pandemic, particularly amongst the middle-age group, there appears to be an under-reporting of its impact on the lives of the elderly (Makiwane *et al.* 2004:11; Help Age International 2007). It is important to document the impact of HIV and AIDS on the elderly, particularly within the sub-Saharan African community where the burden of caring for the sick has shifted onto the shoulders of the elderly left in the community.

HIV/AIDS heaviest toll is in Sub-Saharan Africa constituting more than 60% of all people living with HIV. The prevalence of HIV among countries neighboring Somalia, i.e Djibouti, Ethiopia and Kenya is 2.9%, 4.4% and 6.7% respectively. In these countries HIV is established in the general population. Somalia/ Somaliland have close socio-economic links and population mobility between Somalia and these countries is extensive. The combat of HIV/AIDS is one of the top priority areas for the UN system in Somalia/Somaliland. The United Nations Team and the United Nations Country Theme Group on HIV/AIDS facilitate access to funds for the HIV/AIDS program. It is anticipated that the newly formed National Aids Commissions established in Mogadishu, Bosaso Hargeisa will give momentum to the fight against HIV/AIDS in the country. (WHO/Somalia in 2004)

The wealth of experience from other countries has shown that there are effective strategies to keep the rate of infection low. Somalia could be one of the few countries in Sub-Saharan Africa with an opportunity to fight the epidemic and avoiding high levels of HIV infection. Rate of transmission of HIV from mother to children have varied in different parts of world as 12-30% in the US and Europe, 25-55%. The results of the Summary report presents the findings of the first national HIV sero-surveillance conducted by WHO/Somalia in 2004 showed a mean HIV prevalence of 0.9% in Somalia HIV prevalence was above 1% in pregnant young women (age 15-19 (49) years). These data indicate that the country could be approaching a generalized HIV epidemic. HIV prevalence varied between the different zones of Somalia: Northwest showed average HIV prevalence of 1.4%, North East of 1% and Central South of 0.6%. Subsequent surveillance rounds are required to further explore these geographical variations and to determine future trends in the HIV epidemic. (WHO/Somalia in 2004)

HIV prevalence among the age group 15-24 is generally regarded as indicative of newly contracted infections in a population (incidence rate)<sup>2</sup>. In Somalia this indicator is 0.9%. Experience from Sub-Saharan countries showed that when the rate of HIV exceeds 1%, it could be doubled or tripled in 2-3 years. HIV epidemics are categorized into three stages; the generalized epidemic stage is characterized by an HIV prevalence that is consistently above 1% in pregnant women; in concentrated epidemics it is consistently >5% in at least one defined sub-population and is <1% in pregnant women in urban areas and in low level epidemic HIV prevalence has not consistently exceeded 5% in any defined subpopulation. (WHO/Somalia in 2004)

In all countries the HIV epidemic consists of multiple epidemics in various sub-populations that are due to variations in the behavior in different geographical areas in the country. When the epidemic reaches higher levels within certain sub-populations, so-called bridging groups may transmit the virus more efficiently from sub-populations with higher rate of infection to the general population. In Somalia (6) out of the (13) sites where pregnant women were tested, the average rate of HIV positive cases was above 1%. Berbera stands out as the highest HIV rate in the country. This could be explained by the fact that Berbera is a very busy port serving Djibouti, Ethiopia and Somalia. The rate of HIV infections in the other two ports of Somalia Mogadishu and Bosaso is also relatively high. The young work force coming from the rural areas to the ports is living away from their family social bonds, a phenomenon that is well known for increasing vulnerability to HIV. In Hudur and Jowhar the average rate of HIV infection is 0%, 0.3% and 0.3% respectively. This could be due to limited population mobility because of the difficult security situation with low levels of HIV transmission. However, there should be no complacency in view of these relatively low rates. As soon as peace prevails, mobility and thus vulnerability to HIV may increase. (WHO/Somalia in 2004)

HIV prevalence among blood donors at the same 15 hospitals in Somalia in 2003 was (1.1%) and in 2004 (0.9%). The average rate of HIV infection among patients complaining of sexually transmitted infections in Mogadishu, Bosaso and Hargeisa is 4.3%. Clearly this is higher than the average rate of HIV infection in the general population. STI patients among other sub-populations are one of the most famous bridging groups transmitting the HIV virus to the general population. HIV among TB patients from Mogadishu, Bosaso and Hargeisa showed an average rate of 4.5%. HIV increases the risk of activation of latent tuberculosis and aggravates the disease. HIV among tuberculosis patients is an indicator of the level and maturity of the epidemic and hence then increasing burden of HIV-related disease in the health care services. (WHO/Somalia in 2004)

When examining the burden of curable STI (Gonorrhoea and Chlamydia) among pregnant women and STI patients in Mogadishu, Bosaso and Hargeisa, the results showed average rate of 2.5% among pregnant women. Syphilis prevalence was found to be 1.1% among pregnant women in Somalia. STI & HIV have the same mode of sexual transmission. Preventive measures for STI and HIV have the same target audience and are very similar. Clinical facilities shall serve as important entry points for capturing both curable STI and HIV. (WHO/Somalia in 2004)

### **3. METHODS AND TECHNIQUES**

#### **3.1. Introduction**

This chapter discussed most important parts in the study including research design, study population, study area, the target population, sampling technique, sample size, the method of sampling, the tools or instruments used for data collection and to select subjects under study. In addition to that, it also showed ethical issues of research as well as displaying dependent and independent variables.

### 3.2. Study Design

A cross-sectional descriptive study was done to assess knowledge, attitude and practice towards HIV/AIDS transmission, prevention and control.

This method was used because to enable the researcher together the necessary data within limited time available to complete the project.

### 3.3. Study area

The study was conducted in state house IDPs at red sea, Jig jiga yar, Hargeisa city. Hargeisa is the biggest urban setting in the Northwest and is the capital town (headquarter) of Somaliland. It concentrates public administration, private sector and international community interventions. It is the destination for a large number of refugees, returnees and IDPs hosting more than 72,500 of displaced populations, 60% of who were returnees.

State house IDPs is located on the grounds of the looted colonial governor general's house near the western edge of Hargeisa. The land, therefore, belongs to the government, which does not plan to make the area a permanent settlement.

### 3.4. Study period

The study was conducted From March 26- Oct. 24

### 3.5. Source of population

All people who live in state house IDP's. The study participants were selected by using simple random sampling.

