HIV/AIDS PREVENTIVE INITIATIVES AND PREVALENCE RATES IN NORTHERN UGANDA: THE CASE OF DOKOLO DISTRICT.

BY

NAOMI AYOT OYARO

REG. NO.08/MMSPPM/17/117

(PGDPPM (UMI), B.A ED (MUK))

A DISSERTATION SUBMITTED TO THE HIGHER DEGREES DEPARTMENT IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTERS DEGREE IN MANAGEMENT STUDIES (PROJECT PLANNING AND MANAGEMENT) OF UGANDA MANAGEMENT INSTITUTE.

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DECLARATION

I, Naomi Ayot Oyaro, hereby declare that this is my original work, To the best of my knowledge this work has never been submitted for any award in any academic institution. This work should not be replicated without my authority.

Sincerely,

……. ……..

Naomi Ayot Oyaro Date

APPROVAL

This dissertation entitled “HIV/AIDS preventive initiatives and Prevalence rates in Dokolo district- Northern Uganda” has been submitted for examination with the approval of my supervisors.

JULIET O. ATWEBEMBAIRE

Uganda Management Institute Based Supervisor

Signature …….. Date:……..

GIZAW SHIBRU TESSEMA

Work Based Supervisor

Signature…… Date:……..

DEDICATION

This Dissertation is dedicated to my father (Mr. Oyaro peter), mother (Mrs Oyaro Hellen Rose) who inspired me to further my studies. I further dedicate it to my brothers; James, Andrew, Dan and Amos, and sisters; Rhoda and Deborah. They constantly prayed for me while inquiring how I was doing and encouraged me to keep on reading hard.

I further dedicate it to Dr. Tadesse Zeruhin who gave me all the support even while abroad.

Special dedication goes to my fiancée, Late Asit Somani, who gave me unconditional technical, motivational & financial support throughout this study. Finally, I dedicate this work to my daughter, Angel Somani Sandra Anyadwe, who was a great source of joy and support, while I finalized this piece of work and during the hardest times of our lives.

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TABLE OF CONTENTS

LIST OF ACRONYMS

ABC	Abstinence, Be faithful, Condom Use - Theory
ACP	AIDS Control Program
AIDS	Acquired Immune Deficiency Syndrome
ART	Anti Retroviral Therapy
CAP-AIDS	Canada Africa Partnership on AIDS
CBOs	Community Based Organizations
CD_4	Cluster of Differentiation
CSO	Community Service Organizations
EWA	Entebbe Women Association
FGD	Focus Group Discussion
HCT	HIV/AIDS Counselling and Testing
KI	Key informants
MoH	Ministry of Health
MTCT	Mother to Child Transmission
PHAs	People Having AIDS
PLWHAs	People living with HIV/AIDS
PMTCT	Prevention of Mother to Child Transmission of HIV/AIDS
STDs	Sexually Transmitted Diseases
TASO	The AIDS Support Organization
UAC	Uganda AIDS Commission
UNAIDS	United Nations Joint Program on AIDS
VHT	Village Health Health
WHO	World Health Organization

ABSTRACT

The study assessed the effectiveness of HIV/AIDS preventive initiatives in reducing HIV/AIDS prevalence in Dokolo district from the year 2006 to 2010 when Dokolo was formalized as a district. The study had the following specific outputs; i) It established the effect of Prevention of Mother to Child Transmission (PMTCT) on HIV/AIDS prevalence in Dokolo; ii) It determined the effect of HIV/AIDS counseling and Testing (HCT) on HIV/AIDS prevalence in Dokolo; iii) It established the effect of HIV/AIDS behavior change initiatives on HIV/AIDS prevalence in Dokolo district and; iv) It found out the effect of economic factors on HIV/AIDS prevalence in Dokolo District.

A cross-sectional survey study design was used. Data was obtained through questioning, in-depth interviews, observation, focus group discussions and document reviewing. A total of 132 participants took part in the study and findings revealed that PMTCT, HCT, HIV/AIDS behavior change initiatives (ABCD) and economic factors were contributing to the variations in HIV/AIDS prevalence in Dokolo district as all of them were statistically significant. Findings revealed that HIV/AIDS prevalence rate can be reduced if community members in the district change their current negative behaviors by adopting positive ones which reduce on the spread of HIV, facilities, resources and technical skills amidst sound relations between and among the various stakeholders involved in the fight against the epidemic should also be available throughout for success. It is recommended that; 1) for success in reduction of HIV prevalence rate in the district, communities should be sensitized and mobilized for active participation; 2) Preventive initiatives

should be provided in a logical combination for example if HCT is being provided, PMTCT services should also be present and/or other economic services so as to enhance a positive attitude towards the HIV/AIDS preventive initiatives and; 3)Economic support of the already infected people is necessary so as to motivate positive living thus reducing the spread and therefore HIV/AIDS prevalence in Dokolo District. Other factors not explained by this research should be explored as well to determine how they affect project performance.

In conclusion, this study revealed that HIV Testing and Counseling has the greatest impact on HIV/AIDS prevalence in terms of either reducing its prevalence when the HCT services are readily available and accessible and the opposite is true. The study also revealed that the second most influencing factor is economic environment then behavioral change strategies (ABCD Model) then lastly Prevention of Mother to Child Transmission of HIV/AIDS(PMTCT) which has quite an insignificant effect on HIV/AIDS prevalence. It should also be noted that PMTCT could be effective if it is readily available and accessible.

The lesson learned in this study therefore is that HIV/AIDS service providers should put more emphasis on HCT as the major step to preventing the increasing prevalence of HIV/AIDS particularly in Northern Uganda. This should be in combination with other factors that also influence HIV/AIDS if we are to succeed in fighting the increasing HIV/AIDS prevalence.

CHAPTER ONE - INTRODUCTION

1.0 Introduction

This chapter introduces the study and discusses the effectiveness of the prevailing HIV/AIDS preventive initiatives that have been undertaken to curb down HIV/AIDS infection in relation to the HIV/AIDS prevalence rate in Dokolo District, Northern Uganda. In particular, this chapter includes; the introduction, background of the study, statement of the problem, general objective or purpose of the study, specific objectives of the study, research questions and hypothesis of the study. It further covers the conceptual framework, significance of the study, scope of the study, operational definitions of key concepts, assumptions and limitations of the study.

1.1. Background to the study

The study background has been broken down in to historical background, theoretical background and contextual background as presented below.

1.1.1 Historical Background

Globally, there is abundant evidence that science-based HIV/AIDS prevention is effective, especially when backed by high-level of political leadership, adequate funding, and strong community involvement. Components of successful prevention efforts include clear and accurate communication about HIV/AIDS and methods to prevent infection, HIV counseling and testing, and treatment of sexually transmitted infections. The response to HIV and AIDS must contain comprehensive prevention and treatment strategies in order to prevent new infections while

providing critically needed care and treatment for those already living with HIV/AIDS. One of the most important elements of prevention is to scale up access to antiretroviral (ARVs) for those in need.

UNAIDS Report, (2004) showed that in the Bahamas and Barbados, the introduction of ARV treatment for people living with HIV halved the annual number of AIDS deaths between 1998 and 2003, and brought about 42% drop in hospital admissions for treatment of opportunistic infections in the same period. USAID, (2008) found out that a few countries in South – East Asia are greatly scaling up access to treatment for example Thailand that has tried to reach its target of providing 50,000 people with antiretroviral treatment. USAID, (2008) in addition states that; Thailand also introduced the 100% condom use programme nationally; this explains why it is having a declining trend of HIV/AIDS prevalence, unlike India and Indonesia who have just embarked on drastically expanding treatment access. This kind of support has not only controlled the epidemic but also led to reduction of spread of HIV/AIDS in the respective countries as evidenced above thus reduction in prevalence rates (USAID, 2008).

USAID, (2008) adds that Prevention of Mother to Child Transmission (PMTCT) has been found to be effective in resource-poor settings and recommended for implementation globally. According to UNAIDS, (2004), greater access to prophylactic treatment and sustained support for safe and sustainable breastfeeding alternatives will greatly reduce mother – to – child transmission in developing countries. The report (UNAIDS, 2004) further advances that Providing voluntary counseling and testing services identifies those who need treatment, helps to reduce

mother to child transmission and is also an important entry point for education to prevent further transmission.

UNAIDS, (2004) argues that; prevention programs must include programs tailored to marginalized groups like sex workers and injecting drug users. To them, the harm reduction programs for injecting drug users are making a difference in some areas for example in El Salvador where HIV/AIDS prevalence fell from 50% in 1996 to 7% in 2001 among injecting drug users as a result of such interventions. However in countries like Russia where safer sex is not yet the norm, the epidemic's pattern has been shifting and the proportion of new HIV infections acquired during heterosexual intercourse has grown dramatically from 5.3% in 2001 to just over 20% in 2003 and this means that more women are being infected and more children are being born to HIV-positive women, making prevention of mother-to-child transmission an added priority (UNAIDS, 2004).

Salvador the capital of Bahai is one of the Brazilian national success stories in the fight against HIV/AIDS among people who inject illicit drugs as Salvador was among the first cities to institute funding for comprehensive HIV prevention program for drug injectors and this resulted into a dramatic decrease in HIV infection rates within this population, dropping from 50% in 1996 to 7% in 2001 (UNAIDS, 2004).

At the 10th international conference on Sexually Transmitted Diseases (STDs)/AIDS in Africa, an alliance of mayors and municipality leaders was formed which issued the Abidjan Declaration on 9 December 1997. This Declaration called

upon international Partnership against AIDS in Africa as an understanding that, in isolation, none of its constituencies – neither governments, nor civil society, or various national and international organizations working against AIDS in Africa will succeed in stopping the epidemic. Instead, a coalition or partnerships approach promises to magnify the contribution of all partners, while giving a clear leadership role to African governments. The Declaration therefore called upon all HIV/AIDS service providers to work as a team in order to reduce HIV/AIDS prevalence in Africa.

Nkoli, (2002) reports that in Nigeria, the response to HIV/AIDS epidemic started with a focus on high risk groups including commercial sex workers and men were advised to stay away from sex workers or use condoms if they couldn't control and the focus gradually shifted to the high risk behavior, which encouraged men having sex with men to use condom. This explains the reduction of HIV/AIDS prevalence in Nigeria in the 1980's.

According to USAID Report, (2004) the latest estimates confirm that the Middle East and North Africa have not escaped the advance of the AIDS epidemic, giving an example of Sudan as the region's worst-affected country, with HIV/AIDS prevalence concentrated largely in the south. The report further explains the effects of the conflict to have continued to impede information – gathering about HIV/AIDS and the latest estimates showed that approximately 2% of the adult populations were living with HIV at the end of the year 2003. Iran however has taken positive steps in a bid to contain HIV/AIDS, which has been growing in the wake of a dramatic rise in the overall number of people who inject drugs, by

providing needles and syringes over the counter in the pharmacies to reduce the use of non – sterile needles (USAID, 2004).

USAID Report, (2004) emphasizes that countries with minimal HIV/AIDS prevention interventions have HIV/AIDS prevalence rates on the rise; a case in point is "in Somalia, where only 4% of the young women (ages 15-24) report accurate knowledge of HIV/AIDS, and only 11% of adult females are aware that condoms can prevent HIV transmission. This is the opposite in other African countries where HIV/AIDS prevention interventions are being undertaken for example Namibia which has undertaken steps to strengthen the country's HIV response guided by a five year strategic plan that has an overriding goal of reducing HIV incidence and in two years the country more than doubled its domestic spending on HIV programmes; it has also been successful in mobilizing substantially greater external support such that in 2007 the country enacted legislation to stimulate and guide greater efforts on HIV/AIDS.

In East Africa, the AIDS epidemic highly varies both between and within sub regions – making it inaccurate to speak of a single East African Epidemic. East Africa boasts of several examples of gradual, modest declines in median HIV prevalence among pregnant women in urban areas, a case in point is as per the USAID Report, (2004) which states that a downward trend in HIV infection levels is definitely established in Uganda, where the national HIV/AIDS prevalence fell steeply in the mid 1988 and late 1990s from 30% and stayed between 5% and 6% since 1988 and the late 1990s. A drop in prevalence is also suggested in Kenya,

Burundi and Ethiopia. However, the need for treatment, care and support will continue to increase for the years to come (USAID, 2004).

Uganda AIDS Commission (UAC), (2009) presents the country to have made good progress in rolling out key HIV prevention services for instance HIV Counseling and Testing (HCT), Prevention of Mother - To - Child Transmission (PMTCT), blood transfusion safety, sexually transmitted infections (STI) treatment, condoms and making HIV/AIDS reduction education available in schools in all the districts in the country. Condom procurement and distribution statistics show progress from 28.3 million in 1999 to 130.7 million condoms procured and distributed by min 2007 (UAC, 2009). A major development is the recent increase in coverage of these key prevention services, notably HCT and PMTCT for instance, the proportion of adults who have ever tested and received their test results increased from 4% in 2000/01 to 11% in 2004/05 and 21% in 2006 (UAC, 2009).

The scenario was however different in the United Republic of Tanzania which shows no signs of nationwide HIV prevalence decline, although USAID Report, (2004) on Mbeya region of Tanzania shows that prevention efforts can make a difference. Mbeya has been the focus of intense HIV/AIDS prevention work over the past 13 years and as a result, condom use rose, and treatment for sexually transmitted infections increased, while significant delay in age at first sex was also noted. According to the report, HIV prevalence among 15 – 24 year old women fell from 20.5% to 14.6% over the same period in the urban parts of neighboring Rukwa region and by contrast, only sporadic prevention efforts occurred here and HIV

prevalence in the same age group rose from 22.5% to 30.2% over the same period (USAID, 2004).

When we come to Northern Uganda, Kaiser Daily HIV/AIDS Report, (2004) stated that the HIV/AIDS prevalence rate in Northern Uganda was nearly twice as high as the national average and was continuing to increase because of a "brutal" conflict in the region and the use of rape as a weapon of war. He advanced that the HIV/AIDS prevalence rate in Northern Uganda was 11.9% and rising compared to the HIV/AIDS prevalence rate nationwide which was 6.2% and declining. The HIV/AIDS prevalence rate in Northern Uganda was and is still presented to be much higher than the National prevalence rate, thus the question "what has been the effectiveness of the already prevailing HIV/AIDS preventive initiatives in reducing HIV&AIDS prevalence in Dokolo District of Northern Uganda?" and thus the gap that this study focused on.

1.1.2 Theoretical Background

The theory that underpins this study is "The Ecological Systems Theory", advanced by Bronfenbrenner (1979); There are a number of versions of ecological models but in general, the Ecological systems theory recognizes that successful activities to promote health, including HIV risk reduction, not only address changing individual behaviours, but address multiple levels surrounding individuals such as families, communities, institutions, and policies, advocacy, organizational change, policy development, economic supports, environmental change, and multi-method programs. According to this theory, behaviour is determined by; Interpersonal processes, Institutional factors, Community factors and, public policy.

This theory emphasizes that interventions are more successful if they intervene with in most if not all levels of influence. In the case of HIV/AIDS prevention and therefore prevalence, strategic condom distribution can reduce barriers such as price and convenience, as well as change the social acceptability of carrying condoms. In this case, barriers are what would be the stumbling blocks for one to access a condom thus risk unsafe sex which eventually creates vulnerable grounds for further spread of HIV/AIDS and therefore increase its Prevalence. Consequently when designing and implementing interventions aimed at reducing HIV/AIDS prevalence, this theory emphasizes that one should take into consideration individual behaviors and the multiple levels surrounding individuals in order for it to be successful with no exception of factors that influence behavior as pointed out by the theory.

Interpersonal processes are formal and informal social network and social support systems, including the family, work group, and friendships that can easily influence the effectiveness of any HIV/AIDS prevention initiatives thus affecting HIV/AIDS prevalence either negatively or positively. Institutional factors refer to social institutions with organizational characteristics and formal and informal rules and regulations for operation of various developmental interventions, HIV/AIDS prevention inclusive. Community factors are relationships among organizations, institutions, and informal networks within defined boundaries that can determine the success of any HIV/AIDS prevention interventions. For example the community factors in a project area involved in HIV Counseling and testing may make it successful or unsuccessful. Public policy in this case refers to; local, state,

and national laws and policies which should be put into consideration when designing and implementing any HIV/AIDS prevention initiative. This is supposed to make the prevention initiative undertake the Human Rights Based and Conflict sensitive Approach for it to be successful. For example when carrying out HIV/AIDS awareness campaigns does it only focus on the infected or the uninfected as well, plus the issue of gender?

The researcher agrees with the concepts in the ecological theory and therefore used it to conceptualize the study variables which were a foundation in investigating the effectiveness of HIV/AIDS preventive initiatives in reducing the prevalence of the epidemic in Dokolo district.

1.1.3 Contextual Background

Acquired Immune Deficiency Syndrome (AIDS) was first identified in Rakai District of Uganda in 1982 by Dr. Anthony Lwegaba when a mysterious disease affected 17 fishermen at the Kasensero landing sites on Lake Victoria. People held different beliefs about HIV/AIDS at that time including the factors associated with HIV/AIDS transmission and how to care for the people living with HIV/AIDS. Since then, the number of HIV infections has increased rapidly. At the beginning, the spread followed the Trans - high way from the Kenya border town of Busia through Kampala, Masaka, Rakai and into Rwanda and Tanzanian borders. Later on, the spread increased throughout the country and by 1986, the NRM government accepted the threat of HIV and declared it an epidemic. The First AIDS Control Program in the Ministry of Health (MOH) was set up in 1986.

Uganda AIDS Commission, (2004/2005) reports that by 1988, an estimated 1 million Ugandans had been infected and Uganda had one of the highest rates (30%) of HIV infection in Africa. Various efforts were undertaken by ACP/MOH and in 1992 in order to increase participation and strengthen the response; Uganda AIDS Commission (UAC) was enacted by an act of parliament. Contracted effort was been made by government and Community Services Organisations (CSOs) to manage the epidemic. Uganda adopted the multi-sectoral approach to the control of AIDS (MACA) in 1992. This was in recognition of the fact that the dynamics and impacts of the epidemic are beyond the health sector though largely the most strategically positioned to respond. The MACA policy strategy mobilized concerted efforts from the public and non-public sectors, at national, district, community and individual levels making the country to registered modest achievements demonstrated by declining HIV prevalence and incidence from the 1990s (UAC & National Youth Council, 2007).

The National HIV/AIDS Sero Behavioral Survey (NHSBS), (2004/5) as cited by UAC & National Youth Council, (2007) estimated that about 915,400 adults and children in Uganda were living with HIV/AIDS in 2005 and Prevalence among adults aged 15-49 yrs was estimated at 6.4%, 0.7% among children less than 5 years, and 5.8% among those aged 50-59. The Ministry of Health estimated 132,500 new infections in 2005 alone (UAC & National Youth Council, 2007). According to UAC & National Youth Council, (2007), HIV prevalence among 15-24 yr olds estimated at 3% compared to the 6.4% national figure and HIV was higher among females than males for example young women aged 20-24

years are 3-6 times more likely to get infected than boys of the same age bracket in Uganda. The paper further advanced that HIV prevalence is highest among young people who have been and those currently engaged in long-term sexual relationships. About 80% of all new infections are acquired through heterosexual sex while mother to child transmission accounts for 22-25% new infections in Uganda (UAC & National Youth Council, 2007).

Although Uganda is among the first countries to report a shift of the epicenter from young people 19-25 years to older, married or formerly married adults with shifts in peaks, the peak of the epidemic has shifted from 20-24yrs to 30-34yrs for women and from 30-34yrs to 40-44yrs for men (UAC & National Youth Council, 2007). The National HIV/AIDS Sero Behavioral Survey (NHSBS) revealed that 77% of new infections occurred among people 25yrs and older (UNHSBS, 2004). The country is therefore experiencing a mature generalized epidemic implying that every Ugandan irrespective of demographic, social and economic status is at risk of getting infected, though some population groups are more at risk than others (UAC & National Youth Council, 2007). According to UAC & National Youth Council, (2007) the epidemic is heterogeneous implying that the country is experiencing many epidemics in one, with consequences on intervention packaging and delivery. It is further observed that HIV prevalence in Uganda is higher among adults 25-59 years, among females (7.5%) than males (5.0%), among urban (at 10.1%) than rural dwellers (at 5.7%), and in the central and mid-northern regions than other parts of the country (UAC & National Youth Council, 2007). This therefore calls for a study to investigate the effectiveness of strategies of

combating HIV/AIDS in Uganda with a case of Northern Uganda and Dokolo District in particular as one of the districts with the highest prevalence rates in the country.