### 3.6. Sample size

The sample size was calculated based on the formula for a population.

The proportion (p) was used as assumption of prevalence rate of 10%.

$$n = Z^2pq/d^2$$

Where:

n= minimum sample size

z= confidence interval of 95 % ( 1.96)

q= the non-occurrence of variable (1-p)

d= degree of freedom 5%

$$n = (1.96)^2 * 0.1(1-0.1)/(0.05)^2$$

$$n = 138$$

### 3.7. Sampling procedure

Simple random sampling technique was employed to select study participants from the population. The total population was found from UNDP report 2014 which was 700 households. Serial number was given to each household starting from 1 to 700. Lottery method was used to select individual participants. Numbers representing each household was written on small pieces of paper and was coiled. 138 participants were randomly selected. From each household one adult who were present at the time of data collection was interviewed. In case if more than one adult was present, simple random was used to select one of them.

### 3.8. Inclusion criteria

Women and Men who are voluntary to participate the study.

Adolescent men and women who live in state house IDP's.

### 3.9. Exclusion criteria

People who don't live in state house IDP's and those people who are not voluntary to participate the study.

### 3.10. Study variables

Dependent variable

- Knowledge, attitude & practice of people of live in state house IDP's

Independent variables

- Socio- demographic data & level of income materials & educational level

### 3.11. Data collection instruments

First the questionnaire was made in English version & was changed in to Somali version by the researcher in order to collect information regarding HIV/AIDS. Face to face interview was conducted by using structured questionnaire. 10 data collectors were selected from senior public health student of Gollis University and the principal of investigator supervised during the data collection.

During this data collection different material like papers, exercise books, pencils, calculators, erasers were used.

### 3.12. Quality Control

Pretest was carried out to correct irrelevant points before the actual data collection training was given for data collectors in order to accomplish effective collection of information.

The quality of data was controlled at different level of completeness & consistency first by data collector then by supervisor then by investigator & finally data entry.

### 3.13. Data processing and analysis

The data was entered into SPSS version 20 then it was edited and cleaned. Descriptive statistics was computed like mean, standard deviation for continuous variable. Bar chart, pie chart and tables were used to present the data.

### 3.13. Ethical consideration

Ethical clearance obtained from Hope University. All the study participants informed about the purpose of the study & their consent found before the data collection procedure done. The information obtained from each response was kept confidential.

### 3.14. Validity and Reliability

On one hand, the validity of the instruments, which was questionnaire, was measured. Validity of the instrument means the ability of an instrument to measure what it was intended to measure. In this study, the validity of the instruments was measured by a panel of experts through an assessment of selected items in the instruments that would ensure that the instrument was measuring to the expectations. After identifying the vague and ambiguous questions, corrections were made and a final instrument was prepared. On the other hand, the reliability of an instrument was measured. Reliability of the instrument means the consistence of the instrument in picking the needed information.

## 4. RESULTS

### 4.0 Introduction

This chapter presents the analysis and discussion of findings. The chapter also presents the characteristics of the sample that was used in the collection of the primary data. Further still, the presentation has been done in line with the study objectives. The conceptual framework also provided guide to the study.

Statistical package for social sciences (SPSS) and Microsoft Excel was used to aggregate and analyze the data presented in this chapter. The presentation of this data is in line with the aim of the study which was assessment of knowledge, attitude and practice towards HIV/AIDS among people who live in state house IDP's, Red Sea, Jijiga Yar, Hargeisa city.

### 4.1. Socio-demographic characteristics of the respondents

Table 1 reveals the age group of respondents as being adult of various age groups.

The sample characteristics were summarized in terms of age group, sex structure and position at the work place. Five age brackets were used. These were 15-19; 20-29; 30-39; 40-50 and above 50yrs. This is explained below.

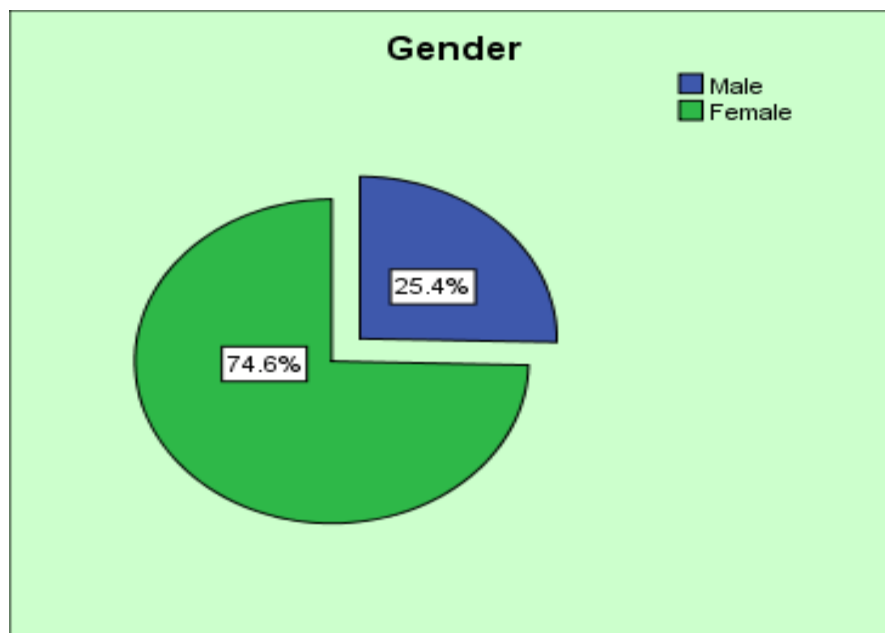


**Table 1: Age Group of Respondents**

Age	Frequency	Valid Percent
15-19 yrs.	13	9.4
20-29 yrs	45	32.6
30-39 yrs	33	23.9
40-50 yrs	32	23.2
50 yrs. and above	15	10.9
Total	138	100.0

Source: Primary data

It is shown that 9.4% of the respondents were in the group of 15-19 yrs. of age; 32.6% were in the age group of 20-29 years; 23.9% were in the age group of 30-39 years; 23.2% were in the age range of 40-50 years; and 10.9% were adults above 50 years respectively. This represents a total of 100% percent of the respondents.