1.2. Statement of the Problem

Uganda was named a role model country in the fight against HIV/AIDS after its success through the use of multi-programs radically reduced HIV/AIDS prevalence steeply in the mid 1988 and late 1990s from 30% and stayed between 5% and 6% from 1988 and the late 1990s (USAID, 2004). Efforts are however still being made by the government of Uganda and other development partners in the fight against the scourge through sensitization, emphasis on abstinence, faithfulness and condoms use among others making the current National prevalence rate to be 6.4% (Uganda AIDS Commission, 2007/2008).

Despite the existence of preventive initiatives being undertaken, there remains a high HIV/AIDS prevalence rate of 8.2% among Northern Uganda's adult population, as compared to the National prevalence rate of 6.4% (Entebbe Women Association, 2007) and Dokolo district in particular is having a worrying prevalence rate. Dokolo District Health Sector Report, (2009) registered HIV/AIDS prevalence rate to be 8.7% as of February 2009 compared to the report in the previous survey which indicated HIV/AIDS prevalence rate in the district to be 6.0% as by 2007/2008. This makes the current 8.7% HIV/AIDS prevalence rate in Dokolo much higher than the National prevalence rate of 6.4% as reported by Uganda AIDS Commission (2007/2008). If this prevalence trend continues, then

Uganda's image as a role model country in the fight against the disease will not only be lost but the national prevalence rate will be reverted as well. The productivity of the population in Dokolo district will be affected negatively as the disease weakens people (impacting on the economic and social development), poverty levels will increase and a lot lives will be lost. This will be a major setback to the achievement of United Nations millennium development goal of poverty eradication by 2015 and fighting HIV/AIDS. There was therefore a great need to assess the effectiveness of the existing HIV/AIDS preventive initiatives in reducing HIV/AIDS prevalence in Dokolo district.

1.3 General Objective of the Study

The general objective of this study was to assess the effectiveness of HIV/AIDS preventive initiatives in reducing HIV/AIDS prevalence in Dokolo District.

1.4 Specific objectives of the study

i. To establish the effect of Prevention of Mother to Child Transmission (PMTCT) on HIV/AIDS prevalence in Dokolo District.

ii. To establish the relationship between HIV/AIDS counseling and Testing (HCT) and HIV/AIDS prevalence in Dokolo District.

iii. To establish the relationship between behavior change initiatives and HIV/AIDS prevalence in Dokolo District.

iv. To find out the effect of economic factors on HIV/AIDS prevalence in Dokolo District.

1.5 Research questions

i. What is the effect of Prevention of Mother to Child Transmission (PMTCT) on HIV/AIDS prevalence in Dokolo District?

ii. What is the relationship between HIV/AIDS counseling and Testing (HCT) and HIV/AIDS prevalence in Dokolo District?

iii. What is the relationship between behavior change initiatives and HIV/AIDS prevalence in Dokolo District?

iv. What is the effect of economic factors on HIV/AIDS prevalence in Dokolo District?

1.6 Hypotheses

i. Prevention of Mother to Child Transmission (PMTCT) has an effect on HIV/AIDS prevalence.

ii. There is a relationship between HIV/AIDS counseling and Testing (HCT) and HIV/AIDS prevalence.

iii. There is a relationship between behavior change initiatives and HIV/AIDS prevalence.

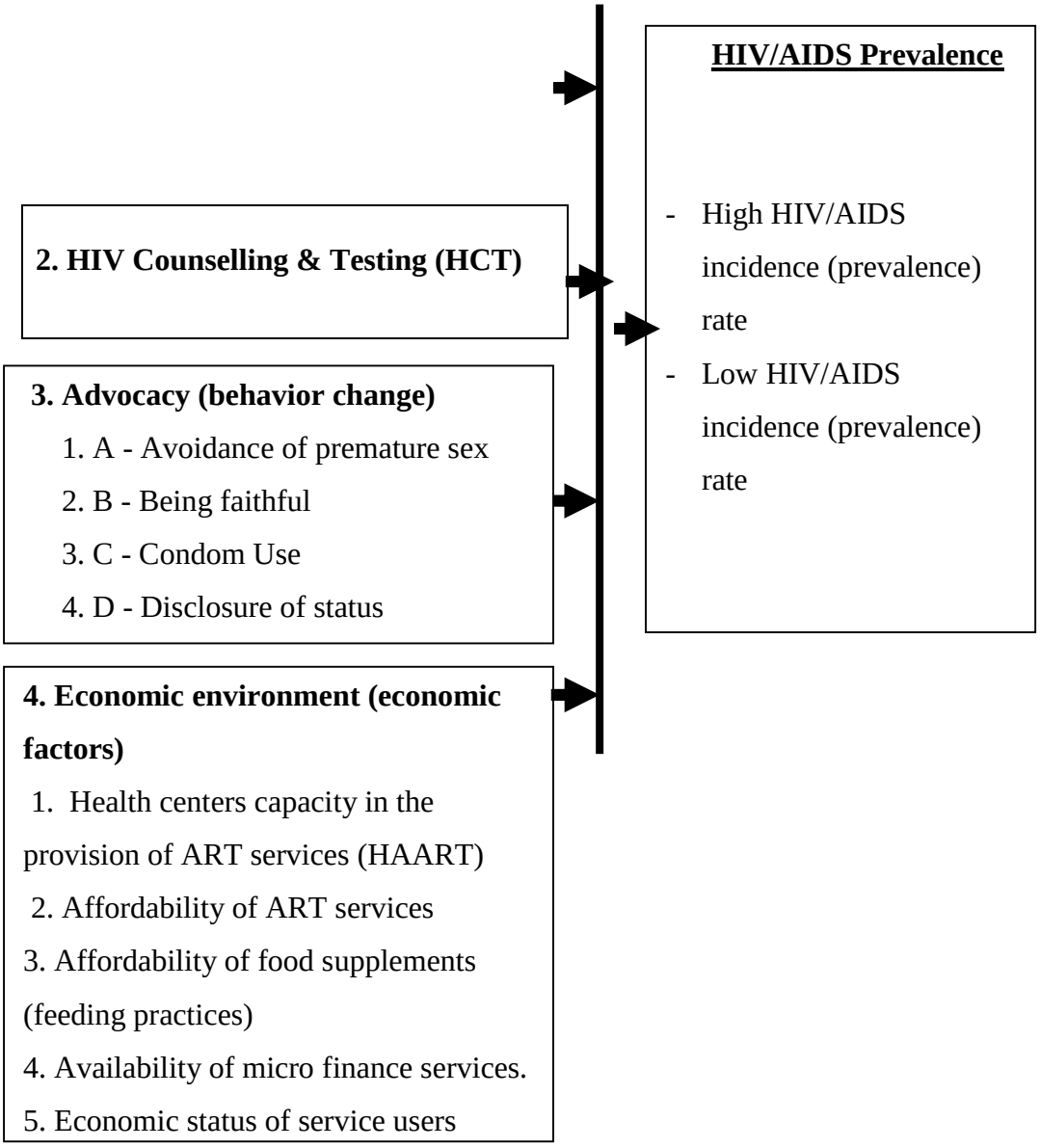
iv. Economic factors have an effect on HIV/AIDS prevalence.

1.7 Conceptual framework

INDEPENDENT VARIABLE (IV) **DEPENDANT VARIABLE (DV)**

Prevention Initiatives

1. Prevention of Mother to Child Transmission (PMTCT)



Adopted and modified from Bronfenbrenner's Ecological Systems Theory (1979).

The framework explains the relationship between HIV/AIDS preventive initiatives and HIV/AIDS prevalence rates, as modified from Bronfenbrenner's Ecological

Systems Theory, (1979). The theory says that for any intervention regarding HIV/AIDS prevention, it is expected that, it should contribute towards reducing its prevalence rate for example PMTCT should reduce HIV/AIDS prevalence rates among the newly born and likewise information, education and communication strategies should be able to change human behaviors and attitudes towards risky behaviors that can expose them to HIV/AIDS infection and consequently reduce HIV/AIDS prevalence.

The frame work further illustrates that any intervention regarding HIV/AIDS prevention and/or promoting health should not only take into account changing individual behaviors but also multiple surrounding individuals, such as families, communities, institutions and policies as emphasized by Bronfenbrenner's Ecological Systems Theory. Bronfenbrenner, (1979) further advanced that as with any of the determinants of HIV infection, interventions to respond to one factor will be of very limited value on their own. Providing people with knowledge about safe sexual practices is unlikely to be successful if the economic, social and cultural environment does not enable people to act on their knowledge. Similarly, economic empowerment on its own may not be enough to overcome other harmful power imbalances in relationships so a coherent, multi-faceted approach to prevention is always required. The researcher agrees with the Bronfenbrenner (1979) argument and the ecological theory on the approaches needed in the intervention in fighting HIV/AIDS as conceptualized in the frame work. This study will therefore focus on the effectiveness of the prevailing HIV/AIDS prevention initiatives on HIV/AIDS prevalence.

The conceptual frame work therefore illustrates that the available medical preventive initiatives relate with HIV/AIDS prevalence in Dokolo District, in that it may cause the prevalence to be high, moderate or low. It also illustrates the common HIV/AIDS advocacy (behavior change initiatives) for prevention that is; the ABCD strategy and its relationship with HIV/AIDS prevalence in Dokolo District, in this relationship the ABCD strategy should affect the prevalence. And that economic environment and HIV/AIDS prevalence have a relationship in that the economic environment has an effect on HIV/AIDS prevalence. Finally the Conceptual frame work illustrates that for any HIV/AIDS interventions to be undertaken whether it is targeting medical preventive initiatives, awareness creation or economic support, key factors as emphasized in the Ecological Systems theory should be highly considered in order to achieve the desired results; that is low HIV/AIDS prevalence.

1.6 Significance of the Study

The study findings were expected to document practical experiences in regards to prevailing HIV/AIDS preventive initiatives and HIV/AIDS prevalence in Dokolo District. In this case therefore the researcher was able to identify the gaps as far as HIV/AIDS preventive initiatives and Prevalence is concerned in the District. More so, the study gave the researcher a better understanding of what the role of the prevailing HIV/AIDS preventive initiatives in relation to the prevalence rates thus enabled establishment of better strategies for HIV/AIDS prevention interventions in Dokolo District. This study is expected to act as a guide to policy makers, researchers, Government and Non Governmental Organizations working with

programs related to HIV/AIDS to have a better picture on the relationship between HIV/AIDS and the preventive measures on ground.

1.7 Scope of the study

The study was carried out in Dokolo district which is located in Northern Uganda. The district comprises of five sub-counties; Agwata, Kangai, Baata, Kwera and Dokolo. However, the study only focused on three sub-counties with the highest HIV/AIDS incidence in the District. The time scope covered the year when Dokolo was formalized as a District that is; 2006 to 2010 because right from the year 2006 to date (2010), HIV/AIDS infection rates were on the increase thus setting a trend of increasing HIV/AIDS prevalence in the District. The content scope focused on HIV/AIDS preventive initiatives undertaken in Dokolo District and their effects on the prevalence rates. There are various HIV/AIDS preventive initiatives that are emphasized in the District but this study focused on PMTCT, HCT, advocacy (behavior change initiatives) and economic environment in relation to HIV/AIDS prevalence in the District.

1.8 Operational definitions of key terms and concepts

The operational definitions used in this study are specific to this study and they include the following.

Effectiveness: It is a measure to which extent an activity has fulfilled its intended purpose for example to what extent has the awareness creation programs contributed to HIV/AIDS prevalence rates.

HIV/AIDS preventive initiatives: This study uses this term to mean means being undertaken to reduce the spread/incidence of HIV/AIDS and consequently the prevalence rate of HIV/AIDS.

HIV/AIDS prevalence: This study uses this terminology to mean the degree of people infected and living with of HIV/AIDS in a given population and geographical area.

Medical preventive initiative: This study uses this term to mean the HIV/AIDS preventive initiatives that requires a trained medical person to administer for example HIV counseling and testing.

Antiretroviral Therapy (ART): This study uses this terminology to mean all types of medication given to any persons living with HIV/AIDS.

HIV: HIV is an abbreviation for "Human Immune Deficiency Virus". The study looks at it as the virus that transmits the deadly epidemic (AIDS).

AIDS: This is an abbreviation for "Acquired Immune Deficiency Syndrome": This study looks at it as the disease that results after one is infected with the HIV virus.

Prevalence: This shall be used in this study as the presence and/or existence of something that was formerly inexistent.

Gender: In this study gender will refer to either one being of the female sex or male sex and particularly human beings as far as this study is concerned.

Infection: This will refer to the process by which people get the disease and as far as this study is concerned, the disease that shall be discussed is AIDS.

Mother to Child Transmission (MTCT): This study will use this term to mean the transmission of the HIV from mothers to their children during pregnancy, child birth and breastfeeding.

Prevention of Mother to Child Transmission (PMTCT): This study shall use this term to mean the ways through which a pregnant mother living with HIV/AIDS can be prevented from transferring HIV to her baby.

Accessibility: This refers to the ability of one to reach for a particular service (HIV/AIDS related health service).

Economic support: This study uses this term to refer to any kind of support aimed at reducing HIV/AIDS incidence and/or spread that can be converted into financial terms.

CHAPTER TWO - REVIEW OF LITERATURE

2.0 Introduction

This chapter sets out to review literature so as to establish what has been written earlier about HIV/AIDS prevention initiatives as an independent variable in relation to HIV/AIDS prevalence (dependent variable). It involves the systematic identification of literature, location and analysis of documents containing information related to the concepts of HIV/AIDS prevention Initiatives and HIV/AIDS prevalence. Literature review has been done covering the concept of HIV/AIDS preventive Initiatives and HIV/AIDS prevalence, PMTCT and HIV/AIDS prevalence, HIV Counselling & Testing (HCT) and HIV/AIDS prevalence, behavior change initiatives and HIV/AIDS prevalence and finally economic environment and HIV/AIDS prevalence.

2.1 The concept of HIV/AIDS preventive Initiatives and HIV/AIDS prevalence

Uganda Aids Commission, (2009) states that; Uganda has well articulated policies for most of the biological prevention interventions in that the policies are guided by the latest evidence on effectiveness and global best practice. The report further states that prevention interventions well covered by evidence-based policies include; Condoms, HIV Counseling and Testing (HCT), PMTCT, Control of sexually transmitted infections, blood safety, infection control, post-exposure prophylaxis and health education in schools. The Well project, (2010) advised that to reduce the risk of HIV transmission: do not reuse or share dirty needles: clean needles with a bleach solution before reusing them or use fresh needles each time; do not have unprotected sex: use a condom every time you have sex, especially for anal and vaginal intercourse, which are the riskiest sexual activities; get tested if

you are pregnant or considering pregnancy as HIV+ mothers can pass the virus to their babies while pregnant, during birth, or by breastfeeding. Well project, (2010) further noted that advances in treatments have significantly reduced the risk of a baby getting HIV from its mother when precautions are taken. However, UNAIDS, (2009) citing Centers for Disease Control and Prevention, (2008) noted that the pronounced declines in AIDS-related deaths as a result of advances in treatment have contributed to an increase in HIV prevalence in high-income countries.

According to EWA Report, (2007) HIV/AIDS prevention needs to start at a young age and therefore drama presentations should also target schools and tertiary institutions, creating a broader base of awareness. They further advanced that the capacity of local volunteers need to be increased so that they can spearhead community-based communication for HIV/AIDS, positive prevention, reduced stigma and positive living, thus increasing project sustainability. Stitt, (2004) adds that; other "key" preventive measures include providing male and female condoms, implementing sterile needle-exchange programs and drug treatment services. According to Stitt, (2004), sex education programs should include information on condoms as young people who participate in HIV prevention programs that include access to condoms are not more likely to start or increase sexual activity. Early diagnosis and treatment of HIV infection is critical to controlling the spread of the virus as it is the first step in improving the chance of survival. "If we are to reduce the untimely and unnecessary death and suffering of young adults, we need to prevent this disease. It is possible" Stitt concludes. UNAIDS, (2009) argued that although significant gains have been achieved

through treatment scale-up, sub-Saharan Africa's epidemic (HIV/AIDS) continues to outpace the response. They advanced that preserving the long-term viability of treatment programs and mitigating the epidemic's impact in the region requires immediate steps to elevate the priority given to HIV prevention and to match prevention strategies with actual needs.

UNAIDS, (2009) noted that access to antiretroviral therapy not only saves lives but reduces on the overall HIV prevalence. It is believed that improved treatment access could help to lower HIV incidence by reducing the viral load at the individual and community level (UNAIDS, 2009). A recent meta-analysis suggests that the transmission rate from a person on antiretroviral therapy is approximately 0.5 per 100 person-years, while it is 5.6 per 100 person-years for persons not on antiretroviral therapy (Attia et al., 2009). Recent mathematical modeling exercises suggest that improved access to HIV testing and counseling and to antiretroviral therapy could significantly reduce infection rates (Granich et al., 2009; Lima et al., 2008).

Ateka, (2002) argued that the participation of youth is vital for HIV prevention and that any intervention focusing on HIV/AIDS prevention should involve the youths as the most vulnerable population who affect the HIV/AIDS prevalence rates in any country. UNAIDS Report, (2004) maintains that; the response to HIV/AIDS must contain comprehensive prevention and treatment strategies in order to prevent new infections while providing critically needed care and treatment for those already living with HIV. WHO website, (2009) states that; Prevention is enhanced when delivered alongside treatment and care. WHO focuses prevention efforts on

evidence – based interventions targeted to at – risk populations such as sex workers and their clients, injecting drug users, men who have sex with men and prisoners among others. The organization promotes interventions in high prevalence regions and aims to prevent HIV transmission among vulnerable populations of young people, women and men. Hoover, (2009) observed that; the current trends tell us there needs to be a renewed focus, in terms of resources and advocacy, on prevention in Uganda.

The center of all World Education's work in HIV prevention points out seven guiding philosophies in the prevention of HIV/AIDS and they include: Engaging multi-sectoral organizations to combat the epidemic; strengthening the skills, talents and resources of local communities through participatory technical and organizational skills training(economic environment); working with communities to stem the spread of HIV; Targeting people and communities most at risk of contracting HIV; developing and adapting technical and organizational skills training for people at all levels of education and literacy; effectively monitoring and evaluating programs and finally documenting and disseminating best practices (World education, 2010).

2.2. Prevention of Mother to Child Transmission (PMTCT) and HIV/AIDS prevalence

Mother-to-child transmission (MTCT) is when an HIV-infected woman passes the virus to her baby (AVERT, 2010). This can occur during pregnancy, labour and delivery, or breastfeeding. Without treatment, around 15-30% of babies born to

HIV positive women will become infected with HIV during pregnancy and delivery and further 5-20% will become infected through breastfeeding (AVERT 2010). PMTCT is a major problem because in 2008, around 430,000 children under 15 became infected with HIV, mainly through mother-to-child transmission and about 90% of these MTCT infections occurred in Africa where AIDS is beginning to reverse decades of steady progress in child survival (AVERT, 2010). In Uganda, about 80,000 women living with HIV/AIDS get pregnant annually and 20,000 to 25,000 of these pass the virus to their babies through MTCT (Kakaire, 2009). Dr Mbonye,(2009) as cited by Kakaire, (2009) advanced that MTCT of HIV is ranked as the second most common means of HIV virus in Uganda and available data shows that MTCT accounts for 15-25% of new infections and as a result, there is currently estimated 15,000 people living with HIV/AIDS (Kakaire, 2009).

According to AVERT, (2010), MTCT has been virtually eliminated in high income countries due to effective voluntary testing and counseling, access to antiretroviral therapy, safe delivery practices, and the widespread availability and safe use of breast-milk substitutes. They further advanced that if these interventions were used worldwide, they could save the lives of thousands of children each year. Jotham, (2009) noted that in the whole of Western Europe, there were fewer than 100 MTCTs in 2007, whereas in Sub-Saharan Africa, there were about 370,000. He advanced that Uganda has been unable to attain her target of reducing MTCT by 50% in 2000 to 15% in 2010, although there is evidence from Africa which suggests that practical, locally appropriate and cost-effective clinical regiments can reduce MTCT of HIV from current rates of 45% to as low as 1-2%. Its hoped that this

initiative will work on the bottlenecks that impend PMTCT and further strengthen HIV testing and counseling of pregnant women, the use of ARVs during and after delivery and safe infant feeding practices that have seen developed countries reduce HIV transmission to children from 25% to between 1% and 5% in recent years (Jotham, 2009).

Muzaaya, (2009) presented that Mother – To – Child – Transmission (MTCT) takes place during late pregnancy, labour, delivery, and in pauperism, and is influenced by various factors namely; viral, maternal, obstetric, fetal and infant. Therefore in implementation of PMTCT, behavioral, therapeutic, obstetric, modification of infant feeding, intrapatum care and postnatal care must be put into consideration and both husband and wife are important in PMTCT. The NHSBS, (2004) revealed threats of a resurging epidemic with subtle increases in new HIV infections from different parts of the country including rural and relatively stable regions. According to NHSBS, (2004), normalization trends and low levels of risk perception in the context of high levels of awareness and knowledge aggravate the situation. Low uptake of available proven interventions such as HCT and PMTCT also demands for innovation in order to reduce on the prevalence rate of HIV/AIDS (NHSBS, 2004).

An estimated 430,000 [240,000- 610,000] new HIV infections occurred among children under the age of 15 in 2008 and most of these new infections are believed to stem from transmission in utero, during delivery or post-partum as a result of breastfeeding. The number of children newly infected with HIV in 2008 was roughly 18% lower than in 2001 (UNAIDS, 2009). The annual number of new

HIV infections globally has declined, and HIV prevalence among young people has fallen in many countries (UNAIDS, 2009).

Globally, coverage for services to prevent mother-to-child HIV transmission rose from 10% in 2004 to 45% in 2008 (World Health Organization, United Nations Children's Fund, UNAIDS, 2009), and the drop in new HIV infections among children in 2008 suggests that these efforts are saving lives. UNAIDS in agreement on the effectiveness, of PMTCT in reduction of HIV/AIDS prevalence, came up with UNAIDS Outcome Framework for 2009 -2011, consisting of nine priority areas among which says "We can reduce sexual transmission of HIV" and "We can prevent mothers from dying and babies from becoming infected with HIV" (UNAIDS, 2009). Although this confirms the effectiveness of PMTCT in the fight against HIV/AIDS, it is not clear whether PMTCT is effective in the reduction of HIV/AIDS prevalence in Dokolo District hence the need for investigation.

UAC Report, (2007) presents that Mother – to – Child – Transmission accounts for 22 – 25% of new infections yet socio-cultural and economic factors such as failure to deliver in health facilities hinder women from accessing PMTCT services to avert risk of passing the infection to the baby. USAID, UNICEF & WHO progress report, (2008) states that; reducing transmission from pregnant woman living with HIV to her infant requires a range of interventions beginning with HIV testing and Counseling for pregnant women; followed by antiretroviral prophylaxis for pregnant women with HIV and their new born babies or antiretroviral therapy for

the mother if eligible; safe obstetric interventions; and counseling and support for safer infant feeding options.

Babcock, (2009) argues that; the first step in preventing mother-to-child HIV transmission (PMTCT) programs is offering HIV counseling and testing to pregnant women. In developing countries where HIV testing remains rare, it represents a unique opportunity for many women to learn their HIV status. This prenatal HIV testing is not only the entry point to prevention of mother-to-child HIV transmission, but also an occasion for women to sensitize their male partner to sexual risks (Babcock, 2009). Here we explore if these women, HIV-tested as mothers, apply the prevention recommendations they also receive as women. According to Annabel, Hermann, Annick, Gerard, Renaud & Valeriane, (2009) offering prenatal HIV counseling and testing is an efficient tool for sensitizing women and their partners to HIV prevention. They further argued that sexual prevention in a conjugal context remains difficult and need to be specifically addressed.

Effective prevention of mother-to-child transmission involves simultaneous support for several strategies that work synergistically to reduce the odds that an infant will become infected as a result of exposure to the mother's virus (UNAIDS 2009). Through the reduction in overall HIV among reproductive-age women and men, the reduction of unwanted pregnancies among HIV-positive women, the provision of antiretroviral drugs to reduce the chance of infection during pregnancy and delivery and appropriate treatment, care and support to mothers living with HIV (including infant feeding), programs are able to reduce the chance that infants

will become infected (UNAIDS, 2009). UNAIDS, (2009) further advanced that in ideal conditions, the provision of antiretroviral prophylaxis and replacement feeding can reduce transmission from an estimated 30% to 35% with no intervention to around 1% to 2%. Most countries (Uganda inclusive) have not yet reached all pregnant women with these services, let alone significantly reduced HIV prevalence among reproductive-age individuals or unwanted pregnancies among HIV-positive women according to UNAIDS, (2009) making it challenging to measure the impact of the full range of services to prevent mother-to-child HIV transmission. Exclusively examining the provision of antiretroviral drugs for prophylaxis to HIV-positive pregnant women, UNAIDS estimates that 200,000 cumulative new HIV infections have been averted in the past 12 years. This represents only a fraction of the overall infections among infants averted through prevention interventions, as the analysis focuses solely on a single prong of the broader package of services to prevent mother-to-child transmission (UNAIDS, 2009).

USAID Report, (2008) maintains that; prevention of mother-to–child transmission has been found to be effective in resource poor settings and is recommended globally. UNAIDS, (2009) holds the view that the recent declines in HIV incidence in multiple countries demonstrate that it is possible to reduce sexual transmission of HIV. Likewise, the increasing coverage of services to prevent mother-to-child transmission and the associated declines in new HIV infections among children highlight the feasibility of preventing mothers from dying and babies from becoming infected with HIV (UNAIDS, 2009). WHO website article, (2009)

further mentions that; evidence shows that new drug combination dramatically reduces mother-to child transmission of HIV during breastfeeding.

AVERT, (2010) recommends that women who have reached the advanced stages of HIV disease require a combination of antiretroviral drugs for their own health and that this treatment, which must be taken every day for the rest of a woman's life, is also highly effective at preventing mother-to-child transmission (PMTCT). Women who require treatment will usually be advised to take it, beginning either immediately or after the first trimester and their newborn babies will usually be given a course of treatment for the first few days or weeks of life, to lower the risk even further (AVERT, 2010) but the questions that remain un answered are; are women in advanced stages of HIV disease in Dokolo district receiving the required antiretroviral drugs? If so, are they taking the antiretroviral drugs on daily basis as required? And are they being given proper and adequate advice by medical personnel in their locality? All these questions can only be answered by carrying out an investigation hence the need for this study.

The simplest of all PMTCT drug regimens was tested in the HIVNET 012 trial, which took place in Uganda between 1997 and 1999 (Guay et al, 1999). This study found that a single dose of nevirapine given to the mother at the onset of labour and to the baby after delivery roughly halved the rate of HIV transmission (Guay et al, (1999). As it is given only once to the mother and baby, single dose nevirapine is relatively cheap and easy to administer. Since 2000, many thousands of babies in resource-poor countries have benefited from this simple intervention, which has been the mainstay of many PMTCT programs (AVERT, 2010).

However critics have a significant concern about drug resistance of single dose nevirapine as it was found out that around a third of women who take single dose nevirapine develop drug resistant HIV (Arrive et al, (2007), which can make subsequent treatment involving nevirapine and efavirenz (a related drug) less effective (Jourdain et al, 2004). Studies have found that drug resistance resulting from single dose nevirapine tends to decrease over time; if a mother waits at least six months before beginning treatment then it may be less likely to fail (AVERT, 2010) citing Lockman et al, (2007) & Coovadia et al, (2006). Nevertheless, in some cases the drug resistant HIV persists for many months in some parts of the body, even if it cannot be detected in the blood, and this may undermine the longer term effectiveness of treatment (Wind-Rotolo et al, (2008). Because of concerns about drug resistance and relatively low effectiveness, there is now general agreement that single dose nevirapine should be used only when no alternative PMTCT drug regimen is available. Whenever possible, women should receive a combination of drugs to prevent HIV resistance problems and to decrease MTCT rates even further. It's not clear whether HIV positive women in Dokolo are accessing and receiving a combination of drugs to prevent HIV resistance problems and decrease MTCT rates making this study so critical in not only knowing the truth but provision of recommendations to help solve the problems being faced.

According to AVERT (2010), effective prevention of mother-to-child transmission (PMTCT) requires a three-fold strategy which include; Preventing HIV infection among prospective parents - making HIV testing and other prevention interventions available in services related to sexual health such as antenatal and postpartum care;

avoiding unwanted pregnancies among HIV positive women - providing appropriate counseling and support to women living with HIV to enable them to make informed decisions about their reproductive lives; preventing the transmission of HIV from HIV positive mothers to their infants during pregnancy, labour, delivery and breastfeeding and finally; integration of HIV care, treatment and support for women found to be positive and their families. The last of these can be achieved by the use of antiretroviral drugs, safer infant feeding practices and other interventions. The questions that remain unanswered are; are all the three-fold strategy mentioned above being implemented in Dokolo district? If so, how effective are they in combating the HIV/AIDS epidemic in the district? This therefore makes this study so important in quest for answers to the above questions.

Although replacement feeding is the only 100% effective way to prevent mother-to-child transmission of HIV after birth, the benefit must be weighed against practical difficulties and the risk from other illnesses which is increased by not breastfeeding (AVERT 2010). According to WHO infant feeding guideline, (2001) as cited by AVERT, (2010), the necessary conditions for replacement feeding do pose some challenges which affect the effectiveness of PMTCT for example acceptability as one of the necessary conditions: Breastfeeding for example is a norm in most cultures, and is generally encouraged by health workers however by choosing not to breastfeed, a mother risks revealing that she is HIV positive, and becoming a target for stigma and discrimination. She must be able to cope with this problem and resist pressure from friends and relatives to breastfeed.

"Many women/couples prepare to try out formula food after receiving counseling on the possibilities of breast milk infecting the infant after birth and information on formula feeds. But the problem crops up when the woman is back home with the extended family who are not aware of the HIV status of the mother or the couple." - Suniti Solomon, Director of YRG Care in Chennai, India (Chatterjee, 2003).

It is however not clear whether all the problems presented in the above literature are occurring in Dokolo district or not thus justifying the need for this study.

2.3 The concept of HIV Counseling & Testing (HCT) and HIV/AIDS prevalence

Counseling is an attempt to create an environment in which the individual or group discovers an in-built sense of responsibility and decides to take informed actions on this basis. In the context of AIDS control, counseling is an essential component of a wider long-term process of education aimed at promoting positive living (WHO, 2005) as cited by Munanura, (2009).

U.S. centers for disease control and prevention, (2010) asserts that knowing whether you have HIV infection through counseling and testing would not only alert one on the need to seek medical care to prevent or delay life- threatening illness but the test result (positive or negative) would also help one's doctor determine the cause and best treatment of the various illnesses a person may have now or in the future. For example, if you are HIV-positive, tuberculosis (TB) and syphilis are treated differently than if you are HIV- negative. Knowing test results

would help HIV positive people protect their sex partner(s) from infection and illness if their partners are not infected in addition to helping couples assess the safety of having a child. According to U.S. centers for disease control and prevention, (2010), knowing your HIV status, even if you are infected (positive test result) may be less stressful for some people than the anxiety of thinking you might be infected but not knowing and if your result indicates you are not infected (negative), you can take action to be sure you don't become infected in the future.

U.S. centers for disease control and prevention, (2010), advanced that there are many reason why people may not seek counseling and testing for among which include, certainty that they have never engaged in behavior that could infect them with HIV, or had a blood transfusion; the stress and phobia of a positive test result and the issues it would raise among family members, friends, and sex partners which people think would be more harmful than not knowing if they are infected, and fear that others may perhaps find out their result without their permission and concern about discrimination; some people have been denied housing, jobs and insurance because they have HIV infection. According to U.S. centers for disease control and prevention, (2010) one should decide for him/her self whether these concerns outweigh the benefits of testing and early medical attention. U.S. centers for disease control and prevention, (2010), points out that the latest medical knowledge gives added weight to the benefits of knowing if you are infected and that if one has any doubts about what to do, then he/she should get counseling before deciding whether to go ahead with testing. However, if one decides not to

be tested he/she should prevent the transmission of any possible HIV in the body to sex (U.S. centers for disease control and prevention, 2010).

Recent mathematical modeling exercises suggest that improved access to HIV testing and counseling and to antiretroviral therapy could significantly reduce infection rates (Granich et al., 2009; Lima et al., 2008). However, the applicability of such mathematical models to the real world remains uncertain for example in North America, Western and Central Europe, HIV incidence appears to be either stable or on the rise in numerous countries where antiretroviral therapy has long been widely available (UNAID, 2009). It's noted by Family Health International, (2009) that counseling and testing (CT) is one of the most rapidly expanding HIV program services in the world and propelling its increased demand is the recognition of CT's role in both preventing new HIV infections and increasing access to care and treatment (including antiretroviral therapy). According to UNAIDS, (2009), many countries have taken steps to increase utilization of HIV testing services. Among countries for which testing utilization data are available for 2008, the highest number of tests per 1000 population was reported in Botswana (210), Lesotho (186), Sao Tome and Principe (179), Uganda (146) and Swaziland (139). In Ethiopia, testing rates more than doubled between 2007 and 2008 from 51 tests per 1000 population to 121 tests per 1000 population (World Health Organization, United Nations Children's Fund, UNAIDS, 2009). However, considerable gaps remain. While HIV testing more than doubled in Kenya between 2003 and 2007, an estimated 83% of Kenyans living with HIV remained undiagnosed in 2007 (Kenya Ministry of Health, 2009). Similarly, fewer than one

in five people in Burundi know their HIV status (Ndayirague et al., 2008b). According to a household survey in Ethiopia, previously untested men and women were more likely to be infected than their counterparts who had previously accessed testing services (Mishra et al., 2008a). Recent evidence suggests that inadequate testing rates impede national AIDS responses, contributing to late entry into medical care for people who are HIV-infected and unknowing HIV transmission, especially within sero discordant couples.

A house-hold survey in Uganda indicated that HIV-infected individuals who knew their HIV status were more than three times more likely to use a condom during their last sexual encounter compared with those who did not know their status (Bunnell et al., 2008). In rural Zimbabwe, women who tested HIV-positive reported increased consistent condom use with primary partners, although individuals testing negative reported an overall increase in risky sexual behaviours (Sherr et al., 2007), underscoring the need for intensified prevention services to accompany initiatives to promote knowledge of HIV serostatus.

UAC Bulletin, (2007) presents that Voluntary Counseling and Testing (VCT) now referred to as HIV Counseling and Testing (HCT) was rolled to all districts in the country and that there are successful piloting of home based HCT and introduction of routine testing and counseling (RCT). UNAIDS report (2004) states that; provision of voluntary counseling services enables identification of those who need treatment, helps to reduce mother – to – child transmission and is also an important entry for education to prevent further transmission. Annabel et al. (2009) further advanced that the first step in preventing mother-to-child HIV transmission

(PMTCT) programs is offering HIV counseling and testing to pregnant women as it represents a unique opportunity for many women to learn their HIV status especially in developing countries (Uganda inclusive) where HIV testing remains rare. This prenatal HIV testing is not only the entry point to prevention of mother-to-child HIV transmission, but also an occasion for women to sensitize their male partner to sexual risks (Annabel et. al, 2009). To them, offering prenatal HIV counseling and testing is an efficient tool for sensitizing women and their partners to HIV prevention. They argued that sexual prevention in a conjugal context remains difficult and need to be specifically addressed.

HIV testing, counseling and prevention services in antenatal settings offer an excellent opportunity not only to prevent newborns from becoming infected but also to protect and enhance the health of HIV-infected women. In numerous countries in which testing data have been reported, women are significantly more likely than men to know their HIV serostatus, in large measure due to the availability of testing services in antenatal facilities (UNAIDS, 2009). A small study in rural Uganda In 2007 found that women living with HIV who become pregnant experience a sharper decline in CD4 cells than non-pregnant women, although no statistically significant difference was detected between these groups in mortality or AIDS diagnosis (UNAIDS, 2009). The findings led the research team to recommend that health-care providers inform women who are infected with HIV (after counseling and testing) of the potential negative immunological effect of pregnancy, offer women contraception and prioritize pregnant women for

antiretroviral therapy if eligible (Van der Paal et al., 2007) as cited by UNAIDS, (2009).

Kitonsa, (2007) presents that; AIDS Information Centre(AIC) introduced the concept of Voluntary Counseling and Testing (VCT) in Uganda and that this was a unique concept, in that people who came to have their blood tested for HIV received counseling beforehand to prepare them to accept the results, whether positive or negative. Peter, (2009) further states that after the test, the clients receive post-test counseling in which those who tested positive are referred to either TASO or to another institution with facilities for providing care and support and for those who tested negative are encouraged to adopt safer sexual behavior in order to protect themselves from HIV infection. Centers for Disease Control (CDC) Report, (2009) mentions that learning one's status has been shown to result in substantial reductions in risk behavior. CDC, (2009) in addition maintains that Testing is a critical component of prevention efforts because when people learn they are infected, they can take steps to protect their own health.

According to Khobotlo et al., (2009) the low social status of sex workers impedes efforts to deliver HIV prevention services to this population. Surveys in Lesotho indicate that sex work is regarded as morally reprehensible, and the country's national AIDS policy explicitly notes that the stigma associated with sex work deters sex workers from seeking HIV testing or other health services (Khobotlo et al., 2009). Although serodiscordant couples account for a substantial percentage of new infections in some African countries, HIV testing and counsel-ling programs are seldom geared specifically for serodiscordant couples. Many programs focused

on young people fail to address some of the key determinants of vulnerability, such as the high prevalence of intergenerational partnerships in many countries (UNAIDS, 2009).

It is yet unknown whether all the problems affecting the success of voluntary counseling and testing in the fight against HIV/AIDS epidemic discussed in the above literature are also taking place in Dokolo district thus calling for the need to carry out an immediate investigation.

2.4 The concept of ABC strategy of HIV/AIDS awareness creation and HIV/AIDS Prevalence

The ABC strategy is credited for bringing the HIV/AIDS epidemic under control in Uganda. By promoting abstinence, being faithful, and condom use, safe(r) behaviours have been identified that are applicable to people in different circumstances (Okware, Kinsman, Onyango, Opio, & Kaggwa, 2005). However, scaling-up of antiretroviral therapy in the country raised concerns that HIV prevention messages targeting the uninfected population are not taking sufficient account of inherent complexities and furthermore, there is debate in the country over relative importance of abstinence in reduction of HIV incidence as well as over the morality and effectiveness of condoms (Okware et.al 2005). The term abstinence can refer either to a situation in which a young person who has never had sex delays starting sexual activity (primary abstinence), or to a person who decides to stop sexual activity after initiation (secondary abstinence) (Okware et.al 2005).

Data from the Medical Research Council Program on AIDS in rural Masaka suggest that the protective value of primary abstinence in relation to HIV can last up until the age of 19 (Okware et.al 2005). Within the 13–19 age group in this study, higher rates of HIV seroconversion were associated with a lower median age at first sex. Thus, for young people up to the age of 19 years, early age of sexual debut is clearly a risk factor for HIV infection; and primary abstinence is protective (Okware et.al 2005). According to Okware et, al (2005), Being faithful (B of ABC) in its purest sense, entails practicing sex with just one partner, in a long term or lifelong relationship such as marriage and only after determining that both partners are not infected with HIV. They however advanced that shades of grey do exist with, for example, polygamous marital relationships and also those who engage in serial monogamy. The concept of ‘‘zero grazing’’ was developed in relation to being faithful. Zero grazing is an agricultural term which refers to feeding one’s livestock exclusively within the paddock (Okware et.al 2005). The humorous double meaning that applies to HIV prevention maintains that one keeps to an exclusive and monogamous relationship, also ‘‘within the paddock’’. There is strong evidence that a large portion of the Ugandan population has taken up the practice of zero grazing, a phenomenon that has been described as being ‘‘equivalent to a highly effective vaccine’’ for HIV (Stoneburner, & Low-Beer, 2004). According to Okware et.al (2005), zero grazing is a tried and tested strategy, and it should be firmly emphasized in a re-invigorated, comprehensive HIV prevention program in the era of ART.

UNAIDS Report, (2007) presented Uganda as a country with a wide program of AIDS awareness-raising initiated by the Ugandan President in 1986 led to demonstrable reductions in risky behavior and at least contributed to a two to fourfold reduction in HIV prevalence. Similar, more recent reductions have been seen in other African countries such as Kenya and Zimbabwe. Malcolm (1998) as cited by UNAIDS, (2007) argues that in Thailand, a single-minded campaign to institute 100% condom use in commercial sex establishments brought down the HIV incidence in young men from 2.5% in 1991 to 0.5% in 1993. When used consistently and correctly, the male condom is effective for the reduction of sexual transmission of HIV and of other sexually transmitted infections (Holmes et al. 2004 & Ahmed et al. 2001).