Source: Primary data

**Figure 1: Gender of the respondents**

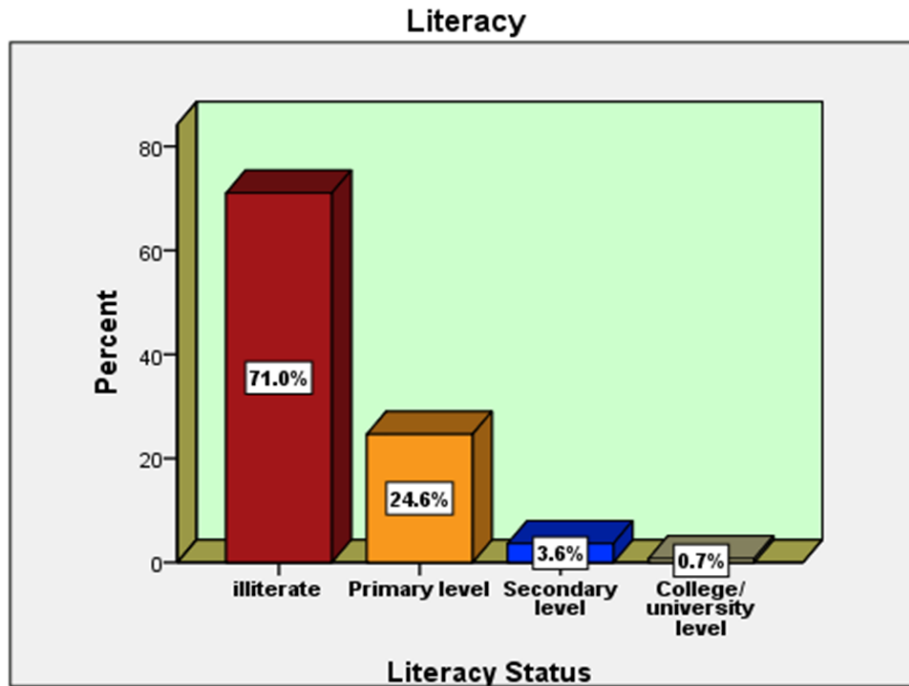
The above pie chart shows that 74.6% of the respondents were female, while 25.4% were Male. This proportion was in line with the population structure, and as reflected by the average of the sample frames. This implies that any conclusions and generalizations made from the sampling frame truly reflected the views of both men and women who were both represented.

**Table 2: Marital Status of the Respondents**

Marital Status of the Respondents	Frequency	Valid Percent
Single	19	13.8
Married	95	68.8
Widowed	5	3.6
Divorced	19	13.8
Total	138	100.0

Source: Primary data

Table 2 reveals that 95(68.8%) of the respondents were married, 19(13.8%) of the respondents were single while 19(13.8%) were divorced and 5(3.6%) were widowed or separated.



Source: Primary data

Figure 2: Education level of the respondents

The above diagram 2 reveals the education levels of respondents. It shows that on 98(71.0%) of the respondents were illiterate and 34(24.6%) reached primary level while 5(3.6%) were secondary level and 1(0.7%) reached college/university level.

Table 3: Ethnicity of the respondents

Ethnicity	Frequency	Valid Percent
Somali	125	90.6
Oromo	10	7.2
Amhara	3	2.2
Total	138	100.0

Source: Primary

Table 3 shows that 125(90.6%), 10(7.2%) and 3(2.2%) of the respondents were Somali, Oromo and Amhara respectively. So majority of the people who live in State House IDP's are Somali people.

Table 4: Occupational Status of the respondents

Occupation Status	Frequency	Valid Percent
Government employee	14	10.1
Merchant	4	2.9
daily laborer	44	31.9
un-employed	67	48.6
Student	9	6.5
Total	138	100.0

Source: Primary Source

Table 4 shows that 14(10.1%) of the respondents were government employees, 4(2.9%) were merchant while 44(31.9%) were daily laborer, 67(48.6%) were unemployed and 9(6.5%) were students. Majority of the respondents were unemployed that leads poor socioeconomic of those people who live in state house IDP's.

**4.2 Responses to research question two: Knowledge towards HIV/AIDS**

The study examined the respondents' knowledge towards HIV/AIDS transmission, prevention and control.

**Table 5: Shows How HIV/AIDS is transmitted? (From person to person)**

How HIV/AIDS is transmitted	Frequency	Valid Percent
Drinking from same bottle with a diseased	3	2.2
Having sex	110	79.7
Shake hands with a diseased	1	.7
Deep kissing	1	.7
Mosquito bites	7	5.1
Do not know	16	11.6
Total	138	100.0

Source: Primary data

According to the Table 5, it was revealed that 110 (79.7%) of the respondents knew that HIV/AIDS is transmitted through sexual intercourse, 16(11.6%) said don't know while 7(5.1%) said it is transmitted through mosquito bite 3(2.2%) drinking from same bottle with a diseased, 1(0.1%) shaking hands with a diseased individuals and also 1(0.1%) said that it is transmitted through deep kissing.

**Table 6: Shows how HIV/AIDS can be prevented and controlled? More than one answer is possible**

how HIV/AIDS can be prevented and controlled	Frequency	Valid Percent
Having one partner	53	38.4
Abstinence from sex	12	8.7
Condom use	2	1.4
Increasing community awareness	34	24.6
Adolescent Health education	22	15.9
I don't know	15	10.9
Total	138	100.0