However, opponents of condom distribution programs say that providing condoms only encourages sexual activity (Aidsmap, 2009) and according to Okware et al. (2005), condom use was low during the period immediately after the establishment of the NACP (National AIDS and STI Control Program) in 1986 because of limited publicity, low availability, and taboo—many people believed that they encouraged promiscuity. There was also considerable public resistance from some religious organizations, media groups, and political lobbies, who maintained that their moral values stood against the condom for personal, cultural, and ideological reasons (Okware et al. 2005),. Furthermore, it was felt in some quarters that message clarity was compromised if people were asked to ‘‘Love Faithfully’’ while at the same time they were being encouraged to use condoms—this potentially would lead to conflicting messages (Okware et al. 2005). Religious practices may range from the

Catholic prohibition against barrier contraception to ideas about bodily integrity in certain Buddhist and Hindu cultures that may prohibit condom use and circumcision (Aidsmap, 2009). Traditional healing practices and ideas about illness as a curse or result of witchcraft may also interfere with understandings about how to avoid HIV and treat AIDS (Aidsmap, 2009). Sexual cultures in the form of marital practices such as widow inheritance, where the brother of a deceased husband marries his widow may not only make sense in agrarian societies where the goal is to keep the land in production, but can also serve as an efficient way of passing on HIV (Aidsmap, 2009).

It's however not clear whether the high prevalence rate of HIV/AIDS in Dokolo district is also caused by the above mentioned factors limiting condom use. This therefore calls for an immediate investigation by carrying out this study.

A house-hold survey in Uganda indicated that HIV-infected individuals who knew their HIV status were more than three times more likely to use a condom during their last sexual encounter compared with those who did not know their status (Bunnell et al., 2008) as cited by UNAIDS, (2009). In rural Zimbabwe, women who tested HIV-positive reported increased consistent condom use with primary partners, although individuals testing negative reported an overall increase in risky sexual behaviours (Sherr et al., 2007) as cited by UNAIDS, (2009), underscoring the need for intensified prevention services to accompany initiatives to promote knowledge of HIV serostatus (UNAIDS 2009).

Almost all countries have seen increased numbers of women diagnosed with HIV, to the extent that women now form the majority of people affected in sub-Saharan Africa. According to Aidsmap, (2009), this has been caused due to the fact that many women find it culturally and personally impossible to negotiate condom use with male partners and this has led to the drive to develop microbicides and other female-controlled technologies. It has also led proponents of abstinence and monogamy to say that these are the only strategies that protect vulnerable women against male sexual dominance. They recommended that female empowerment and education may lead to better reductions in women's degree of vulnerability to HIV than either of these (Aids map, 2009).

Aids map, (2009) argues that given lack of other biomedical HIV prevention methods that work, abstinence, being faithful and condoms remain the three pillars upon which the prevention of the sexual transmission of HIV stands. It further presents that Abstinence, being faithful and condom use are three mutually reinforcing strategies which individuals may adopt at different times in their lives and with different partners. It gives an example of Kenya, a country which has seen one of the most significant recent falls in HIV prevalence, from 13% in 2000 to 7.5% in 2004 and this was a result of using the three methods. Considering the 1998 and 2003 Demographic Health Surveys and comparing them, the following changes are noted; Regarding Abstinence, the proportion of young unmarried men (15-24) who had not had sex in the last year increased from 44% to 59%, and the proportion of young women from 68% to 79% (Aids map, 2009). And in addition, it argues that regarding Being Faithful, the portion of 15-49 year olds who reported multiple

partners in the last year declined from 30% to 17% of men and from 4% to 2% of women. And Finally regarding Condoms, the proportion of 15-49 year olds who used condoms the last time they had sex with non-regular partners increased non-significantly from 44% to 47% in men – but significantly from 16% to 24% in those women who did have casual partners (Aids map, 2009).

Aids portal, (2009) website reports that; ABC strategy has long been used as the foundation of comprehensive HIV prevention programs around the world and according to UNAIDS, (2007), Thailand introduced 100% condom use program nationally and has contributed to the decline in HIV/AIDS prevalence in the country. It's however argued by Aidsmap, (2009) that ABC is not a perfect recipe for reducing HIV risk on either an individual or a societal level. They advanced that for a married woman in a resource-poor setting who has a husband who may have contracted HIV through extramarital affairs; sexual abstinence is a thing of the past. Her faithfulness does not benefit her unless he too is faithful, and insisting on condom use is at best impractical and at worst could expose her to domestic conflict, divorce or violence (Aidsmap, 2009). Even in situations where people in high-risk populations have free choice to use one of these methods – as, for instance, gay men do in wealthier parts of the world, they may not do so as people may make a conscious or semi-conscious decision to trade long-term health benefits for a short-term feeling of trust, intimacy or ecstasy (Aidsmap, 2009).

Achieving and sustaining health and HIV/AIDS targets among young people largely depends on their active involvement and individual commitment to access services and adopt positive behaviours while acknowledging their rights

in addition to seriously taking on their roles and responsibilities (UAC& national youth council, 2007). A socio-cultural study to determine the factors that impede behavioral change and fuel the spread of the disease (HIV/AIDS) was conducted in July 2001, amongst all ethnic groups in the central Monrovia area. The findings revealed that there is a gap between awareness and education on HIV and AIDS in Liberia (Otti & Barh, 2001) in that though most have heard of AIDS (93%), not all fully comprehend the situation and consequences, including modes of transmission and methods of prevention. They advised that new strategies must be developed in disseminating information on HIV and AIDS. Desmond, (2010) argued that it is not simply that Information, Education and Communication (IEC) activities are unlikely to reach the poor (which is too often the case) but that such messages are often irrelevant and inoperable given the reality of their lives. Even if the poor understood what they are being urged to do it is rarely the case that they have either the incentive or the resources to adopt the recommended behaviours. Indeed to take the long-view in sexual or other behaviours is antithetical to the condition of being poor. For the poor it is the here and now that matters, and policies and programs that recommend deferral of gratification will, and do, fall on deaf ears (Desmond, 2010). Poor households typically have few if any financial or other assets and are often politically and socially marginalized and these conditions of social exclusion increase the problems of reaching these populations through programs aimed at changing sexual and other behaviours as it is not at all surprising in these circumstances that the poor adopt behaviours which expose them to HIV infection (Desmond, 2010).

The absolute degree of wealth in a society and its standard of living determine the vulnerability of such a society to HIV/AIDS. Clearly a society that cannot afford to give out condoms or where its citizens cannot buy them, let alone one that cannot afford antiretrovirals, is going to be more susceptible to AIDS in the first place, less able to stop it when it does arrive, and lacking resources to help fight it, than a richer one (Aidsmap, 2009). Low-Beer, Stoneburner, Barnett & Whiteside, (2,000) have made a convincing case that much of the difference between Uganda's response to HIV and southern Africa's lies firstly in the degree of direct exposure people had to AIDS and, secondly and crucially, their willingness to talk to each other about it. Their 2000 study showed that while 90% of Ugandans reported discussing HIV with friends and family, only 35% of South Africans were. Barnett and Whiteside, (2002) identify three stages individuals and communities need to go through in order to be able to mount an effective response to HIV and they include: identification of the disease. **(**People need to understand that there is an organism that causes illness); ownership **(**People have to recognize that the illness has implications for them and their societies; and finally empowerment (People have to believe that there is something that can be done and that they can be part of it). Because of this, they argue, for an HIV/AIDS strategy to be effective – whether that strategy belongs to a country, a community, a commercial company or an NGO – people have to be actively involved in developing such strategies (Barnett and Whiteside, 2002).

The literature above presents the conditions which have to be put in place for the success of the ABC strategy in the fight against HIV/AIDS in addition to the

limitations of the ABC strategy in reduction of HIV/AIDS prevalence. However, it is not known whether the high prevalence rate of the epidemic in Dokolo district could be caused by some of the above discussed limitations or any other factors not captured in the literature thus the need to carry out this study in pursuit of the truth. The study will also help in providing solutions to the problems limiting the reduction in HIV/AIDS prevalence in the district.

2.5. The concept of Economic factors and HIV/AIDS prevalence

The relationships between poverty and HIV are far from simple and direct and more complex forces are at work than just the effects of poverty alone (Desmond, 2009). HIV infection is not confined to the poorest even though the poor account absolutely for most of those infected in Africa (Desmond, 2009). He advanced that many of the non-poor in Africa have adopted and pursued life styles which expose them to HIV infection, with all the social and economic consequences that this entails. It follows that the capacity of individuals and households to cope with HIV and AIDS will depend on their initial endowment of assets - both human and financial (Desmond, 2009).The poorest by definition according to Desmond, (2009) are least able to cope with the effects of HIV/AIDS causing increasing immiseration for affected populations. He pointed out that even the non-poor find their resources diminished by their experience of infection (morbidity and death), and that there is increasing evidence in urban communities of an emerging class of those recently impoverished by the epidemic.

In most countries, relatively rich and better educated men and women have higher rates of partner change because they have greater personal autonomy and spatial mobility (Stuart, Suneetha & Robert Greener, 2007). They further argued that although the richer and better educated are likely to have better access to reproductive health care, condom use is generally low in Africa and other parts of the developing world. Pre-existing sexual behavior patterns therefore make the richer and the better educated more vulnerable to HIV infection, especially in the early stages of the epidemic, when information about the virus and how to protect oneself is usually low (Stuart et al; 2007). At a later stage, however, it has been argued that individuals with higher socioeconomic status tend to adopt safer sexual practices, once the effects of AIDS-related morbidity and mortality become more apparent, adding greater credibility to HIV prevention messages (Stuart et al; 2007). Stuart et al; (2007) argue that although national poverty rates do not show a strong association with HIV prevalence, income inequality does as countries with greater inequality have higher HIV prevalence, especially in sub-Saharan Africa but also to a lesser extent in Asia and Latin America.

A cross-sectional study using DHS data from eight countries however finds HIV prevalence to be generally lower among the poorest individuals in these countries and this is partly accounted for by an association of wealth with other underlying factors (Stuart et al; 2007). Wealthier individuals tend to live in urban areas where HIV is more prevalent, they tend to be more mobile, more likely to have multiple partners, more likely to engage in sex with non-regular partners, and they live longer – all factors which may present greater lifetime HIV risks (Stuart et al;

2007). On the other hand, the rich tend to be better educated, with better knowledge of HIV prevention methods, and are more likely to use condoms – factors which reduce their risk relative to poorer individuals (Stuart et al; 2007). These literature however suffer from important limitations among which include the following: they are unable to distinguish between the effect of economic status on HIV infection and the effect of HIV infection on economic status, and they are unable to control for the fact that individuals from richer households may survive longer with HIV, and thus are more likely to be present in the population to be tested, thereby increasing HIV prevalence rates.

Stuart et al; (2007) pointed out that another currently postulated dynamic is that poverty (possibly itself fuelled by AIDS) is increasingly placing individuals from poor households at greater risk of exposure to HIV via the economically-driven adoption of risky behaviors. The poor adopt behaviors which expose them to HIV infection (Desmond, 2010). Even if the poor understood what they are being urged to do it is rarely the case that they have either the incentive or the resources to adopt the recommended behaviors (Desmond, 2010). Indeed to take the long-view in sexual or other behaviors is antithetical to the condition of being poor. For the poor it is the here and now that matters, and policies and programs that recommend deferral of gratification will, and do, fall on deaf ears (Desmond, 2010).

According to Stuart et al; (2007), poverty and food insecurity are thought to increase sexual risk taking, particularly among women who may engage in transactional sex to procure food for themselves and their children. They further advanced that women's economic dependence on their partners may also make it

difficult for them to insist on safer sex (e.g. condom use) in addition, poor people are more likely to be food insecure and malnourished and malnutrition is known to weaken the immune system, which in turn may lead to greater risk of HIV transmission in any unprotected sexual encounter (Stuart et al; 2007). It is noted that HIV-specific programs are neglectful of the interests of the poor and are rarely if ever related to their needs, and also unfortunately are other non-HIV related program activities such as those relating to agriculture and credit (Desmond, 2010). He argued that it is the absence of effective programs aimed at sustainable livelihoods limiting the possibilities of changing the socio-economic conditions of the poor and unless the reality of the lives of the poor are changed, they will persist with behaviors which expose them to HIV infection (and all the consequences of this for themselves and their families).

Two examples of this state of affairs will perhaps suffice to indicate how poverty leads to outcomes which expose the poor to HIV. Firstly, poverty -- especially rural poverty, and the absence of access to sustainable livelihoods, are factors in labour mobility which itself contributes to the conditions in which HIV transmission occurs (Desmond, 2010). Aids map, (2009) asserts that HIV has been associated since the beginning of the epidemic with travel and 'men on the move' ranging from gay air stewards in the rich world to truckers and trucking routes in the poor. Societies in conflict, facing sudden urbanization and industrialization, or with endemic rural poverty often feature huge flows in migrant labour where men travel to cities or other countries to find work for months or years at a time and under these circumstances men resort to sex workers or casual partners, and then take HIV

home with them (Aidsmap, 2009). Men in armed forces often have HIV prevalence greatly in excess of the general male population. In his book entitled "The River (Hooper 1999)" as cited by Aids map, (2009), Edward Hooper documents how HIV arrived in Uganda along with Tanzanian troops in 1985 as they invaded, and how HIV subsequently spread along the same trucking routes that the soldiers had marched along previously.

All the factors associated with HIV transmission mentioned above (trucking, being in conflict, sudden urbanization, rural urban migration and rural poverty among others) are taking place in Dokolo and they could be contributing to the high prevalence rate of HIV/AIDS. This therefore calls for an investigation.

According to Desmond, (2010) mobile populations which often consist of large numbers of young men and women are isolated from traditional cultural and social networks and in the new conditions, they will often engage in risky sexual behaviours with obvious consequences in terms of HIV infection. Secondly, many of the poorest are women who often head the poorest of households in Africa. Inevitably such women will often engage in commercial sexual transactions, sometimes as commercial sex workers but more often on an occasional basis, as survival strategies for themselves and their dependants. The effects of these behaviours on HIV infection in women are only too evident, and in part account for the much higher infection rates in young women who are increasingly unable to sustain themselves by other work in either the formal or informal sectors (Desmond, 2010). Gender economic inequality between young women and adult men has been found to be a driver of HIV transmission, as has food insufficiency which may not

directly correlate with household income (Stuart et al; 2007). According to Stuart et al; (2007), a specific focus on protecting and promoting access to food may thus decrease exposure to HIV, especially among women.

Aidsmap, (2009) advanced that an important aspect of poverty is food insecurity, which may increase vulnerability to both HIV and AIDS in numerous ways. Adults and children may resort to sex work to survive. Malnutrition may harm the immune system and make people more susceptible to HIV, STIs and opportunistic infections like TB and salmonella and instructions to take HIV medications with food may make little sense where medications are supplied but food is hard to come by (Rafatellu, 2008) as cited by Aidsmap,(2009). In a prospective cohort study in Uganda, a combination of antiretroviral drugs and co-trimoxazole reduced mortality by 95% in comparison with no intervention (Mermin et al., 2008) as cited by UNAIDS, (2009). However, it's not clear whether these drugs are affordable to both government and all the people who are living with HIV/AIDS. In Swaziland, the country with the highest HIV prevalence in the world, 17% of total expenditures in 2008 supported HIV prevention programs (Mngadi et al., 2009). Between 2005 and 2007, prevention spending declined by 43.2% in Ghana (Bosu et al., 2009). Prevention spending in Lesotho fell by 24% between 2005–2006 and 2007–2008 (Khobotlo et al., 2009). However, in Uganda, prevention resources as a share of national HIV-related spending rose from 13% in 2003–2004 to 33.6% in 2006–2007 (Wabwire et al., 2009).

Although Uganda was once described as a role model in subduing the HIV/AIDS epidemic, having reduced prevalence from 30 per cent in the 1980s to six per cent

in the early 2000, the country is now seeing a reverse in this success story as many thousands of people who need ARVs can't have them. UNAIDS, (2009) supports this by arguing that, although evidence suggests that improved access to antiretroviral therapy is helping to drive a decline in HIV-related mortality, important access gaps in antiretroviral therapy remain as more than half of all people in need of treatment in Sub-Saharan Africa are still not receiving such services.

Nationally, in 2005 of the 200,000 people who needed ARVs, only about 86,000 Ugandans had access to the drugs (Kihumuro, 2005) as cited by Munanura, (2009). By March 2008, 150,000 people living with HIV/AIDS could access ART from 328 centres of whom, 15% were children less than 15 years of age (Malinga, 2008). According to Kihumuro, (2010), the availability of the life-prolonging anti-retroviral drugs has resulted in more money being directed towards treatment compared to prevention programs. To him, the challenge has been making a choice between care and treatment and HIV/AIDS prevention as the AIDS epidemic has imposed a severe burden on the meager resources of the country (Uganda). The focus on treatment is putting a great strain on a health system that is already struggling to cope with thousands of people who are living with HIV/AIDS but do not have access to the drugs (Kihumuro, 2010).

UAC says there are 191,000 HIV positive people currently on ARVs, far below the 322,000 who require the drugs and most of the people who need treatment cannot be started on the life-prolonging drugs because funds are not enough to have all of them on the medication (Evelyn, 2010). According to Kihumuro, (2010) as cited

by Evelyn, (2010), a life time cost for ARVs for one patient is $11,500 (about Shs20 million). “Maintaining 191,000 people currently on ARVs requires $2.2 billion. This is not money that is easily available,” he revealed. With 110,000 new infections registered annually, the challenge will be how to sustain more people on ARVs (Kihumuro, 2010). Clearly a society that cannot afford to give out condoms or where its citizens cannot buy them, let alone one that cannot afford antiretroviral, is going to be more susceptible to AIDS in the first place, less able to stop it when it does arrive, and lacking resources to help fight it, than a richer one Aidsmap,(2009).

Garbus, Marseille, Sewankambo, Kamya & Morin, (2004) argue that, despite of strong political support, Uganda has limited resources to spend on prevention & mitigation of HIV/AIDS. It is one of the world's poorest countries; its economic prospects and debt sustainability are threatened by a variety of factors. The conflict in the north of the country continues to consume enormous resources. Uganda faces the task of concurrently expanding & sustaining prevention interventions, providing ART, and reaching underserved populations to maintain prevalence declines as well as achieve future targets (Garbus et al. 2004).

There are increasing numbers of children infected with HIV through perinatal transmission (from mother to child) in sub Saharan Africa and this reflects the large numbers of pregnant women who are HIV positive (Desmond, 2010). Perinatal transmission is largely preventable through appropriate access to drugs (AZT) but these drugs and the necessary infrastructure for their delivery are more or less unattainable for most African women. Desmond, (2010) further noted that

limitation of access to AZT is not confined to the poor although they account absolutely for most of the women who have the greatest need. A number of studies have shown that the protective benefit of drugs is diminished when babies continue to be exposed to HIV through breastfeeding (AVERT, 2009). AVERT, (2009) argue that although replacement feeding is the only 100% effective way to prevent mother-to-child transmission of HIV after birth, this benefit however must be weighed against practical difficulties and the risk from other illnesses which is increased by not breastfeeding. According to WHO infant feeding guideline, (2001) as cited by AVERT, (2010), mothers with HIV are advised not to breastfeed whenever the use of breast milk substitutes (formula) is acceptable, feasible, affordable, sustainable and safe (AFASS). However if they live in a country where safe water is not available then the risk of life-threatening conditions from formula feeding may be higher than the risk from breastfeeding. Although mother to child transmission of HIV is avoidable, poverty is a clear factor in access to the methods for prevention of transmission to babies through breast milk (Desmond, 2010). To prevent transmission through breast milk requires the ability to buy baby formula and access to clean water, plus an understanding of why these changes in practice are needed and according to Desmond, (2010) neither clean water nor the income for purchasing formula are available to the poor, so they are unable because of their poverty to adopt a form of prevention known to be successful as a means of limiting HIV transmission. This problem is resolvable through relatively inexpensive program activities backed up by community mobilization to ensure support to families and there are, therefore, no good reasons why actions in this area are not being undertaken by governments, NGOs and donors (Desmond, 2010).

AVERT, (2010) points out the limitation of using infant formula food in the PMTCT by arguing that a baby fed on infant formula does not receive the special vitamins, nutrients and protective agents found in breast milk. And the cost of infant formula often puts it beyond the reach of poor families in resource poor countries (Uganda inclusive), even if the product is widely available. According to AVERT, (2010), many women also lack access to the knowledge, potable water and fuel needed to prepare replacement feeds safely, or simply have no time to prepare them. If used incorrectly - mixed with unsafe water, for example, or over-diluted - a breast milk substitute can cause infections, malnutrition and even death. Furthermore, if a mother chooses not to breastfeed in settings where breastfeeding is the norm then this may draw attention to her HIV status and invite discrimination, violence or abandonment by her family and community. Another factor worth noting is the contraceptive effect of breastfeeding, which can help to lengthen the interval between pregnancies (AVERT, 2010).

Poor families have a reduced capacity to deal with the effects of morbidity and mortality than richer families for very obvious reasons and these reasons include the absence of savings and other assets which can cushion the impact of illness and death (Desmond, 2010). He further advanced that the poor are already on the margins of survival and thus are also unable to deal with the consequent health and other costs. These include the costs of drugs when available to treat opportunistic infections, transport costs to health centers, reduced household productivity through illness and diversion of labour to caring roles, losses of employment through illness and job discrimination, funeral and related costs, and so on

(Desmond, 2010). In the longer term such poor households never recover even their initial level of living as their capacity is reduced through the losses of productive family members through death and through migration, and through the sales of any productive assets they once possessed; a true process of immiseration is now observable in many parts of Africa (Desmond, 2010).

Intergenerational poverty is caused when children who have lost both parents are left isolated and access to most forms of social support limited. According to Desmond, (2010), when the mechanisms for socialization of children no longer operate, systems for acculturation do not function and the children become alienated from their community. This becomes the beginning of the process of alienation and anomie which have socially destructive outcomes for children and their communities, and ultimately for society (Desmond, 2010). There are also the direct effects of what has happened to the children which are material and damaging to their futures. Poor nutrition leads to poor health which is an important cause of low labour productivity and thus the persistence of low incomes for the poor. Poor and damp housing is a major factor in causing illnesses such as TB which is itself exacerbated by the HIV epidemic (where there is now a dual epidemic underway in Africa). These children will continue to experience poor health status over their lifetimes with all kinds of social and economic consequences for them and their families (Desmond, 2010).

The children's chances of escaping from their poverty depends on access to resources which are self evidently missing among which include access to education which is the primary mechanism that the poor have for social mobility.

Desmond, (2010), showed concern that education is one thing that these children will not have access to in accordance with their abilities most evidently in the case of girl children. A generation is thus emerging with poor health status, few skills (not even those necessary for rural development), low levels of literacy and numeracy, little or no access to financial and other real assets (where their property and other rights will often have been infringed), and who have been deprived of normal processes of socialization and social inclusion (indeed they will face additional social exclusion because they come from families who have experienced AIDS) (Desmond, 2010). These children growing up in poverty will adopt precisely those behaviours which lead to HIV infection and they will in effect become the next cohort of the HIV infected; a state of affairs which will permit the epidemic to continue and intensify.

An important aspect of the coping experience of those infected and affected by HIV and directly related to poverty is the survival time from initial HIV infection to death in Africa. HIV infected persons in Africa live for a shorter time after initial infection than in developed countries, and this is not simply related to access to new anti-retroviral treatments (although this is now an important factor in the differential experience of rich and poor countries) (Desmond, 2010). Even prior to the availability of ARV in rich countries the evidence was that HIV infected persons in Africa had a survival time from infection to death of approximately 5-7 years, about half that in developed countries (Desmond, 2010). The explanation is complex according to Desmond, (2010) but is to a significant degree related to the poverty of most of those infected with HIV in Africa.

Elements in the survival-time-differential of Africans which are undoubtedly important include the inability to purchase relatively inexpensive drugs to deal with HIV opportunistic infections (such as TB and diarrhea), poor basic health and nutrition, limited psycho-social support and generally poor quality care both in hospital and home settings. These factors are all remedial through program activities which can be provided at relatively low cost by the state and NGOs, although they remain well beyond the capacity of poor households to provide for themselves (Desmond, 2010) and once provided they will extend and enhance the lives of those infected and will permit them to support both themselves and their families. Central to these processes are often conditions of isolation and discrimination such that traditional forms of social support for the poor and the sick become inoperable. Societies characterized by random events such as illness and death have developed mechanisms of social support -- traditional safety nets for those impoverished by disease and crop failure but what appears to be happening is that traditional systems of support are themselves in decline for structural reasons and are not being replaced by state mechanisms (Desmond, 2010).

According to (Desmond, 2010), the clustering of poverty caused by HIV which concentrates spatially and in certain communities places demands on disintegrating social support systems to which they cannot respond and furthermore HIV and AIDS are viewed in many communities as the outcome of reprehensible behaviour and because of this, there is often an unwillingness both to seek help by those affected and negative responses often by those able to provide assistance (Desmond, 2010). He showed concern that a dual process has emerged which is the

antithesis of what is required if the poor are to deal with the social and economic costs of HIV and AIDS. One fascinating examination of the cultural and economic drivers behind multiple sexual partners in Africa was presented at the Sixteenth International AIDS Conference in 2006 and was given the intriguing title of "A cow dies with grass in its mouth" (Sharma, 2006).This was an examination of sex and relationship patterns among Luo fishing communities of Lake Victoria in Kenya. Researcher Anjali Sharma found that this apparently fatalistic attitude of taking AIDS as normal and just like any other accidents was driven both by tradition and by economic necessity in a group of people whose livelihoods were under threat. According to his findings, sex had a ritual place in Luo culture as he quoted one man saying "Traditionally among us Luo most of our customs end with sex – whether it is the planting season or when you want to harvest, everything ends with sex". Sex was also part of the local economy and abstinence would have an impact on the earnings of female fish-sellers, who were often widows. Much of the sex was transactional as women would sell sex to fishermen and get paid in fish that they then sold to earn a living. In turn, other men would form sexual relationships with fish-sellers for both comfort and food security – because the women that sold most sex had most fish. Not surprisingly, multiple concurrent relationships were the norm and the local HIV prevalence was 29%.

According to Sharma, (2006) the Luo themselves, were not really fatalistic about HIV. When asked what their own solutions would be to the HIV/AIDS problem they came back with one biomedical solution (local antiretroviral dispensaries), but all their other solutions were economic: diversification of livelihoods, a cash float

that could be rotated between women's groups in times of need, fishermen's co-operatives, and local microcredit and savings and loan programs (Sharma, 2006).

CHAPTER THREE - METHODOLOGY

3.0 Introduction

This chapter discusses the systematic approach and the underlying procedures that were followed while carrying out this research. It discusses in detail the research design, study population, sample size and selection, sampling techniques and procedure. It also covers data collection methods, data collection instruments, pre-testing, procedures of data collection, data analysis, and lastly measurements of variables.

3.1 Research Design

A cross sectional survey design was used in this study because it is flexible and provides opportunities for considering many different aspects of a problem in-depth at a particular time (Kothari, 1990). Amin, (2005) describes cross sectional survey as the most commonly used research method in social research where surveys are used to gather data from a sample of a population at a particular time.

3.2 Study population

The study population consisted of Sub-County HIV/AIDS Focal Persons, Heads of Health Centers, Village Health Teams (VHTs), Community Based Organization (CBOs), Community members, District Health Officer (DHO), District Health Educator (DHE), Chief Administrative Officers (CAO) and finally Local Council I (LCI) Chairpersons. The study covered three randomly selected sub-counties which represent 50% of the entire population. The study had a target population of 231 and the accessible population of 153 respondents were selected using various

methods. The accessible population was used to get information required for the study and provided a basis for generalization of the target population. Amin, (2005 p. 235), advanced that the ultimate aim in most statistical investigations is to be able to generalize the results of the data from the sample to the entire population from which the sample data was drawn.

3.3 Sample Size Selection

The researcher selected the sample size according to the extent of precision and confidence desired and since this research had numerous variables. The researcher used the table that provides a good decision model as provided by Krejie and Morgan (1970) for decision on sample size selection. Below is the table for sample size selection and sampling technique that was used in the study.

Table 1.0 Sample size selection and selection techniques for the different categories of respondents.

Category	**Population**	**Sample size**	**Sampling strategy**
Sub-County HIV/AIDS Focal Persons	03	03	Purposive
Heads of Health centers	03	03	Purposive
Village Health Teams	06	06	Purposive
Community Based Organization	03	03	Purposive
Community members	210	132	Simple random sampling
DHO, DHE, CAO	03	03	Purposive
Local Council I C/persons	03	03	Purposive
Total	231	153	

Adapted from: R.V Krejcie and D. W Morgan (1970).

3.4. Sampling techniques and procedure

The researcher used purposive sampling and simple random sampling to determine the sample. Community members were selected using simple random sampling technique from three sub-counties out of five sub-counties in Dokolo district and they included; Baata, Dokolo and Agwata sub-counties. Forty four respondents (community members) were selected from each Sub-county for the interview using simple random sampling method. Two groups were selected from each sub-county using the same method and this enabled twenty-two respondents (44 respondents divided by two) to answer the questionnaires from each selected sub-county. Lists containing community members' names were obtained from LCI Chairpersons and at the Sub-County Headquarters to facilitate this sampling method. Sub-County HIV/AIDS Focal Persons, Heads of Health centers, Village Health Teams, HIV/AIDS focused-Community Based Organization, DHO, DHE, CAO and LCI chair persons were selected purposively as summarized in table 1.0 above.

3.5 Data Collection Methods

Data collection methods used in this study were both quantitative and qualitative. Qualitative methods used in this study included the interviews (structured), focus group discussions and observation while the quantitative method was carried out with the use of questionnaires. Triangulation of these methods was carried out to enrich the study and it enabled all kinds of data to be collected. All these methods were used either one at a time, or concurrently. For example, the researcher used interviews while carrying out observation of conditions in existence at the same

time and making a follow up of the responses given in the questionnaires using an interview method later on.

3.5.1 Questioning

The questionnaire was the main instrument for collecting data in this research. They were administered by the research team (researcher administered). Questioning method helped in the generation of constructive data and enabled the coverage of large samples in addition to making the results more dependable and reliable. The questioning method also offered greater assurance of anonymity and enabled the respondents to give sensitive information without fear, as their identities were not needed, hence the justification for the use of the method in this study.

3.5.2 Interviews

Interviewing as a method was used to help in the collection of the respondent's views on the study variables. Semi-structured interviews were used to collect data from PHA Focal Persons, CAO, DHE, DHO and DIO. To obtain accurate information through interviews, the researcher ensured maximum co-operation from respondents by communicating clearly the purpose of the study. Interviews were advantageous in that they provided in-depth data which was not possible to get using a questionnaire. It made it possible to obtain data required to meet the specific objectives of the study. Interviewing not only permitted the researcher to follow up leads, but also helped in obtaining more data and greater clarity. Community members were interviewed by the research team and in carrying this out, statements in the questionnaires were read to them and they provided

appropriate responses (researcher administered questionnaires). Interviewing also made it possible to get information from some of the respondents who couldn't read and write. Kakinda, (1999) stresses that for the interview to be conducted, the information must be accessible to the respondents, the respondents should be able to play the role of a respondent and he/she should be motivated to participate in the interview. All these were ensured by the researcher.

3.5.3 Focus Group Discussion (FGD)

The researcher used this method to collect data from the groups like; the Village Health Teams, Local Council I Chairpersons and Community Based Organizations. The justification for the use of this method is because of its particularly usefulness for exploring people's knowledge and experiences and it can also be used to examine not only what people think, but how they think and why they think that way. Kitzinger, (1994) explains that; Focus groups are a form of group interview that capitalizes on communication between research participants in order to generate data. Although group interviews are often used simply as a quick and convenient way to collect data from several people simultaneously, focus groups explicitly use group interaction as part of the method. This means that instead of the researcher asking each person to respond to a question in turn, people are encouraged to talk to one another: asking questions, exchanging anecdotes and commenting on each others' experiences and points of view. Fisher, et al (2002) maintains that; the use of focus group discussion has the advantage of being economical yet still yields detailed qualitative information from a relatively large number of respondents.

3.5.4 Observation

Non participant observation was used in this study and it enabled the researcher to control the research by avoiding biases and prejudices of respondents. Observation was done on status of HIV/AIDS test books (registration, laboratory test record books, ART client register, refill chart/ schedules and other records on VCT, PMCT and RCT among others). The researcher used this method and it provided a "richer" and more direct amount of the phenomena under study. Kakinda, (1990) cites Blackman 1976 who asserts that observation as an everyday phenomenon becomes a scientific technique when it serves a formulated research purpose is planned systematically, is recorded systematically and related to more general propositions and is subjected to check and control on validity and reliability. Data was collected using observation method as it's the most commonly used method especially in studies related to behavioral sciences (Kothari, 1990). In carrying this out, the researcher used an observation checklist.

3.5.5 Recording

The researcher used this method to capture everything said by the key informants that were interviewed and the method provided the exact data as received from the informant without any distortion. Sansa recording was carried out during interviews and focus group discussions and the recorded information was later transcribed by the research team to extract the crucial information for the study.

3.5.6. Documentary Review

Secondary data were collected from the internet, newspapers, district health reports, reports compiled by World Health Organization and journals on HIV/AIDS among others. Documentary review helped in finding out information available on HIV/AIDS preventive initiatives in relation to the prevalence of HIV/AIDS. This enabled the identification of their strengths, weaknesses and gaps in the reduction of HIV/AIDS prevalence. This also helped the researcher in the validation of the primary data that were collected from the field.

3.6. Data Collection Instruments

The study involved the use of various instruments of data collection. They varied according to the particular type of information needed for collection. The instruments that were used are presented below.

3.6.1 Structured Questionnaires

The researcher used an open ended questionnaire to gather data from the community members. The questionnaires were administered by the researcher and research assistants. Quite often the questionnaire is considered as the heart of a survey operation. It involves low cost. It's wide spread geographically. It's free from bias of the interviewer and answers are in respondents' own words (Kothari, 2004). With questionnaires, respondents have adequate time to give well thought answers, unapproachable respondents can be conveniently reached and above all large samples can be made use of and thus the results can be made more dependable and reliable.

Rensis Likert's scale statement having five category response continuums of 1-5 were used where, 1 means 'strongly disagree', 2 means 'disagree', 3 means 'neither agree nor disagree', 4 means 'agree' and 5 means 'strongly agree' with assertion. This was designed to establish the extent to which respondents were in agreement with the statements and were used to measure the variables under study. In using this, each respondent selected the response most suitable to him/her in describing each statement. The response categories were weighed from 1-5 and averaged for all items.

3.6.2. Interview Guides

The researcher used interview guides to get data from the Chief Administrative Officer (CAO), The District Health Educator (DHE), The District Health Officer (DHO), Health Center Officers and HIV/AIDS focal persons. The use of interview guides helped the researcher to generate more information, with greater depth on the various questions asked. Interview guide use also made it possible to get the required data to meet the study objectives. In addition to the provision of rich information that would not be captured in the closed-ended questionnaires.

3.6.3 Focus Group Discussion Guides

The researcher used focus group discussion guides so as to have a systematic flow of the discussion, with the aim of capturing the relevant information as far as the study was concerned.

3.6.4 Observation Check List

Observation check list helped in the collection of information generated by observation. The check list had an outline of phenomenon for observation. They included the status of HIV/AIDS test books (registration, laboratory test record books, ART client register, refill chart/ schedules, records on VCT, PMCT, RCT) and reaction to sensitive issues on HIV/AIDS prevention like condom use and other behavioral change activities among others. To avoid collecting unreliable data, unobtrusive observation was carried out and this made respondents not to change their behaviors.

3.6.5 Recorders

The interview process was recorded using radio cassettes as the main tools for recording information. Information recorded on tapes was later transcribed by the research team, after the interviews and focused group discussions.

3.6.6 Documentary Review Checklist

Documentary review checklist containing a list of documents reviewed was used and this provided necessary data for the study. The documents reviewed were obtained from libraries, internet and newspapers among others. These documents also included minutes of meetings held by health workers and community group members on HIV/AIDS awareness, attendance lists for meetings and reports on HIV/AIDS prevalence in the district among others. These documents helped in obtaining information on the reasons for the high prevalence of HIV/AIDS in Dokolo district.

3.7.0. Ensuring quality

The research instruments were pre-tested to ensure reliability and validity. Reliability of an instrument reflects the extent to which it is error free by establishing its consistency, while validity is ensuring that the researcher is measuring the variables she/he set out to measure, not something else (Sekarani, 2003).

3.7 .1 Validity measures

Validity of the instruments was ensured through discussions with colleagues, my work based supervisor, pilot respondents, key informants, fellow Masters of Management Studies (MMS) participants and most importantly UMI based supervisor about what the instruments intended to measure and asking them whether the instruments designed were likely to capture the required data. The researcher ensured both face validity and content validity through reviewing the research proposal document and removing vague questions that conveyed the same meaning to all subjects; comments and suggestions made by the respondents during pre-testing were considered and incorporated. Validity was also ensured by observing deficiencies in the questionnaire, such as insufficient space to write the response; cluttered questions were reviewed and corrected before the actual data collection exercise took place.

3.8 Reliability of Research Instruments

To ensure reliability, questionnaires were pre-tested in one Sub-county; Agwata Sub-county. The sample population, in Dokolo District, and the District's

characteristics was a good representation of the entire district. Consistency in response was ensured when administering the research instruments by carrying out a test – retest and this method (test-retest reliability) helped in measuring the extent to which the instrument was able to produce consistent scores when the same groups of individuals were repeatedly measured under the same conditions. The results of these tests were interpreted in line with Cronbach alpha's reliability measurement which ensured that all constructs exceeded the cut-off of 0.7 meaning the scales were reliable and consistent. Reliability coefficients of the variables computed were as follows;

Table 2.0: Reliability Statistics

Variable	Cronbach's Alpha	No. of Items
PMCT	.514	19
HCT	.672	15
Advocacy	.768	18
Economic Environment	.770	16
Employee retention	.512	11

Cronbach's Alpha Coefficient was used to measure reliability of the instruments with the results indicating an alpha of over .514. According to Amin (2005), an alpha of 0.5 or higher is sufficient to show reliability; the closer it is to1, the higher the internal consistency reliability; (Sekaran, 2003).

3.9 Procedure of Data Collection

Introductory meeting was held with Dokolo District health officers and during the meeting; the researcher explained the need to carry out the study and the purpose of the study. A letter from Uganda Management Institute (UMI) explaining the

purpose of the study was presented by the researcher to provide further proof of the researcher's intention and helped seek permission to carry out the study in the district. The same thing was done for all other respondents in the sample. The lead researcher employed eight research assistants familiar with action and social research methods to help in data collection and the assistants were oriented to methods and rationale, and 'armed' with essential kits, including a letter of introduction from UMI, questionnaires and varied documentation resources. The research assistants were positively motivated by the lead researcher to ensure quality work. Appointments were made with selected respondents at sub-county offices, health centres and at agreed places convenient to respondents. Confidentiality of data collected from respondents was maintained and data collection took 21 days.

3.10 Data Analysis

The researcher edited completed questionnaires for completeness, accuracy, uniformity and comprehensiveness. The interview guide responses were revised, compiled, checked and coded noting the relationships between the given answers and questions asked. Data were analyzed using Statistical Package for Social Scientists (SPSS) version 10 computer program because of its simple usability. Data were analyzed by way of frequency, tables, and percentages. The presentation of quantitative results was made in descriptive formats such as tables, frequencies, mean and percentages on top of narrations and citations of qualitative data collected from the interviews conducted, focus group discussions and observation. This was done after a comprehensive analysis of the statistics was generated. Regression

analysis was used to analyze the effect of HIV/AIDS preventive initiatives on HIV/AIDS prevalence rate in Dokolo District and to find out the effect of economic environment on HIV/AIDS prevalence in Dokolo District.

3.11 Measurement of Variables

The researcher was basically interested in the mean and averages of data collected in this study so as to determine the consistency of the variables. Ordinal Measurement scales were used to measure attitudes, beliefs and opinions; the scales were constructed by presenting respondents with statements followed by series of response options indicating different degrees of agreement with each of the statements. Fisher, et al (2002) maintain that this type of scale is often referred to as a "Likert Scale," named after one of its originators, R. Likert and that in HIV/AIDS operations research, ordinal variables are usually used to measure attitudes, beliefs, and opinions This research uses a Likert Scale of 5 to 1, (5 representing strongly agree, 4 representing agree, 3 representing neither agree nor disagree, 2 representing disagree and 1 representing strongly disagree).

CHAPTER FOUR - DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.0 Introduction

This chapter presents, analyses and discusses the findings of the study and it has been structured into four parts; Part I presents background information (sample characteristics and demographic statistics) about respondents reached; Part II presents the descriptive analysis of respondents views on PMTCT and HIV/AIDS prevalence, correlation and regression (effect) ; and, Part III presents the respondents views on HIV counseling and testing, correlation and regression (effect); Part IV presents respondents views on HIV/AIDS behavior change initiatives (ABCD strategy); correlation and regression (effect) , part V presents respondents' views on economic environment in relation to HIV/AIDS prevalence correlation and regression (effect); and part VI presents the views of community members (clients) on HIV/AIDS prevalence in Dokolo district.