Source: Primary data

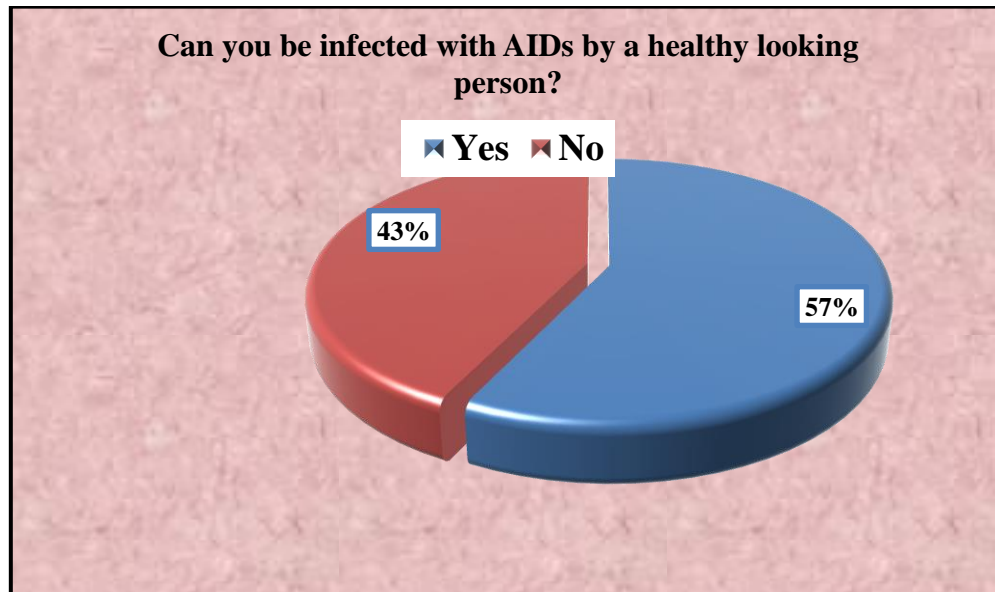
Table 6 shows that 53(38.4%) said that HIV/AIDS can be prevented and controlled by having one partner, 34(24.6%) increasing community awareness, 22(15.9%) providing Adolescent health education can contribute HIV/AIDS prevention and control, 15(10.9%) said don't know while 12(8.7%) said it can be prevented and controlled through abstinence from sex and 2(1.4%) said by using condom HIV/AIDS can be prevented and controlled.

**Table 7: Do you know that HIV/AIDS lead a death?**

Do you know that HIV/AIDS lead a death	Frequency	Valid Percent
Not serious or simple	6	4.3
moderately serious	29	21.0
Very serious	94	68.1
I don't know	9	6.5
Total	138	100.0

Source: Primary data

According to the above Table 7 shows that 94(68.1%) knew that HIV/AIDs is very serious and leads a death, 29(21.0%) said that HIV/AIDs is moderately serious, 6(4.3%) not serious and 9(6.5%) do not know HIV/AIDs severity. This is clear that majority of the respondents 94(68.1%) mentioned the how HIV/AIDs is severe and fatal.



Source: Primary data

Figure 3: Can you be infected with HIV/AIDs by a healthy looking person?

The above diagram 3 displayed that 79(57.2%) of the respondents answered yes when asked whether normal looking person can be infected with them HIV/AIDs whereas 59(42.8%) of them answered that normal looking person could not infect with them. In addition to that we know that individuals can be asymptomatic and can transmit it to another. So some individual may be sub clinical and take part the disease transmission.

#### 4.3 Responses to research question three: Respondent’s attitude towards HIV/AIDs

Table 8: Shows whether HIV/AIDs positive person will be discriminated or not?

Do you believe that HIV/AIDs positive person will be discriminated?	Frequency	Valid Percent
Yes	35	25.4
No	54	39.1
Don't know	49	35.5
Total	138	100.0

Source: Primary data

The above table 8 shows that 35(25.4%) of the respondents supported that HIV/AIDs person to be discriminated, 54(39.1%) of the respondents said that HIV/AIDs person would not be discriminated while 49(35.5%) of the respondents said don't know.

Table 9: Do you think that HIV/AIDs positive person develop psychological trauma?

Do you think that HIV/AIDs positive person develop psychological trauma?	Frequency	Valid Percent
Yes	83	60.1
No	36	26.1
Dont know	19	13.8
Total	138	100

Source: Primary

According to the above table 9 shows that 83(60.1%) of the respondents believe that HIV/AIDs positive person will develop psychological trauma, 36(26.1%) said that HIV/AIDs positive person would not develop psychological trauma while 19(13.8%) of the respondents did not think

**Table 10: Do you think that HIV/AIDs affect community health?**

Do you think that HIV/AIDs affect community health?	Frequency	Valid Percent
Yes	85	61.6
No	52	37.7
I don't know	1	0.7
Total	138	100

Source: Primary data

Table 10 shows that 85(61.6%) of the respondents thought that HIV/AIDs affect community health, 52(37.7%) of the respondents said that HIV/AIDs would not affect community health whereas 1(0.1%) said did not know. So majority of the respondents 85(61.6%) believed that HIV/AIDs affect human population in different aspects socioeconomically, psychologically and etc.

**Table 11: Do you believe if women/men become HIV/AIDs positive will not be married?**

Do you believe if women/men become HIV/AIDs positive will not be married?	Frequency	Valid Percent
Yes	73	52.9
No	47	34.1
Dont know	18	13
Total	138	100

Source: Primary data

The above table 11 shows that 73(52.9%) of the respondents believed that if person become HIV/AIDs positive would not be married, 47(34.1%) of the respondents thought HIV/AIDs positive persons would be married and 18(13.0%) said don't know. You see that 73(52.9%) of the respondents would think HIV/AIDs positive persons would not be married because of risk of transmission of the disease.

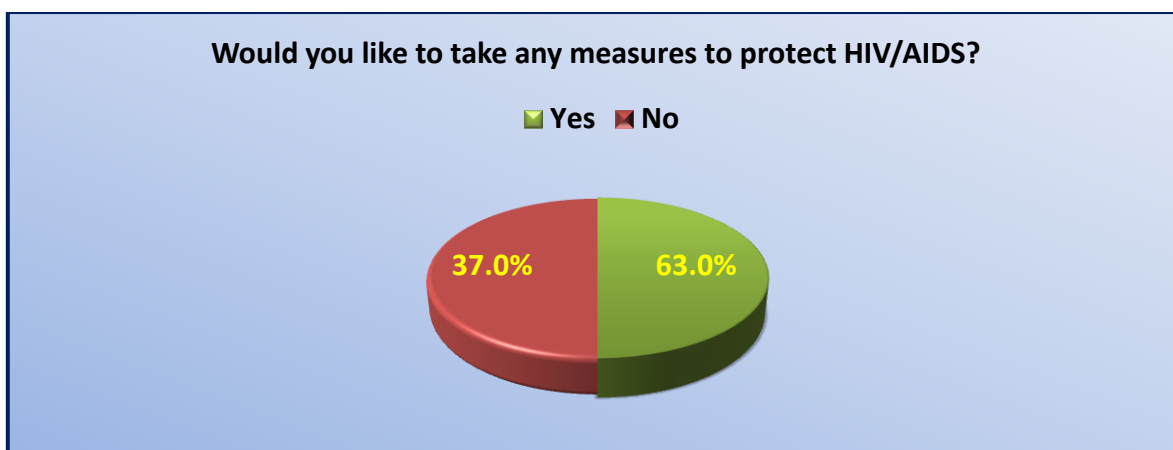
**Table 12: Do you think that HIV/AIDs affect marital relationship?**

Do you think that HIV/AIDs affect marital relationship?	Frequency	Valid Percent
Yes	82	59.4
No	35	25.4
Don't know	21	15.2
Total	138	100

Source: Primary data

As we see the above table 12 majority of the respondents 82(59.4%) would think that HIV/AIDs affect the marital status, 35(25.4%) thought that HIV/AIDs have could not affect marital status while 21(15.2%) said that did not know whether it would affect marital status or not.