4.1 Response Rate

The researcher administered questionnaires which were used to get information from community members (clients). Table 2.0 indicates the sample size, questionnaires administered, valid questionnaires, invalid questionnaires and response rate.

Table 2.0 Response Rate

Sample size	132
Questionnaires administered	132
Valid questionnaires	132
Invalid questionnaires	0
Response rate	100%

(Source: primary data).

From table 2.0 above, statistics show that out of 132 questionnaires administered to respondents, all were valid and the 132 valid questionnaires make the response rate to be 100%. This is because the researcher was carrying out the study where they have ever implemented a project plus coincidentally her field visit was on a day when an organization called; Northern Uganda Malaria, AIDS and Tuberclosis (NUMAT) was distributing handouts like Mosquito Nets and therefore the respondents turned up in large numbers and were very cooperative because of the researcher's past relationship with the community. Above all, participants had high expectation for benefits in the near future in terms of a new project, like they had benefitted before.

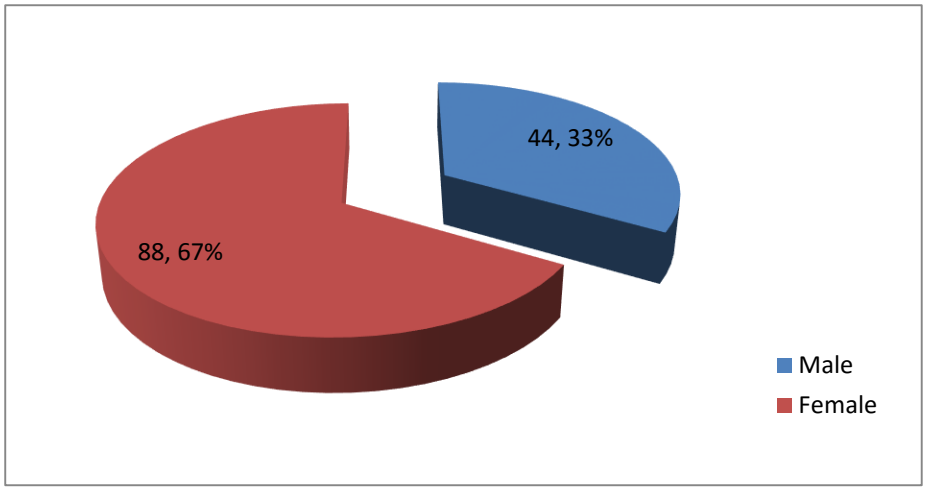
4.2.0.: Background information

The background information had six factors which were assessed during the study. They include; gender of respondents, age, religion, marital status, level of education, and occupation of respondents and finally the number of years lived with HIV/AIDS. The findings on each of the above factors have been presented below.

4.2.1. Gender of Respondents

The researcher set out to find out the Gender distribution of respondents, this was intended to establish whether gender was taken into consideration while looking at HIV/AIDS prevalence rates and results are presented as shown in the figure.

Figure 1.0: Showing Gender of Respondents



From figure 1.0, above out of the total respondents (132 respondents), 44 (33.3%) were male and 88 (66.7%) were female. The table above shows that the majority of respondents were female represented by 66.7% as compared to only 33.3% of male respondents. This implies females are more responsive in behavior to HIV/AIDS than males. It could imply that more females than males are infected with HIV/AIDS and therefore yearn to learn more. This perhaps contributes to the higher rates of HIV/AIDS infection rates among young, mid aged and old female. It could also imply that more females were willing to disclose their HIV status than the males like it was mentioned in the Focus Group Discussions that;"Cho kobo ni di chwinyi itoo, kara chene ni pe" Literary meaning; the males say endure and get HIV/AIDS since you have to depend on my money!"

4.2.2. Age of respondents

Respondents were asked to indicate their age category and the results are shown in the table below.

Table 3.0: Age of Respondents

Age of Respondent	**Frequency**	**Percentage**
20 years and below	3	2.3%
21-30 years	40	30.3%
31-40 years	41	31.1%
41-50 years	34	25.8%
50 years and above	14	10.6%
Total	**132**	**100%**

(Source: primary data)

Table 3.0 above, shows respondents' age bracket. The majority of respondents 41(31.1%) fell between the age category of 31-40 years, 40(30.3%) fell between age category of 21-30 years, 34(25.8%) fell between 41-50 years, and those 50 years and above were 14(10.6%). %). This could imply that the majority of respondents were relatively mid-age respondents meaning that mid age respondents were more susceptible to HIV/AIDs infections than any other groups. So more were willing to learn more about HIV/AIDS. This may also imply that in the study community, this age is the most sexually active.

4.2.3. Marital Status of Respondents

The marital status of respondents had five response categories and they were; -

single, married, widow(er), divorced and others. The statistics generated from the above information have been presented in the figure below.

Figure 3.0: Showing Marital Status of Respondents

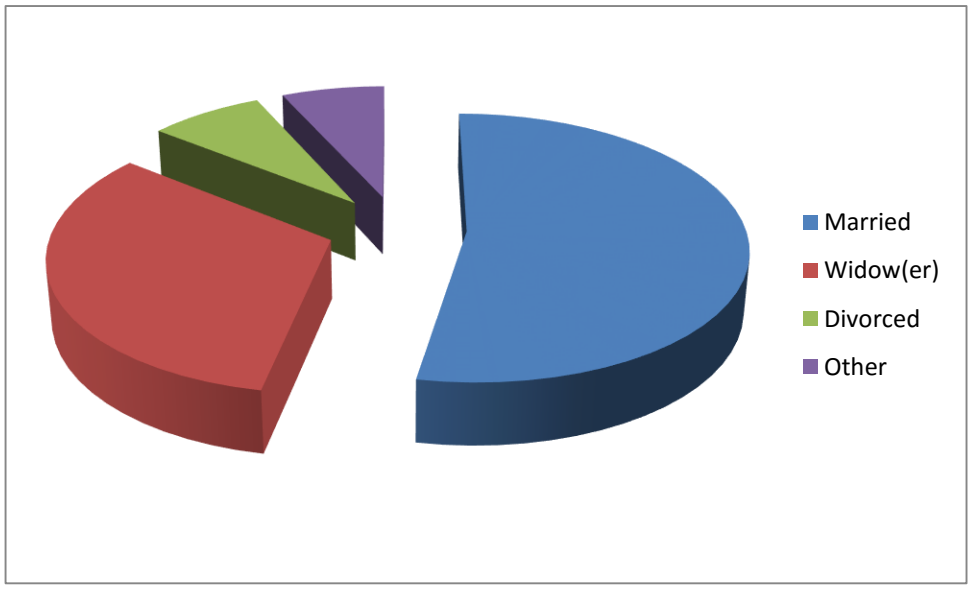


Figure 3, indicates that of the 132 respondents, 70 (53.0%) of respondents were married, 43(32.6%) respondents were widowed(er), 10 (7.6%) of respondents were divorced; with the minority 09 respondents (6.8%) being others (eloped and separated). This could imply that the HIV/AIDS prevalence rate is relatively high among the married couples who are therefore very much willing to know more about HIV/AIDS. This is in line with what one of the district officials mentioned during the interviews that;

> "The increasing HIV/AIDS prevalence in Dokolo is due to adulterous behaviours amongst the married people"

4.2.4. Level of Education Attained by Respondents

Respondents were asked to indicate their level of education and the results are shown in table below

Table 4.0: Respondents' Level of Education

Education Level	**Frequency**	**Percentage**
Primary and Lower	100	75.8%
Secondary	24	18.2%
Tertiary	8	6.1%
Total	**132**	**100%**

(Source: primary data)

Table 4.0 above shows respondents by education level, the study revealed that the majority of respondents have attained very low level of education with 100 respondents (75.8%) falling in the category of primary level and below. This was followed by those who have attained secondary educational level 24 respondents (18.2%), and finally tertiary education category having 08 respondents (6.1%). %). This implied that the majority of the respondents did not go beyond primary education. This could explain the high prevalence rate of HIV/AIDS since the respondents did not go far with education and probably missed out on the chance of getting more information on the disease through the education system plus this limits the ability of the illiterate community members particularly the females in making choices particularly to use or not to use condoms when having sex later on wife inheritance behavior, a common practice in the Lango Sub-region making increasing HIV/AIDS prevalence inevitable.

4.2.5. Occupation of Respondents

Respondents were asked to indicate their occupation and the results are shown in the table below

Table 5.0: Occupation of Respondents

Occupation	**Frequency**	**Percentage**
Peasant farmer	112	84.8%
Trader	13	9.8%
Others	7	5.3%
Total	**132**	**100%**

(Source: primary data)

The occupation of respondents in the questionnaire had three different categories and these were; Peasant farmers, traders, and others. Analysis showed that the majority of respondents 112 (84.8%) were peasant, 13 (9.8%) were traders, with the least 7(5.3%) representing others. This implied that the majority were low income earners and could easily be lured into risky behaviors such prostitution, widow inheritance and having multiple sexual partners in attempt to improve on their income. All these could explain the high prevalence rates of HIV/AIDS in Dokolo District.

4.2.6. The Number of Years Lived with HIV

Respondents were asked to indicate the number of years, they had lived with HIV.

Table 6.0: Number of Years lived with HIV

Years	**Frequency**	**Percentage**
< 1 year	17	12.9%
2-5 years	69	52.3%
5-10 years	31	23.5%
10-15 years	6	4.5 %
15- 20 years	9	6.8%
Total	**132**	**100%**

(Source: primary data)

The table 6.0 above shows the number of years respondents have lived with HIV-AIDs. The majority of respondents 69 (52.3%) have lived with HIV for a period of 2-5 years, 31(23.5%) who have lived with it between 5-10 years, the third group was 17(12.9%) for less than a year, 9 (2.3%) had lived with HIV for over 15 years, with the least being 6(4.5%) that had lived with HIV between 10-15 years. This implies that despite all the interventions put in place, the rates of infection are still going up and therefore an urgent need to review the Preventive initiatives being advocated for in Dokolo district so as to design a more effective strategy.

4.3. Presentation of Empirical Findings

4.3.1 The descriptive analysis of respondents views on PMTCT and HIV/AIDS prevalence.

This section presents the respondents views on all the indicators used to measure the effect of PMTCT on HIV/AIDS prevalence in Dokolo District and the percentage response rates have been presented in the table below.

Table 7.0 Prevention of Mother to Child Transmission (PMTCT)	**Mean**	**Std Dev (σ)**	**PERCENTAGE RESPONSES**				
			SD (1)	**D (2)**	**N (3)**	**A (4)**	**SA (5)**
Government health centers in my community provide HIV/AIDS preventive services.	**4.22**	**.416**	0% (0)	0% (0)	0% (0)	78% (103)	22% (29)
The NGOs in my community provide HIV/AIDS preventive services	**3.92**	**.742**	0% (0)	10.6% (14)	0% (0)	76.5% (101)	12.9% (17)
I easily access HIV prevention services in my community.	**3.80**	**.878**	0% (0)	16.7% (22)	0% (0)	69.7% (92)	13.6% (18)
I have heard about Mother to Child HIV transmission.	**4.04**	**.670**	0% (0)	6.8% (9)	0% (0)	75.8% (100)	17.4% (23)
I know that Mother to Child Transmission of HIV/AIDS is preventable.	**3.89**	**.754**	0% (0)	11.4% (15)	0% (0)	76.5% (101)	12.1% (16)
I know where to get services for Prevention of Mother to Child Transmission of HIV.	**3.89**	**.650**	0% (0)	9.1% (12)	0% (0)	84.1% (111)	6.8% (9)
PMTCT services are available in health centers	**3.89**	**.542**	0% (0)	6.8% (9)	0% (0)	90.2% (119)	3% (4)
Pregnant women in our community seek ante-natal & post-partum care in our health centers	**4.02**	**.390**	0% (0)	2.3% (3)	0% (0)	91.7% (121)	6.1% (8)
Preventing Mother to Child transmission of HIV can be done during pregnancy, labour and delivery at health centers.	**3.89**	**.807**	0% (0)	11.4% (15)	4.5% (6)	68.2% (90)	15.9% (21)
Preventing Mother to child transmission of HIV can be done through safer infant feeding and the use of antiretroviral drugs	**3.89**	**.650**	0% (0)	7.6% (10)	4.5% (6)	79.5% (105)	8.3% (11)
It's easy for me and other people living with HIV to access Septrin or Dapson for prophylaxis from our health centers anytime we need them.	**2.52**	**1.007**	6.8% (9)	64.4% (85)	0.8% (1)	26.5% (35)	1.5% (2)
HIV positive mothers in our community have access to knowledge on formula feeds and how to prepare them.	**3.17**	**1.099**	9.1% (12)	25.8% (34)	4.5% (6)	60.6% (80)	0% (0)
HIV positive mothers in our community have the ability to buy baby formula feeds.	**2.13**	**.469**	0% (0)	92.4% (122)	2.3% (3)	5.3% (7)	0% (0)
HIV positive mothers in our community have access to clean water for preparing baby formula feeds safely.	**2.45**	**850**	0% (0)	78% (103)	0% (0)	21.2% (28)	0.8% (1)
There is wide spread availability and safe use of breast milk substitute in our community.	**2.08**	**.533**	4.5% (6)	89.4% (118)	0% (0)	6.1% (8)	0% (0)
Lactating mothers living with HIV/AIDS in our community face pressure from others to breast feed their children as choosing not to breastfeed & use formula feeds reveal their HIV status.	**2.76**	**1.005**	4.5% (6)	51.5% (68)	7.6% (10)	36.4% (48)	0% (0)

(Source: primary data)

This study noted that, most respondents have knowledge on HIV prevention services within their community. Analysis showed that, 78% (103) of the respondents indicated that government health centers in Dokolo District provided HIV/AIDS preventive services, On provision of HIV/AIDS preventive services by NGO's in the district 78.5% agreed with the statement compared to 10.8% that disagreed, findings revealed that NGOs in the district provide HIV/AIDS preventive services as 89.4% of respondents agreed or strongly agreed that the NGOs in their community provide HIV/AIDS preventive services, and only 10.6% of respondents disagreed on the above, 78.5% agreed that they had been sensitized about Mother to Child HIV transmission, On attitude of women towards going for antenatal services, findings revealed that most expectant women go for pregnancy tests in health centers as all the respondents (100%) agreed that most expectant women in their community go for pregnancy tests in health centers. This therefore shows that there was a high number of expectant women going for pregnancy tests in health centers. On hearing about Mother to Child HIV transmission, 93.2% of respondents agreed that they have heard about and have knowledge on PMTCT and only 6.8% of respondents disagreed that they do not have knowledge on PMTCT. This therefore reveals that the majority of people in the district have knowledge on PMTCT which is so critical for the success of PMTCT in the fight against HIV/AIDS.

The researcher further sought the respondents' views on whether PMTCT is preventable or not in the fight against HIV/AIDS and statistics revealed that the majority of people in Dokolo district know that the strategy is preventable as only

11.4% of respondents disagreed that they don't know that Mother to Child Transmission of HIV/AIDS is preventable while 88.6% of respondents agreed that they know that Mother to Child Transmission of HIV/AIDS is preventable. This therefore means that the community has high level of knowledge that Mother to Child Transmission of HIV/AIDS is preventable. Only knowing that the strategy is preventable is of very limited use if people don't know where to access such services from so the researcher asked respondents whether they know where to access such services from or not.

The study findings showed that the majority of people in the district knew where to access such services (PMTCT) from as 90.9% of respondents agreed that they know where to get services for Prevention of Mother to Child Transmission of HIV and only 9.1% of respondents disagreed that they don't know where to get such services from. This suggests that community members in Dokolo district know where to get services for Prevention of Mother to Child Transmission of HIV. The study also found out that that PMTCT services are readily available in the health centers within Dokolo District as 93.2% of respondents agreed that the PMTCT services are readily available in their health centers and only 6.8% disagreed that they are not readily available.

Analysis noted that it's not easy for people living with HIV to access Septrin or Dapson for prophylaxis from their health centers anytime they need them as 71.2% of respondents disagreed on the above and only 28% of respondents agreed to the above leaving out 0.8% of respondents who were undecided. This means that it's not easy for people living with HIV in Dokolo to access Septrin or Dapson for

prophylaxis from their health centers anytime they need them and yet this is so critical in the reduction of HIV/AIDS prevalence rate. A respondent expressed his concern on the above issue when he said,

> *"we don't have medical doctors in most of our health centres here and the majority of people heading our health centres are clinical officers most of whom lack proper knowledge on how to treat certain kind of diseases that affect us people who are HIV positive".*

Another disgruntled respondent confessed this during an interview

> *"HIV/AIDS affect our memory at later stages thus making the services of psychiatrists so critical but do we have any in our health centres here? Not even one my daughter, yet our brothers and sisters are suffering from mental problems but there are no specialists to help treat them".*

Findings further revealed that HIV positive mothers in Dokolo district have access to knowledge on formula feeds and how to prepare them as 60.6% of respondents agreed on the above and only 34.9% disagreed that they don't have access to knowledge on formula feeds and how to prepare them whereas 4.5 % of the respondent's neither agreed nor disagreed with the statement that ;

> *"HIV positive mothers in their community have access to knowledge on formula feeds and how to prepare them."*

Having knowledge on formula feeds and how they are prepared is of limited or no use at all if someone doesn't have the ability to acquire the feeds so the researcher had to find out information on the ability of HIV positive people to buy these alternative feeds for their children. On ability to buy baby formula feeds by HIV

positive mothers in Dokolo district, 92.4% of the respondents disagreed that HIV positive mothers in their community don't have the ability to buy baby formula feeds whereas 5.3 % of respondents agreed that HIV positive mothers are able to buy the feeds living out 2.3 % who were undecided. This indicates clearly that HIV positive mothers in Dokolo district don't have the ability to buy baby formula feeds.

Statistics also revealed that HIV positive mothers in Dokolo district don't have respondent's community access to clean water for preparing baby formula safely as 78 % of respondents disagreed on the above leaving only 22 % of respondents who agreed that people in their community have access to clean water. This therefore suggests that community members in the district don't have access to clean water for preparing baby formula feeds safely. On HIV positive mothers in Dokolo district having access to fuel for preparing replacement feeds safely, 80.3% of respondents disagreed that HIV positive mothers in their community don't have access to fuel to prepare replacement feeds safely while 17.4 % of respondents agreed on having easy access to fuel and 2.3% of the respondents were undecided. This was further confirmed when one of the respondents during the focus group discussions said,

> *"We face problems with the collection of as collecting only two heaps of firewood is hard work. This has been caused as a result of massive deforestation that occurred during the time when people were in IDP camps majorly for building poles, firewood and sale".*

This means that the community members (including HIV positive mothers) in Dokolo don't have access to fuel for preparing replacement feeds safely. The study

however noted that there is no wide spread availability and safe use of breast milk substitute in Dokolo district as 93.9% of respondents disagreed that there is no wide spread availability and safe use of breast milk substitute in their community and only 6.1% of respondents agreed on availability and safe use of breast milk substitutes. This therefore means that there is no wide spread availability and safe use of breast milk substitutes in the Dokolo district.

Analysis further indicated that, 47% of respondents approved that HIV positive mothers in their community are a target for stigma and discrimination if they stop breast feeding their children to Prevent MTCT and 50.7% of respondents disagreed to this statement while only 2.3% of respondents were undecided. This means that stigmatization of HIV positive people still takes place in the district although its rate is on the decline as indicated by the statistics above. The study also found out that, 56% of respondents disagreed to the statement that "lactating mothers living with HIV/AIDS in the district face pressure from others to breast feed their children as choosing not to breastfeed & use formula feeds reveal their HIV status". Only 36.4% of respondents agreed with the above statement whereas 7.6 % were undecided. This therefore confirms the decline in the rate of stigmatization of people living with virus in the district. One of the respondents affected by stigmatization during the focus group discussions said that;

> "*Stopping breastfeeding is not easy for people like us. Can you believe that some of our husbands tear our medical forms (books) and even confiscate our drugs if they come across them? That habit makes some of us to keep*

our drugs like septrin, ART and propylaxis at our neighbors' homes for safety".