4.4 Responses to research question Four: Respondent’s practice towards HIV/AIDS prevention and control.



Source: Primary data

Figures 4: would you like to take any measures to protect HIV/AIDS?

As you see the above diagram 87(63.0%) of the respondents would like to practice measures to prevent HIV/AIDS while 52(37.0%) of the respondents said would not practice any measures to protect HIV/AIDS.

Table 13: If yes, what kind (more than one answer is possible)

If yes, what kind (more than one answer is possible)	Frequency	Valid Percent
Giving awareness to the people about the problems relating to HIV/AIDS	80	58
Sexual abstinence	50	36.2
Giving health education to community in order to know its transmission and prevention	6	4.3
Condom use	2	1.4
Total	138	100

Source: Primary data

Table 13 show that in order to practice measures to protect HIV/AIDSs from being infected to people 80(58.0%) of the respondents said giving awareness to the people about the problems relating HIV/AIDSs, 50(36.2%) said it can be prevented to practice sexual abstinence, 6(4.3%) of the respondents said that giving health education to community in order to know it’s transmission and prevention whereas 2(1.4%) of the respondents said using condom. Mean that Somali people dislike practicing condom use for the prevention of HIV/AIDSs.

Table 14: Have you ever taken any measures to know whether you are HIV/AIDS positive or not?

Have you ever taken any measures to know whether you are HIV/AIDS positive or not?	Frequency	Valid Percent
Yes	69	50
No	69	50
Total	138	100

Source: Primary data

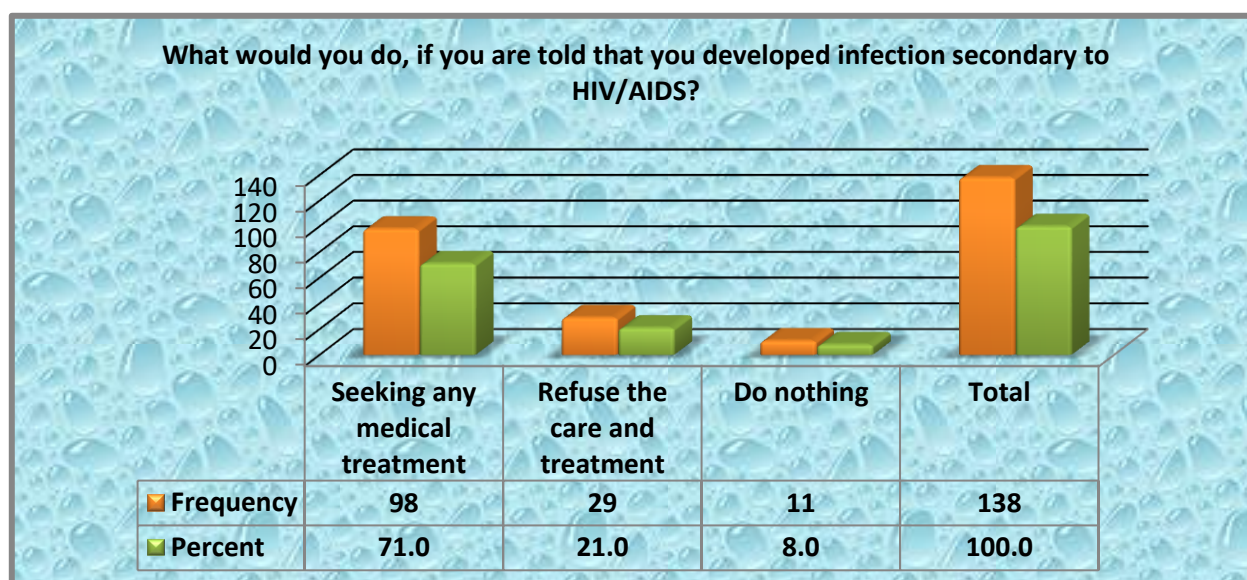
Table 14 shows that 69(50.0%) of the respondents took measures to know whether they were HIV/AIDSs positive mean that they practiced to know their HIV/AIDSs status while 69(50.0%) half of the respondents also said that they did not practice any measure to know their HIV status.

Table 15: what would you do if you realized that you are HIV/AIDS positive?

What would you do if you realized that you are HIV/AIDS positive?	Frequency	Valid Percent
Go to medical facility	84	60.9
Kept silent	37	26.8
Having regular check ups	15	10.9
Took medications	2	1.4
Total	138	100

Source: Primary data

According to table 15 most of the respondents answered when asked what they would do if they realized that they became HIV/AIDS positive 84(60.0%) of the study participants said would go medical facility, 37(26.8) said that if they become HIV/AIDS positive would kept silent, 15(10.9%) said having regular checkups, 2(1.4%) said took medications.



Source: Primary data

Figure 5: What would you do, if you are told that you developed infection secondary to HIV/AIDS?

The above diagram 5 shows that 98(71.0%) answered when asked what they would do if they develop infection secondary to HIV/AIDS that they said would seek medical treatment, 29(21.0%) refuse care and treatment and the remaining respondents said will do nothing.

## 5. DISCUSSION

### 5.1 Introduction

The main aim of this study was to assess knowledge, attitude and practice on HIV/AIDS transmission, prevention and control among people who live in state house IDP's at Red Sea, Jig jiga Yar, Hargeisa city.

The study therefore focuses three main areas: The knowledge towards HIV/AIDS transmission, prevention and control, the attitude on HIV/AIDS transmission and prevention and whether they practice prevention modalities or not.