4.3.2 Correlation Results for Prevention of Mother to Child Transmission (PMTCT) and HIV Prevalence in Dokolo District.

The researcher went ahead to establish whether there was a relationship between PMTCT and HIV/AIDS prevalence rate. The analysis was guided by the following null hypothesis. *"There is no relationship between PMTCT and HIV/AIDS prevalence rate in Dokolo district*" The results are represented in the table below

Table 8.0: Correlation results for PMTCT and HIV/AIDS Prevalence

		PMTCT	**HIV Prevalence**
PMTCT	Pearson Correlation	1	.020**
	Sig. (2-tailed)		.819
	N	132	132
HIV Prevalence	Pearson Correlation	.020**	1
	Sig. (2-tailed)	.819	
	N	132	132

** Correlation is significant at the 0.05 level (2-tailed).

Results in the table indicate that there is no significant relationship between PMTCT and HIV prevalence given the very small correlation coefficients of 0.02 with observed significance level of 0.819 that is far above the critical 0.05 level of significance. This implies that the null hypothesis is accepted, meaning that there is no sufficient evidence at 5% level to support the research hypothesis that a relationship exists between PMTCT and HIV prevalence in the District.

4.3.3 Regression Results between Prevention of Mother to Child Transmission (PMTCT) and Prevalence in Dokolo District.

The contribution of Prevention of Mother to Child Transmission (PMTCT), on HIV/AIDS prevalence in Dokolo District was assessed by the use of regression analysis. The results of the analysis are presented in the table below.

Table 9.0: Model Summary: Prevention of Mother to Child Transmission and HIV/AIDS Prevalence.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.020[a]	.000	0.0004	.39148

a. Predictors: (Constant), PMTCT

R^2 of 0.000 in the table means that PMTCT does not in any way explain the variations in the HIV prevalence rates in Dokolo District. There are other factors other than PMTCT that explain HIV/AIDS prevalence.

Table 10: Analysis Of Variance (ANOVA)

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	0.008	1	.008	.053	.819[a]
	Residual	19.924	130	.153		
	Total	19.932	131			

a. Predictors: (Constant), PMTCT

b. Dependent Variable: Prevalence

The Analysis of variance (ANOVA) shown in the table 10 above, indicate that there is no significant relationship between PMTCT and prevalence rates. Hence the null hypothesis was accepted and research hypothesis rejected.

In conclusion therefore, basing on the findings of this study, the provision of PMTCT does not explain the prevalence rates of HIV/AIDS in Dokolo District.

4.3.4 The Descriptive Analysis of Respondents views on HCT and HIV/AIDS prevalence in Dokolo District.

Table 11: Respondents' Views on HCT and HIV/AIDS Prevalence

HIV Counseling and Testing	Mean	Std Dev (σ)	PERCENTAGE RESPONSES				
			SD (1)	D (2)	N (3)	A (4)	SA (5)
It is important to test HIV Counseling & Testing.	**4.00**	**.303**	0% (0)	0% (0)	4.5% (6)	90.9% (120)	4.5% (6)
Counseling & testing services are available and done in the health centers within Dokolo.	**4.00**	**.371**	0% (0)	2.3% (3)	0% (0)	93.2% (123)	4.5% (6)
Counseling schedules in health centers are known.	**3.76**	**.722**	0% (0)	13.6% (18)	0% (0)	83.3% (110)	3% (4)
Counselors/Counseling assistants are available all the time.	**3.23**	**1.010**	0% (0)	39.4% (52)	0% (0)	58.3% (77)	2.3% (3)
There are private places for counseling within the health centres.	**3.47**	**.912**	0% (0)	27.3% (36)	0% (0)	71.2% (94)	1.5% (2)
I have tested for HIV from a health centre in Dokolo district.	**3.73**	**.721**	0% (0)	14.4% (19)	0% (0)	84.1% (111)	1.5% (2)
Pre-test counseling is available in health centers within Dokolo district.	**3.83**	**.595**	0% (0)	9.1% (12)	0% (0)	89.4% (118)	1.5% (2)
I was counseled after being tested for HIV virus (post test counseling).	**4.02**	**.261**	0% (0)	0% (0)	2.3% (3)	93.2% (123)	4.5% (6)
I received my HIV test results from my counselor without waiting for too long.	**3.64**	**.892**	0% (0)	21.2% (28)	0% (0)	72% (95)	6.8% (9)
I understood my results through the explanation of the counselor.	**3.91**	**.671**	0% (0)	2.3% (3)	0% (0)	81.8% (108)	4.5% (6)
I continue to receive counseling from nearby health centres these days.	**4.00**	**.371**	0% (0)	2.3% (3)	0% (0)	93.2% (123)	4.5% (6)
Knowing my status has made me to start practicing & continue with faithfulness to my partner (avoiding extramarital sex)	**3.95**	**.640**	2.3% (3)	3% (4)	0% (0)	86.4% (114)	86.4% (114)
Since I tested HIV/AIDS positive, I have continued to have various sexual relationship.	**2.24**	**.655**	0% (0)	87.9% (116)	0% (0)	12.1% (16)	0% (0)
HCT is increasing access to treatment (ART inclusive) and care in our community.	**3.78**	**.680**	2.3% (3)	7.6% (10)	0% (0)	90.2% (119)	0% (0)
The majority of people in my community go for HIV counseling and testing.	**3.61**	**.798**	0% (0)	20% (26)	0% (0)	80% (106)	0% (0)

In the table above, respondents views on all the indicators used to measure the effect of HCT on HIV/AIDS prevalence in Dokolo district and the percentage response

rates have been presented. On the importance of HCT, 90.9% of respondents agreed that it is very important for anyone to go for HIV Counseling & Testing and only 4.5% of the respondents were undecided. Therefore community members in Dokolo district acknowledge that there is a high level of importance for anyone to go for HIV Counseling & Testing. When respondents' opinions were sought on whether ccounseling & testing services were available and done in the health centers within Dokolo district, 93.2% of respondents agreed with the opinion and only 2.3% of respondents disagreed on the above. This therefore means that Counseling & testing services are available and done in the health centers in the district. Having schedules for counseling is very important and must be known by everyone who wants to seek for the service as failure to know the schedules could lead to lack of or even no access to counseling services at all.

When asked on the above, 83.3% of respondents agreed that counseling schedules in health centers are known, while 13.6% disagreed on the statement that counseling schedules in health centers are known. This therefore suggests that there is a high level of knowledge on counseling schedules in health centers thus supporting HIV counseling and testing services.

Observation further confirmed this when the researcher went to some of the health centers in the district as five out of the seven health centers visited had information on testing dates and other information related to HIV/AIDS clearly written and pinned on the notice boards and most of the walls within the health centers. For example in Bata health centre III, CD4 counts are tested after every 15 days (twice in a month), HCT is done on daily basis and ART services are provided every

Tuesdays. Having knowledge on the counseling schedules is of no importance if the health service providers are not available most of the times in health centers and this motivated the researcher to find out information on the availability of health workers in health centers in the district.

Findings revealed that counselors/counseling assistants are available in health centers all the time as 58.3% of respondent agreed that counselors/counseling assistants are available all the time and only 39.4% disagreed with the above. Counseling can only be done efficiently and effectively if carried out at private places that permit openness so the researcher found it so important to know if there were private places for counseling people in health centers within the district. Of the 132 respondents, 71.2% agreed that there are private places for counseling within the health centers and 27.3 % of respondents disagreed with the above statement. Observation further showed that although there are counseling places in most of the health centers visited, some of them are not private as they are used to carry out different activities like counseling, testing, storing of drugs and storing of records among others.

One unsatisfied client interviewed supported this when he said that, “We are counseled in tents while seated down on the grass as the chairs are very few and this is so uncomfortable. There is even no privacy as the counseling room is also used as a laboratory making some one receiving pre test counseling service to be heard by the people in the laboratory section who might have come for other services”. Analysis further noted that people receive counseling and testing services from health centers within Dokolo district as, 84.1% of respondents agreed that

they have tested for HIV from health centres in Dokolo district and 14.4% of respondents disagreed on the above. This therefore suggests that majority of people within the community test for HIV from health centers.

Analysis also noted that Pre-test counseling is available in health centers within Dokolo district as 89.4% of respondents agreed and only 1.5% of respondents disagreed to the above. When asked on the availability of post test counseling in the health centers in the district, a total of 93.2 % respondents agreed that they were counseled after being tested for HIV virus (post-test counseling) and only a few respondents (2.3%) were neutral to the statement. This means that post-test counseling services are provided in health centers within the district.

This study also revealed that people in Dokolo receive HIV test results from their counselor without waiting for too long as 72% of the respondents agreed on the above leaving out only 21.2% of respondents who disagreed that they don't received HIV test results from their counselor after waiting for too long. Analysis also indicated that, 81.8% of the respondents agreed that they understood their results through the explanation of the counselors, while 2.3% disagreed with this. This therefore means that there was high level of understanding of results through explanation from the counselors in health centers.

The study also found out that the majority of HIV positive clients in Dokolo istrict are in the post-test club(s) where, 56.1% out of 132 respondents agreed to it, 41.6% of respondents disagreed and only 2.3% of the respondents were undecided. On continuous availability of counseling services within the community members in

the district, 97.7% of respondents agreed that they continue to receive counseling from nearby health centre these days, and only 2.3% disagreed on the above. This therefore suggests that community members who are HIV positive in Dokolo district continue receiving counseling from nearby health centers to enable them adopt positive living.

On counseling and testing (HCT) preventing new HIV infections in community in Dokolo district, statistics indicated that 70.5% of the respondents agreed that counseling and testing (HCT) is preventing new HIV infections in Dokolo district and 29.5% of respondents disagreed to this statement. Counseling and testing is therefore preventing HIV infections and prevalence in the district. On counseling and testing being effective in increasing access to treatment, results of the analysis found out that 90.1% of respondents agreed that counseling and testing (HCT) is increasing access to treatment (ART inclusive) and care in their community whereas 9.9% of the respondents disagreed with this. This therefore indicates that there was high level of counseling and testing (HCT) which increased access to treatment (ART inclusive) and care in their community.

The study found that although counseling and testing (HCT) has increased on access to treatment (ART inclusive) and care in the community in the district, there are still cases of clients who stubbornly refuse to start treatment as confirmed during the interview when one the sub county HIV/AIDS focal point persons interviewed said,

> "there are clients who stop either refuse or stop taking prescribed medication after getting drug resistance problems and most of them end up dying".

Another focal point person interviewed on the above said that;

> *" Access to treatment is becoming of limited use especially among men most of whom are drunkards who don't follow advise given to us during counseling and most of them don't take their medication at the right time as they get drunk and forget to do so".*

On the majority of people in the community going for HIV counseling and testing, 80.3% of respondents agreed that the majority of people in their community go for HIV counseling and testing while 2.3% of the respondents disagreed to it, yet 4.5% strongly agreed. This means that a high number of people in the community (Dokolo district) going for HIV counseling and testing and this occur because of high level of knowledge and sensitization about the service. The study however noted that Phobia of positive test results and the issues it would raise among family members, friends and sex partners among others don't make the majority of people in Dokolo district fear going for HCT as 20% of respondents disagreed with it, and 80% of respondents agreed that this happens.

4.4.1 Correlation Results for HIV Counselling-Testing and HIV Prevalence in Dokolo District.

The researcher also tried to establish whether HIV counselling and testing affected the HIV/AIDS prevalence rate by testing the following hypothesis; "HIV/AIDS

counselling and testing does affect the HIV/AIDS prevalence rate in Dokolo district" The results are presented in the table 12 below.

Table 12: Correlation Results for HIV Counselling-Testing and HIV Prevalence

		HCT	HIV Prevalence
HCT	Pearson Correlation	1	.192**
	Sig. (2-tailed)		.027
	N	132	132
HIV Prevalence	Pearson Correlation	.192**	1
	Sig. (2-tailed)	.027	
	N	132	132

** Correlation is significant at the 0.05 level (2-tailed).

The findings in the table above show the correlations between HCT on HIV Prevalence. The findings indicate the Pearson correlation (r=.192), the significance value (.027) and the number of respondents (N), (132). The correlation coefficient indicates a weak positive strength of the association and statistically significant correlation between HCT, and HIV/AIDS prevalence, taking in to consideration all the interrelations among the study variables. The weak positive correlation value therefore indicates that when HCT strategy is increased, then chances of decreasing on HIV/AIDS prevalence are likely to increase though at a low level.

4.4.2 Regression Results between HCT and Prevalence in Dokolo District.

The contribution of HIV Counselling-Testing, on HIV/AIDS prevalence in Dokolo District was assessed by the use of regression analysis. The results of the analysis are presented in the table 13 below.

Table 13: Model Summary: HCT and HIV/AIDS prevalence.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.192[a]	.037	.030	.38425

a. Predictors: (Constant), HCT

The Model Summary table above, revealed that correlation coefficient *(R)*, using the predictor; HCT, is .037 and the R^2 (.030). This implies that HCT explains only 3.0% variance on HIV/AIDS prevalence in Dokolo district. This also means that 96.3% of HIV/AIDS prevalence is explained by other factors other than the HCT.

Table 14: ANOVA: HCT and HIV/AIDS prevalence

ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.737	1	.737	4.992	.027[a]
	Residual	19.195	130	.148		
	Total	19.932	131			

a. Predictors: (Constant), HCT

b. Dependent Variable: HIV Prevalence

The Analysis of variance (ANOVA) shown in the table above, indicated the overall significance of regression results with, degree of freedom (df)-(1,130), F value of 4.992 which was significant at a confidence level of (P value of .027). After the establishment of the significance of the model summary and ANOVA, the researcher found out that they were both significant at (95% level of confidence). The researcher therefore continued to present the summary of coefficients that were obtained as indicated in the table below.

Table 15: Coefficients: HCT and HIV/AIDS prevalence

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.557	.445		5.742	.000
	HCT	.270	.121	.192	2.234	.027

a. Dependent Variable: HIV Prevalence

The coefficients above indicates that HCT significantly contributes to the equation for predicting *prevalence, (y=a +bx)* where *y is the dependent variable, a is the constant and b is HCT value.* Prevalence=2.557 + 0.27 HCT, The p-value of (0.027), clearly reflects that HCT has a significant, positive effect on HIV Prevalence. The standardized coefficient of 0.192 means that any unit improvement of HCT decreases of affects HIV/AIDS prevalence rates by 19.2%.

In conclusion the results indicated that provision of HIV/AIDS counseling and testing had a positive effect on HIV/AIDS prevalence rates in Dokolo district. Therefore the Null hypothesis that stated that, HCT has no effect on HIV/AIDS prevalence rate was rejected and the research hypothesis accepted.

4.4.3 The Descriptive Analysis of Respondents Views on Behavior Change Initiatives and HIV/AIDS Prevalence.

The respondents' views on all the indicators used to measure the effect of behavior change initiatives on HIV/AIDS prevalence in Dokolo district and the percentage response rates have been presented in the table below.

Table 16: Respondents' views on Advocacy and HIV/AIDS Prevalence

Advocacy (Behavior Change)	**Mean**	**Std Dev (σ)**	**PERCENTAGE RESPONSES**				
			SD (1)	**D (2)**	**N (3)**	**A (4)**	**SA (5)**
Sex education programs (eg ABCD strategies) are carried out by Govt and NGOs in our community.	**3.88**	**.618**	0% (0)	8.3% (11)	0.8% (1)	85.6% (113)	5.3% (7)

The media for disseminating sex education information and other information related to HIV/AIDS are suitable to us the audience.	**3.89**	**.596**	0% (0)	7.8% (10)	0.8% (1)	86.4% (114)	5.3% (7)
Sex education programs and other programs related to HIV/AIDS also target schools and tertiary institutions in our community.	**3.57**	**.918**	0% (0)	23.5% (31)	2.3% (3)	68.2% (90)	6.1% (8)
The majority of youths in our community participate in HIV/AIDS preventive initiatives.	**2.72**	**.975**	0% (0)	63.6% (84)	2.3% (3)	68.2% (90)	6.1% (8)
Abstinence from sex is a means for prevention of HIV/AIDS in our community.	**4.02**	**.390**	0% (0)	2.3% (3)	0% (0)	91.7% (121)	6.1% (8)
People in our community abstain from pre-marital sex so as to avoid contracting STDS.	**2.65**	**.925**	0% (0)	65.9% (87)	3.0% (4)	31.1% (41)	0% (0)
I prefer having more than one sexual partner	**2.04**	**.379**	2.3% (3)	94.7% (125)	0% (0)	3% (4)	0% (0)
It is easy for me to abstain from sex	**3.60**	**.818**	0% (0)	19.7% (26)	2.3% (3)	76.5% (101)	1.5% (2)
Being faithful to one sexual partner is a means of prevention of HIV/AIDS in our community.	**3.75**	**.714**	0% (0)	13.6% (18)	% ()	84.1% (111)	2.3% (3)
People in our community are faithful to one sexual partner or marital partners to avoid contracting HIV/AIDS.	**2.98**	**.996**	0% (0)	49.2% (65)	3.8% (5)	46.2% (61)	0.8% (1)
Extra marital affairs in our community have increased on HIV/AIDS prevalence.	**3.60**	**.890**	0% (0)	22% (29)	1.5% (2)	67.4% (94)	5.3% (7)
Trust of unknown sexual partners and intimacy has discouraged condom use in our community causing increase in HIV/AIDS prevalence.	**3.61**	**.836**	0% (0)	17.4% (23)	9.8% (13)	67.4% (89)	5.3% (7)
I use condoms to reduce on the risks of further infections.	**3.48**	**.895**	0% (0)	25.8% (34)	2.3% (3)	70.5% (93)	1.5% (2)
We use condoms to reduce on the risk of unwanted pregnancies.	**3.64**	**.774**	0% (0)	17.4% (23)	2.3% (3)	79.5% (105)	0.8% (1)
It`s embarrassing to buy a condom in community.	**2.77**	**.964**	2.3% (3)	52.3% (69)	13.6% (18)	30.3% (40)	1.5% (2)
I feel free to disclose my HIV/AIDS status to family members, relatives and friend.	**3.78**	**1.051**	0% (0)	22.7% (30)	0% (0)	53.8% (71)	23.5% (31)
Disclosure of our HIV status has reduced the spread of HIV/AIDS in our community.	**3.69**	**1.071**	2.3% (3)	20.5% (27)	2.3% (3)	56.1% (74)	18.9% (25)
The ABCD strategy is a good method for HIV/AIDS prevention in our community.	**3.85**	.961	6.8% (9)	4.5% (6)	0% (0)	74.2% (98)	14.4% (19)

Statistics revealed that out of 132 respondents, 90.9% agreed that sex education programs (example ABCD strategies) are carried out by government and NGOs in Dokolo District and only 8.3% of respondents disagreed with the practice living out 0.8% of the respondents who were undecided. Sex education programs are therefore carried out targeting communities in the district. When respondents were further

asked on the suitability of the media for disseminating such information, 91.6% of respondents approved that the media for disseminating information on HIV/AIDS are suitable to the audience whereas 7.6% of respondents disagreed on the above living out 0.8% of the respondents who were undecided. This means that the media used in disseminating information on HIV/AIDS is suitable to the audience (community members in Dokolo district). On Sex education programs (ABCD) and other programs related to HIV targeting schools and tertiary institutions in Dokolo district, 68.2% of respondents agreed that sex education programs (ABCD) and other programs related to HIV target schools and tertiary institutions in the district while 29.5% of respondents disagreed with the above leaving out 2.3% of respondents who were undecided.

Respondents' opinion were further sought to find out whether the majority of youths in the community participate in HIV/AIDS preventive initiatives and findings revealed that 63.6% of respondents disagreed with the opinion that the majority of youths in the community participate in HIV/AIDS preventive initiatives. Only 34.1% of the respondents agreed with this whereas 2.3% of respondents neither agreed nor disagreed. This means that the majority of the youths in Dokolo district don't participate in HIV/AIDS preventive initiatives yet this is so critical in the reduction of HIV/AIDS prevalence rate especially among the youths. When asked on the importance of abstinence, 97.7% of respondents agreed that abstinence from sex is a means for prevention of HIV/AIDS in their community while 2.3% disagreed with it. This therefore suggests that community members in Dokolo district are aware that abstinence from sex is important for the

prevention of HIV/AIDS in their community. On abstinence from premarital sex in the district, 65.7% of respondents disagreed on the statement that the majority of People in their community abstain from pre-marital sex so as to avoid contracting STDS, while 31.1% of respondents agreed that the majority of People in their community abstain from pre-marital sex so as to avoid contracting STDS and only 3% of the respondents were undecided.

This was confirmed when one of the respondents during the focus group discussions narrated the situation in their area by saying,

> *"The youths in our community according to the way I see them won't be useful people in future as the majority of them have dropped out of school and resorted to drinking alcohol (lira lira), fornication, and worst of all raping. Can you believe that six boys from our community (Alapata parish in Bata Sub County) gang raped a drunken woman two weeks (June 2010) ago?"*

This implies that the majority of people in Dokolo district don't abstain from premarital sex yet this is very risky as it exposes people to HIV virus. On preference to having more than one sexual partner for self-satisfaction, results showed that 97% of respondents preferred having more than one sexual partner for self satisfaction whereas 3% of the respondents disagreed with this. This means that most people in Dokolo district still have preference of having more than one sexual partner for self-satisfaction.