### 5.2 The knowledge of HIV/AIDS transmission, prevention and control

A very important finding of this study was that most of the study participants had heard about AIDS. About 110 (79.7%) of the respondents knew that HIV/AIDS is transmitted through sexual intercourse, 16(11.6%) said don't know while 7(5.1%) said it is transmitted through mosquito bite, 3(2.2%) drinking from same bottle with a diseased, 1(0.1%) shaking hands with a diseased individuals and also 1(0.1%) said that it is transmitted through deep kissing. As you see above most

of the respondents have knowledge towards HIV/AIDS transmission. This result is consistent to study done in Gondar town, northwest Ethiopia which reported that there were also misconceptions in HIV/AIDS transmission like kissing and sharing equipments with AIDS patients (1.7%) and mosquito bite (1.3%) would transmit HIV. Studies in other parts of Ethiopia also reported similar misconceptions. [38, 39].

Another study done in Lao People's Democratic Republic illustrated all of the respondents had heard of HIV/AIDS and 91.3% had heard about people who had died of AIDS. Overall, the knowledge about route of transmission of HIV was high for some factors and relatively low for other factors. Accordingly, 97.7% of respondents knew that HIV can be transmitted through sexual intercourse. The majority of respondents were also aware that HIV can be transmitted through sharing needles or syringes, from mother to child and through blood transfusions. However, there was confusion about some routes of transmission. For example, only 61.0% of the participants correctly answered that "shaking hands" with PLHIV does not spread HIV. There was confusion about routes of transmission e.g. nearly half of respondents incorrectly thought that HIV could be transmitted by eating from the same plate, drinking from the same glass, wearing the same clothes and sharing the same toilet with PLHIV. Only a quarter of the respondents correctly answered that mosquitos do not transmit HIV.

Another similar study in Japan, Nagasaki showed that most of the study participants demonstrated good knowledge of HIV/AIDS. Misconceptions do exist, however. A small percentage of participants identified 'mosquito bites' (11%), 'sharing the toilet' (3%) and 'sneezing and coughing' (4%) as possible transmission routes. These kinds of misunderstandings tend to produce prejudices against those having HIV/AIDS (Fukuda, 1993).

The study showed that 53(38.4%) said that HIV/AIDS can be prevented and controlled by having one partner, 34(24.6%) increasing community awareness, 22(15.9%) providing health education can contribute HIV/AIDS prevention and control, 15(10.9%) said don't know while 12(8.7%) said it can be prevented and controlled through abstinence from sex and 2(1.4%) said by using condom HIV/AIDS can be prevented and controlled. Because of shy to buy a condom due to religious and cultural issues.

Furthermore; the same study conducted in Gondar town, North West Ethiopia showed that condoms were used only some times by about a third of those who were undergo sexual intercourse. In practice, sexually active individuals are still shy to buy condom because of religious and socio-cultural norms related to youths, especially unmarried youths. (40)

In addition, the study also showed that 94(68.1%) knew that HIV/AIDS is very serious and leads a death, 29(21.0%) said that HIV/AIDS is moderately serious, 6(4.3%) not serious and 9(6.5%) do not know HIV/AIDS severity. This is clear that majority of the respondents 94(68.1%) mentioned the how HIV/AIDS is severe and fatal. A similar study in Japan, Nagasaki showed that severity of AIDS was well acknowledged, as 98% of them agreed that it is a life-threatening disease. (Maswanya *et al.*, 1999)

On the other hand, 98(71.0%) of the respondents were illiterate and 34(24.6%) reached primary level while 5(3.6%) were secondary level and 1(0.7%) reached college/university level. As you see above most of the respondents were illiterate, but they had got many times community awareness and health education regarding to HIV/AIDS transmission, prevention and control that is why majorities of the study participants knew HIV is transmitted through sexual intercourse. Although there were some respondents who revealed misconception regarding its transmission.

### 5.3 The Attitude of HIV/AIDS transmission, prevention and control

The study shows that a total of 54(39.1%) of the respondents said that HIV/AIDS infected person would not be discriminated, 35(25.4%) of the respondents supported that HIV/AIDS infected person to be discriminated, while 49(35.5%) of the respondents said don't know. So the majorities of the respondents 54(39.1%) were against isolation of AIDS infected persons and exhibited positive attitudes to taking care of their HIV-positive relatives if they were ill and continuing friendships with HIV-positive individuals.

This was comparable with findings of a study done in Ethiopia among students of Bahir Dar University. The majorities of the students were sympathetic towards AIDS patients and were against isolating AIDS patients from living in one dormitory.

The study showed that 83(60.1%) of the respondents believe that HIV/AIDS positive person will develop psychological trauma.



HIV infection is often thought to be the result of personal irresponsibility (Wolfe et al., 2008). Religious or moral beliefs lead some people to believe that being infected with HIV was a result of moral fault such as promiscuity or deviant sex that served to be punished and in some circumstances, even undertaking HCT would portray that someone in promiscuous (Wolfe et al., 2008). These messages have probably created one of the greatest fear factors in the community, thus leading to further stigmatization and avoidance of the HCT services.

In addition to this, the study also displayed 85(61.6%) of the respondents thought that HIV/AIDS affect community health, 52(37.7%) of the respondents said that HIV/AIDS would not affect community health whereas 1(0.1%) said did not know. HIV/AIDS continues to be the most devastating and important global public health and development problems (Edward, 2006; Wabwire-Mangen et al., 2008)

However, HIV/AIDS have to compete for resource allocation with other emergencies that constantly threatens the human race, including civil strife, natural disasters and the continuing threats of emerging infectious diseases such as Ebola, SARS and Avian influenza (Cohen et al., 1994; Pratt, 1988; Montgomery, 1992)

Majority of the respondents 82(59.4%) would think that HIV/AIDS affect the marital status, 35(25.4%) thought that HIV/AIDS have could not affect marital status while 21(15.2%) said that did not know whether it would affect marital status or not.

HIV-related stigma and discrimination severely hamper efforts to effectively fight the HIV/AIDS epidemic. Fear of discrimination often prevents people from seeking HCT and treatment for AIDS or from admitting their HIV status publicly. People with or suspected of having HIV may be forced from home by their families and rejected by their friends and colleague. Denial goes hand in hand with discrimination, with many people continuing to deny that HIV exists in their communities and in individuals (Mugenyi, 2008).

The study also showed that 73(52.9%) of the respondents would think HIV/AIDS positive persons would not be married because of risk of transmission of the disease. A similar study done in Atteridgeville and Mamelodi showed that even though many of the participants don not have contact with infected persons and they have high level of knowledge about the disease, some expressed fear and wished to avoid people with HIV/AIDS. 70% of the study participants felt if the family member people in their community would keep it secret from others. Sixty five percent (65%) of the respondents though that the community blamed people with HIV and that they should be ashamed of themselves and 62% of the respondents though other community members think less of someone because they have HIV. This finding supports the hypothesis that the community members perceived stigma associated with HIV/AIDS in Mamelodi and Atteridgeville community in South Africa.

#### **5.4 The practice of HIV/AIDS transmission, prevention and control**

Our finding showed that over 87(63.0%) of the respondents would like to practice measures to prevent and control HIV/AIDS from being infected to people, majorities 80(58.0%) of the respondents said giving awareness to the people about the problems relating HIV/AIDS, 50(36.2%) said it can be prevented to practice sexual abstinence, 6(4.3%) of the respondents said that giving health education to community in order to know its transmission and prevention whereas 2(1.4%) of the respondents said using condom. Mean that Somali people dislike practicing condom use for the prevention of HIV/AIDS due to religious and cultural believes.

This comparable to a study done in College of Medicine and Health Sciences, Bahir Dar University, Ethiopia which showed that over 15% of the respondents had sex without condom, indicate such risky behavior can predispose the students acquisition of HIV. Furthermore, there are also students still did not at all see condom, shy to buy and hold condom and not confident to discuss about condom use by demonstration because of religious and socio-cultural norms related to it.

The study showed that 69(50.0%) of the respondents took measures to know whether they were HIV/AIDS positive mean that they practiced to know their HIV/AIDS status.

Majorities of the study participants 84(60.0%) said would go medical facility if they become infected with HIV/AIDS, 37(26.8) said that if they become HIV/AIDS positive would kept silent, 15(10.9%) said having regular checkups, 2(1.4%) said took medications. Mean that the respondents have good practice regarding what they will do if they suffer HIV/AIDS.

We attempted to determine the association between knowledge and attitude levels with preventive practices for HIV/AIDS. Those participants who had good knowledge and favorable attitude showed good practices behavior compared to those who had less knowledge and unfavorable attitude.

There were several limitations to the study. First, we restricted this study to only Hargeisa city and did not include out-of-State House IDP's people. This limits the generalizability of the study findings. Second, whilst HIV knowledge is important, it may not be the primary factor in explaining HIV transmission among young people. Many people have adequate knowledge about HIV but do not act on it due to a wide variety of social, cultural and economic constraints. Future studies that investigate of all these possible constraints could help to improve our understanding of HIV transmission.

Despite all of these limitations, we believe this study might be a reasonable source of information for researchers and policymakers

## **6. CONCLUSION**

The current study sought to explore the knowledge, attitude and practices on HIV/AIDS transmission, prevention and control among people who live in state house IDP' in Hargeisa city, Somaliland. KAPs are an important tool for HIV prevention and control. Despite the presence of favorable attitudes, the majority of the study participants had moderate knowledge and good practice about HIV/AIDS.

The study highlighted some misconceptions about HIV prevention, and risky sexual practices, which need to be addressed.

Therefore, our investigation calls to implement specified, focused, continued and strengthened health education on HIV/AIDS-related issues to bring change in practices, along with knowledge and attitudes. Variability of questions used to measure the knowledge, attitude and practices of study participants compared to other studies was the limitations of this study. However, including large number of people representative was the main strength of the study.

Future research involving nationally representative samples could contribute substantially to HIV/AIDS prevention and control.

## **7. RECOMMENDATION**

In view of the serious health consequences of HIV/AIDS, it is recommended that:

- The ultimate goal should be elimination of HIV/AIDS transmission and promoting prevention and control.
- Efforts to raise the educational level of people should be intensified so that with better education, they can be more objective in their judgment of social issues especially those that affect their health or their family members.
- Providing health education to rule out misconceptions regarding to HIV/AIDS transmission.
- Providing HIV voluntary testing and counseling should contribute a lot in its prevention and control and to know their HIV status.
- Governmental support and NGO either local or national in those people who live in state house because most of them were unemployed and poor socioeconomic status so that vulnerable to be infected with HIV/AIDS.
- Providing a forum to discuss HIV AIDS so that they should get more information related to HIV AIDS.
- Creating Community Mobilization in order to make HIV awareness programs more efficient and effective.

## **ACKNOWLEDGEMENT**

First and foremost I thanks to Allah who created us from small blood of clot and at the same time provide us. I would like to thank all those who helped me through the process involved in this research thesis and graduate studies. In particular, I am grateful to Dr. Kanyamasoro Muhire Alphonse (Lecturer, Researcher & Consultant) Kampala University- Graduate School, my supervisor, for his valuable contributions, patience, guidance and counsel during the development of this research thesis.

## **REFERENCES**

- [1] UNAIDS. Report on global AIDS epidemic: UNAIDS; 2010.
- [2] UNFPA: Preventing HIV infection. Global Youth Partners. Advocating for increased access by young people to information, education and services in the area of HIV prevention. [<http://www.unfpa.org/hiv/gyp/index.htm>]
- [3] Centers for Disease Control and Prevention: Young people at risk: HIV/AIDS among America's Youth.

- [4] Abebe G, Fekadu A; 2000; A health concerns and challenges among high school adolescents. *Ethiop J Health Dev*, 10(1):37-40.
- [5] Harrisons, 2005, Principles of internal medicine, 16th edition USA.
- [6] Current diagnosis and treatment of obstetrics and gynecology, 10th edition USA, 2007.
- [7] De Cock KM, MG Fowler, Mercier E. de Vincenzi I, Saba J, Hoff E, et al. "Prevention of mother-to-child HIV transmission in resource-poor countries: Translating research into policy and practice." *JAMA* 2000; 283:1175-82.
- [8] CISP - International Committee for the Development of Peoples
- [9] UNAIDS (2011) ' World AIDS Day Report 2011'
- [10] WHO/UNAIDS/UNICEF (2011) ', Global HIV/AIDS Response: Epidemic update and health sector progress towards Universal Access 2011'
- [11] The World Health Report 2006: Working Together for Health. Available at; [http://www.who.int/whr/2006/06\\_chap1\\_en.pdf](http://www.who.int/whr/2006/06_chap1_en.pdf).
- [12] Gutierrez, J. P., et al. "Achieving the WHO/UNAIDS Antiretroviral Treatment 3 by 5 Goal:What Will it Cost?" *Lancet* 364.9428 (2004): 63-4.
- [13] United Nations General Assembly. "Declaration of Commitment on HIV/AIDS: Five Years Later". Available at: [http://data.unaids.org/pub/Report/2006/20060324\\_SGReport\\_GA\\_A60737\\_en.pdf](http://data.unaids.org/pub/Report/2006/20060324_SGReport_GA_A60737_en.pdf).
- [14] Vassall, A., and P. Compennolle. "Estimating the Resource Needs of Scaling-Up HIV/AIDS and Tuberculosis Interventions in Sub-Saharan Africa: A Systematic Review for National Policy Makers and Planners." *Health policy (Amsterdam, Netherlands)* 79.1 (2006): 1-15.
- [15] Johns, B. "Costs of Scaling Up Health Interventions: A Systematic Review." *Health policy and planning* 20.1 (2005): 1
- [16] Bertozzi, S. "Estimating Resource Needs for HIV/AIDS Health Care Services in Low- Income and Middle-Income Countries." *Health policy (Amsterdam)* 69.2 (2004): 189
- [17] Over M. 1998 Coping with the impact of AIDS. *Finance and Development*.
- [18] Saoko P, Mutemi R, Blair C. Another song begins: children orphaned by AIDS. In *AIDS in Kenya: Socioeconomic Impact and Policy Implications*. USAID AIDSCAP/Family Health International, 1996:45-64.
- [19] Konde-Lule JK, Ssengonzi R, Wawer M, et al. The HIV epidemic and orphanhood, Rakai District, Uganda. IX th International Conference on AIDS and STD in Africa. Kampala, December 1995 (abstractTuD670).
- [20] World Bank. *Confronting AIDS: Public Priorities in a Global Epidemic*. New York: Oxford University Press; 1997.
- [21] Drew RS, Foster G, Chitima J. Poverty - a major constraint in the community care of orphans: A study from the North Nyanga District of Zimbabwe. *SafAIDS News*, 1996, 4:14-16.
- [22] Foster G. HIV and AIDS: Orphans and sexual vulnerability. In *Sexually Exploited Children: Working to Protect and Heal*. Edited by Kilbourn P, McDermid M. Monrovia: MARC; 1998 216-232.
- [23] World Bank. *Lessons in designing safety nets PREM notes: Nr 2*. Washington DC: World Bank; 1998.
- [24] Urassa M, Boerma T, Ng'weshemi JZL et al. Orphanhood, child fostering and the AIDS epidemic in rural Tanzania. *Health Trans Rev* 1997, 7 (Suppl 2):141-153.
- [25] Rugalema G. It is not only the loss of labour: HIV/AIDS, loss of household assets and household livelihood in Bukoba District, Tanzania. In *AIDS and African Smallholder Agriculture*. Edited by Mutangadura G, Jackson H, Mukurazita D. Harare: Southern Africa AIDS Information Dissemination Service; 1999 41-52.
- [26] Donahue J. Community-based economic support for households affected by HIV/AIDS. Discussion papers on HIV/AIDS care and support No. 6. Arlington, VA: Health Technical Services (HTS) Project for USAID, June 1998.
- [27] World Bank. *Confronting AIDS: Public Priorities in a Global Epidemic*. New York: Oxford University Press; 1997.

- [28] Hunter S, Williamson J. Children on the Brink: Strategies to Support Children Isolated by HIV/AIDS. Washington: USAID; 1998.
- [29] USAID. USAID Responds to HIV/AIDS: Report on the Fiscal Years 1995 and 1996 HIV/AIDS Prevention Programmes of the United States Agency for International Development. Washington, DC: United States Agency for International Development; 1996.
- [30] Barnett T, Blaikie P. AIDS in Africa: its present and future impact. London: Belhaven Press; 1992.
- [31] WHO/UNICEF Action for Children Affected by AIDS. New York: United Nations Children's Fund; 1994.
- [32] Foster G. Responses in Zimbabwe to children affected by AIDS. SafAIDS News, 2000, 8:2-7.
- [33] Foster G, Makufa C, Drew R et al. Perceptions of children and community members concerning the circumstances of orphans in rural Zimbabwe. AIDS Care 1997, 9:391-406.
- [34] Drew RS, Makufa C & Foster G. Strategies for providing care and support to children orphaned by AIDS. AIDS Care 1998, 10 (Suppl):S9-S15.
- [35] Ledward A. Age, Gender and Sexual Coercion: their Role in Creating Pathways of Vulnerability to HIV Infection. Masters dissertation, M Sc Medical Anthropology. London: University of London; 1997.
- [36] Abera Y, Asnake M. Integrating FP Services in VCT and PMTCT sites: the Experience of Pathfinder International-Ethiopia in the Amhara Region (Presentation). Baltimore, MD: Johns Hopkins Bloomberg School of Public Health, 2006. Available at: [http://www.jhsph.edu/gatesinstitute/\\_pdf/policy\\_practice/FP-HIV/Presentations/Session%201A/Abera\\_Linking%20FP%20with%20HIV%20Prevention.pdf](http://www.jhsph.edu/gatesinstitute/_pdf/policy_practice/FP-HIV/Presentations/Session%201A/Abera_Linking%20FP%20with%20HIV%20Prevention.pdf).
- [37] HIV/AIDS Interventions in the Health Sector: Progress Report, April 2007." Available at [http://www.who.int/hiv/mediacentre/universal\\_access\\_progress\\_report\\_en.pdf](http://www.who.int/hiv/mediacentre/universal_access_progress_report_en.pdf).
- [38] Gashaw A, A fework K, Feleke M, Yigzaw K, Molla G, Fissehe W, et al., low prevalence of HIV infection, and knowledge, attitude and practice on HIV/AIDS among high school students in Gondar, North west Ethiopia. Ethop J Health Dev 2007, 21(2):179-182.
- [39] Negussie T: Sexual activity out of school youth and their knowledge and attitude about STD/HIV/AIDS in southern Ethiopia. Ethop J Health Dev 1997, 11(1): 29-36
- [40] Fitaw Y, Worku A: High risk sexual behavior and pattern of condom utilization of the Gondar College of Medical Sciences students, North Western Ethiopia. . Ethiop J Health Dev 2002, 16(3):335-338.
- [41] Drew RS, Makufa C & Foster G. Strategies for providing care and support to children orphaned by AIDS. AIDS Care 1998, 10 (Suppl):S9-S15.,