When respondents' views were sought on abstinence from sex, 78% of them agreed that it is easy for them to abstain from sex while 19.7% disagreed that it is not easy for them to abstain from sex and only 2.3% of respondents were undecided. This therefore suggests that abstinence can be very effective in the fight against HIV/AIDS in the district as it is easy for people of Dokolo to abstain from sex as a means for prevention of HIV/AIDS in the community. Analysis also noted that, the people of Dokolo district are aware that faithful to one sexual partner works in the reduction of HIV/AIDS prevalence rate in that out of 132 respondents interviewed, 86.4% agreed that being faithful to one sexual partner is a means of prevention of HIV/AIDS in their community and only 13.6% of the respondents disagreed that being faithful to one sexual partner is not a means of prevention of HIV/AIDS in their community. Only knowing about faithfulness to one sexual partner as a means of prevention of HIV/AIDS may be of very little use if people are not practicing faithfulness to their sexual partners. The researcher therefore asked the respondents on whether they were faithful to their partners and the statistics generated after analysis indicated that most people in Dokolo district are not faithful to one sexual partner or marital partners as 49.2% of respondents disagreed that most people in their community are not faithful to one sexual partner or marital partners whereas 47% of respondents agreed to the above and only 3.8% of respondents were undecided. Lack of faithfulness by the people in the district to their sexual partners was further confirmed when 76.5% of respondents agreed that extra marital affairs in their community have increased on HIV/AIDS prevalence and only 22% of respondents disagreed that extra marital affairs in their community have not increased on HIV/AIDS prevalence leaving out a few respondents (1.5%) who

neither agreed nor disagreed to the statement that "Extra marital affairs in their community have increased on HIV/AIDS prevalence."

Respondents were further asked whether trust of unknown sexual partners and intimacy has discouraged condom use in their community and findings revealed that the above was true as 72.7% of respondents agreed that trust of unknown sexual partners and intimacy has discouraged condom use in their community causing increase in HIV/AIDS prevalence leaving out only 17.5% of respondents who disagreed on the above and 9.8% of the respondents were undecided.

On condoms being distributed to community members in the district by government/NGOs free of charge, 95.4% of respondents agreed that condoms are distributed to their community members by government/NGOs free of charge and only 2.3% of the respondents disagreed while 2.3% of the respondents were undecided. This means that there was high level of distribution of condoms in the community by government/NGOs free of charge. Condom use was also found out to be effective in reducing the risks of contracting HIV as 93.2% of respondents agreed on its effectiveness and only 4.5% disagreed on its effectiveness living out 2.3% of the respondents who were undecided. This means that condom use is so critical in the reduction of HIV/AIDS prevalence rate in Dokolo district. This was further confirmed when the respondents' opinion were sought on the use of condoms to reduce on the risks of infections where 72% of respondents agreed that they use condoms to reduce on the risks of infections, and only 25.7% of respondents disagreed that they don't use condoms to reduce on the risks of infections, leaving out only 2.3% of the respondents who were undecided. The

study however noted that 80.3% of respondents generally agreed that they use condoms to reduce on the risks of unwanted pregnancies, 17.4% of respondents disagreed that this does not happen while only 2.3% of the respondents were undecided. This therefore suggests that there was high level of condom use to reduce on the risk of unwanted pregnancies. Concern was however raised by one of the people interviewed who said that,

> *"Most of the men in this community force their wives to have unprotected sex especially those who are drunkards. To them, condom use is a waste of time and interferes with enjoyment of sex".*

Condom use cannot be effective in the reduction of HIV/AIDS prevalence and unwanted pregnancies once access to condoms is difficult or impossible so when information on condom access was sought by the researcher, findings revealed that, out of 132 respondents, 87.1% agreed that getting a condom in their community is easy and 11.4% of respondents disagreed that getting condoms were not easy for them. The remaining 1.5% of the respondents were however undecided. This means that accessing condoms in Dokolo district is very easy; a critical factor in the fight against HIV/AIDS pandemic. Although access to condoms might be easy for community members, it might still be very difficult for some community members to gain courage to ask for condoms as it's taken to be embarrassing so opinions of respondents were therefore sought on this and analysis indicated that, 31.8% approved that it is embarrassing to buy a condom in their community, and 54.6% disagreed to this statement whereas 13.6% of the respondents were undecided. This implies that the people of Dokolo district are not embarrassed of buying condoms

and this is so important in the reduction of HIV/AIDS prevalence if the condoms are accessed and used correctly.

On feeling free to disclose HIV/AIDS status to family members, relatives and friends, 77.3% of respondents agreed that they feel free to disclose their HIV/AIDS status to family members, relatives and friends, while 22.7% disagreed that they don't feel free on the above. A respondent expressed the importance of disclosure when she said that,

> *"Disclosure helps in that it makes my children and those I am caretaking to remind me on appropriate time for taking my drugs and it also makes the children to know that HIV/AIDS is real thus making them to take good care of themselves".*

This means that there was high level of disclosure of HIV/AIDS status as the majority of people feel free to disclose their HIV/AIDS status to family members, relatives and friends. Another question asked waswhether disclosure of HIV status was effective in reducing the spread of HIV/AIDS in their community (Dokolo district) or not and findings revealed that 75% of respondents agreed with the opinion that disclosure of HIV status was effective in reducing the spread of HIV/AIDS in their community (Dokolo district) and 22.7% of respondents disagreed to this opinion leaving out only 2.3% of respondents who were undecided. This implies that disclosure of HIV status was effective in reducing the spread of HIV/AIDS in Dokolo district.

Analysis of results further showed that a total of 88.7% of respondents agreed that the ABCD strategy is a good method for HIV/AIDS prevention in Dokolo district

while only 11.3% of the respondents disagreed on the above. This means that the ABCD strategy is a good method for HIV/AIDS prevention in Dokolo district. When asked whether community members in the district advise other community members to use the strategy, a total of 84.1% of the respondents agreed that they advice people in their community to use the ABCD strategy in fighting HIV/AIDS while 15.9% of respondents disagreed that they don't advice people in their community to use the ABCD strategy in fighting HIV/AIDS. Conclusion can therefore be drawn that the majority of community members in the district advice others to use the ABCD strategy and this could help in the reduction of HIV/AIDS prevalence rate in the district.

4.5.1 Correlation Results for behavior change initiatives and HIV Prevalence in Dokolo District.

Table 17: Showing Correlation results for Advocacy and HIV Prevalence

		Advocacy	**HIV Prevalence**
HCT	Pearson Correlation	1	.023**
	Sig. (2-tailed)		.0094
	N	132	132

Advocacy (BCI)	Pearson Correlation	.023**	1
	Sig. (2-tailed)	.0094	
	N	132	132

** Correlation is significant at the 0.05 level (2-tailed).

The findings in the table above show the correlation between behavior change initiatives on HIV Prevalence. The findings indicate the Pearson correlation (r=.023), the significance value (.0094) and the number of respondents (N), (132). The correlation coefficient indicates a positive strength of the association and statistically significant correlation between behavior change initiatives, and HIV/AIDS prevalence, taking in to consideration all the interrelations among the study variables. This therefore indicates that when current behavior trends are overturned by adopting positive behavior change, then HIV/AIDS prevalence is likely to decrease and vice versa. This finding therefore does not support the predetermined hypothesis which stated that behavior change initiatives do not have a significant effect on HIV/AIDS prevalence in Dokolo District.

4.5.2 Regression Results between Behavior Change Initiatives and Prevalence in Dokolo District.

The contribution of Behavior Change Initiatives, on HIV/AIDS prevalence in Dokolo District was assessed by the use of regression analysis. The results of the analysis are presented in the table 19 below.

Table 18: Model Summary: Behavior Change Initiatives and HIV/AIDS prevalence.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.023[a]	.053	.050	.39164

a. Predictors: (Constant), Advocacy

The Model Summary table above, revealed that correlation coefficient *(R)*, using the predictor; Behavioral change, is .023 and the R^2 (.050). The adjusted R square of .050 implies that 5% variance on HIV/AIDS prevalence is explained by Behavior Change Initiatives, putting in to consideration all the study variables and the sample size of the study. The other 95% prevalence of HIV/AIDS is explained by other factors other than Behavior Change Initiatives.

The researcher therefore continued to present the summary of coefficients that were obtained as indicated in the table below.

Table 19: Model Summary: Behavior Change Initiatives and HIV/AIDS prevalence

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.647	.374		9.757	.000
	BCI	.029	.111	.023	262	.0094

a. Dependent Variable: HIV Prevalence

The coefficients table clearly above shows unstandardized β, the *t* value and the Sig**.** The coefficients above indicate that Behavior Change Initiatives insignificantly contributes to the equation for predicting *prevalence, (y=a +bx)* where *y is the dependent variable, a is the constant and b is* Behavior Change Initiatives (Advocacy) *value.* The p-value (0.0094) clearly reflects a statistically significant relationship. This relationship was reliable and could be used to make predictions hence (HIV Prevalence=3.647 + 0.029 Behavior Change Initiatives).

The standardized coefficients of 0.023 means that, a unit improvement in behavioral change initiatives reduces the HIV/AIDS prevalence rate by 2.3%.

In conclusion therefore the Null hypothesis was rejected and the alternative accepted. There is a significant relationship between behavior change Initiatives and HIV/AIDS prevalence in Dokolo district.

4.5.3 The Descriptive Analysis of Respondents views on Economic Environment and HIV/AIDS Prevalence.

The respondents' views on all the indicators used to measure the effect of economic environment on HIV/AIDS prevalence in Dokolo district and the percentage response rates have been presented in the table below.

Table 20: Respondents' Views on Economic Environment and HIV/AIDS Prevalence

Economic environment (Economic Factors)	Mean	Std Dev (σ)	PERCENTAGE RESPONSES				
			SD (1)	D (2)	N (3)	A (4)	SA (5)
Treatment prescribed by the Doctor is provided at the health centers near my home town free of charge.	**3.73**	**.839**	0% (0)	17.4% (23)	0% (0)	75% (99)	7.6% (10)
The health workers ask for money before you get the ART in government health centres	**2.23**	**.637**	0% (0)	88.6% (117)	0% (0)	11.4% (15)	0% (0)
My ART combination is available in the health centre near my home town.	**3.36**	**.983**	2.3% (3)	28.8% (38)	0% (0)	68.2% (90)	.8% (1)
I do get all the combinations that I am required to take from health centers free of charge.	**3.92**	**.575**	.8% (1)	3% (4)	6.8% (9)	81.8% (108)	7.6% (10)
My relatives /I buy the prescribed drugs.	**4.02**	**.501**	0% (0)	3.8% (5)	0% (0)	86.4% (114)	9.8% (13)
I know what a balanced diet is.	**4.02**	**.586**	0% (0)	5.3% (7)	0% (0)	81.8% (108)	12.9% (17)
I can afford protective foods	**3.05**	**1.003**	0% (0)	47.7% (63)	0% (0)	52.3% (69)	0% (0)
Fruits are affordable for me.	**2.77**	**.978**	0% (0)	61.4% (81)	0% (0)	38.6% (51)	0% (0)
I consume the fruits regularly to improve on my health.	**2.82**	**1.054**	2.3% (3)	56.8% (75)	0% (0)	38.6% (51)	2.3% (3)
My house hold access and use clean drinking water	**2.57**	**.918**	0.8% (1)	70.5% (93)	0% (0)	28.8% (38)	0% (0)
We have local microcredit and savings associations and loan programs in our community.	**2.39**	**.778**	0% (0)	79.5% (105)	2.3% (3)	18.2% (24)	0% (0)
We have a cash float (alulu) that we rotate among group members in times of need.	**3.48**	**1.000**	0% (0)	29.5% (39)	% (0)	62.9% (83)	7.6% (10)
We have microfinance institutions in the district which give us loans.	**1.86**	**.700**	27.3% (36)	62.9% (86)	0% (0)	7.6% (10)	0% (0)
The micro finance institutions charge us low interest rates.	**2.02**	**.150**	0% (0)	97.7% (129)	2.3% (2)	0% (0)	0% (0)
We have got the loans and used them to improve on our economic livelihoods.	**2.11**	**.450**	0% (0)	93.2% (125)	0% (0)	5.3% (7)	0% (0)
All HIV/AIDS related programs in our community cover our exact interests and needs.	**2.14**	**.506**	0% (0)	93.2% (123)	0% (0)	6.8% (9)	0% (0)

On treatment prescribed by Doctors (other medical practitioners) at the health centers near their home towns being free of charge, 37.5% of respondents agreed that treatment prescribed were free whereas 39.1% of respondents disagreed with the opinion while 23.4% of the respondents were undecided. This implies that some of the treatment given is free while others are not free as shown from the percentage response rate by the respondents who were in agreement and those in disagreement to the statement that are almost the same. When information on the above was probed further by asking whether health workers ask them for money before the provision of medical treatment, 52.5% of respondents agreed that the health workers ask for money before one gets the ART in government health centers and 33..3 % of them disagreed while 14.2 % of respondents were undecided. This therefore shows clearly that access to treatment in the District is not free of charge.

Analysis further noted that clients get all the required ART combinations from health centers as 69% of the respondents agreed that ART combination required by clients is available in the health centers near their home town while 31% of the respondents disagreed that ART combinations required by clients are available in the health centers near their home town. ART combinations required by clients are therefore available in the health centers within Dokolo district. Findings further revealed that clients are getting all the combinations that they are required to take from health centers for free as 89.4% of the respondents agreed that they do get all the combinations that they are required to take from health centers for free, and 3.8% of respondents disagreed to the above whereas 6.8% of the respondents were undecided. On continuous availability of ART in health centers, findings revealed

that 8.3% of respondents disagreed that the health centers in their district don't run short of the ARVs however, 90.9% of the respondents agreed that ARTs are available most of the times and only a few respondents represented by 0.8% neither agreed nor disagreed to the statement that “the health centers in the district don't run short of the ARVs”. This therefore implies that health centers in the district don't run short of the ARVs and this is so important in saving the lives of people who are already surviving on the drugs.

Statistics further revealed that most of the HIV positive clients and their relatives buy the drugs needed for their survival as 96.2% of respondents agreed that they or sometimes their relatives buy the prescribed drugs and only 3.8% of the respondents disagreed that they/their relatives don’t buy the prescribed drugs. The researcher further sought the opinion of the respondents on the affordability of prescribed drugs (including those to deal with opportunistic infections like TB & diarrhea) and findings revealed that only 19% of the respondents agreed that prescribed drugs (including those to deal with opportunistic infections like TB & diarrhea) are affordable whereas 80.2% of the respondent disagreed that prescribed drugs (including those to deal with opportunistic infections like TB & diarrhea) are not affordable to them leaving out 0.8% of respondents who were undecided. This therefore suggests that prescribed drugs (including those to deal with opportunistic infections like TB & diarrhea) are not affordable to clients in Dokolo district.

Living on drugs especially for people who are HIV/AIDS positive require feeding on a balanced diet to improve on body energy and immunity so the researcher asked the respondents whether they know what a balanced diet is or not. According to

findings, 94.7 % of respondents agreed that they do know and only 5.3 % of the respondents disagreed that they do not know what it is. This therefore means that there is a high level of knowledge by the clients in Dokolo district about what a balanced diet is. When affordability of vital food supplements was asked for, statistics revealed that most clients in the community were not able to afford protein foods (milk, eggs, G. nuts and fish among others) as 80.3% of respondents disagreed that most clients in their community cannot afford protein foods while only 19.7 % of the respondents agreed that such protein food were affordable to them. This therefore means that most clients in Dokolo district cannot afford protein foods to improve on their health. The study however noted that most clients in the community can afford protective foods like cabbages, amaranthus (buga), pigeon pea leaves (boyo), and panacium ethiopicum (nakati), among others as 52.3% of respondents agreed on their affordability and 47.7% of the respondents disagreed that most clients in their community cannot afford protective foods. Analysis also indicated that, 38.6% of respondents approved that fruits like avocadoes, oranges, pineapples and mangoes among others are affordable to the majority of clients and 61.4% of the respondents disagreed that such fruits are not affordable to the majority of clients. The study further revealed that the people living with HIV/AIDS are not consuming the fruits to improve on their health as 59.1% of respondents disagree that they don't consume the fruits regularly to improve on their health and 40.9% of respondents agreed that they consume the fruits regularly to improve on their health.

When asked on having access to and benefiting from food support agencies, analysis indicated that 22.7% of respondents approved that the majority of clients in their community have access to food support agencies like ACDI- VOCA and TASO among others and 77.3% of respondents disagreed that the majority of clients in their community don't have access to food support agencies. This means that there is low level of access and benefit from food support agencies by clients in Dokolo district yet these can help in supplementing the food stock of clients most of whom have very little stock due to low level of production and low income to purchase food stock that can improve on their health as shown earlier by the statistics expressing inability of clients to buy the necessary food supplements to improve on their health.

On feeding only on posho and beans, 38.7% of respondents agreed that they feed only on posho and beans, while 61.4% of the respondents disagreed that they don't feed only on posho and beans. When asked on affordability of clean water, 30. 3% of respondents agreed that the majority of people in their community can afford clean drinking water and 69.7% of the respondents disagreed that the majority of people in their community can't afford clean drinking water. Affordability of water affects its access and use as well and when respondents were asked on access and use of clean drinking water, 70.4% of respondents disagreed that their households don't access and use clean drinking water and only 29.6% of respondents agreed that their households were accessing and using clean drinking water. This therefore reveals that there is a problem of access and use of clean water by community members in Dokolo district. Observation further confirmed this as the majority of

water points visited were used as watering points for animals as well (especially the wells and springs) and a few boreholes available had very long lines of people with jerrycans queuing to fetch the water thus indicating that the water points were not enough for the people in the district.

On availability of microfinance institutions in the district to facilitate the provision of loans to help improve on peoples' livelihood, a total of 79.5% of respondents interviewed disagreed that they don't have local micro credit and savings associations and loan programs in their community, while only 18.2% of the respondents agreed that they have local micro credit and savings associations and loan programs in their community and that only 2.3% of the respondents were undecided. This implies that there are a few microfinance institutions available in the district to facilitate the provision of loans to help improve on peoples' livelihood. When asked whether the available microfinance institutions provide them with loans at low interest rates, analysis noted that, a total of 97.7% of respondents disagreed that the micro finance institutions don't charge them low interest rates and only 2.3% of the respondents were undecided. This therefore suggests that clients are not charged low interest rates by the micro finance institutions. Statistics from analysis further revealed that the majority of people have not got the loans and used them to improve on their livelihoods as 94.7% of respondents disagreed with the above statement, and only 5.3% of the respondents agreed they have got the loans and used them to improve on their economic livelihoods. This therefore means that clients haven't got the loans and used them to improve on their economic livelihoods due to the high interest rates charged by

the microfinance institutions in the district. On having a cash float (alulu) that involves rotating among group members in times of need, 70.5% of the respondents agreed that they have a cash float (alulu) that they rotate among group members in times of need and only 29.5% of respondents disagreed with the opinion.

Findings further revealed that HIV/AIDS related programs don't cover the exact needs of people as 68.2% of respondents disagreed that the HIV/AIDS related programs & other non related programs (e.g. agriculture, credit etc) have not greatly helped in improving their livelihoods (economically, socially and health wise) while 28.8 % of the respondents agreed that the HIV/AIDS related programs & other non related programs (e.g. agriculture, credit etc) have greatly helped in improving their livelihoods (economically, socially and health wise). A few respondents representing 3.0% neither agreed nor disagreed to the above statement. This study further noted that, all HIV/AIDS related programs in the community cover people's exact interests and needs as a total of 93.2% of the respondents disagreed that all HIV/AIDS related programs in their community don't cover their exact interests and needs, while only 6.8% of the respondents agreed that all HIV/AIDS related programs in their community cover their exact interests and needs.

4.6.1 Correlation Results for Economic Environment and HIV Prevalence in Dokolo District.

Table 21: Showing Correlation Economic Environment and Prevalence

		Economic Environment	HIV Prevalence
Economic Environment	Pearson Correlation	1	.157**
	Sig. (2-tailed)		.013
	N	132	132
HIV Prevalence	Pearson Correlation	.157**	1
	Sig. (2-tailed)	.013	
	N	132	132

** Correlation is significant at the 0.05 level (2-tailed).

The findings in the table above show the correlations between Economic Environment on HIV Prevalence. The findings indicate the Pearson correlation (r=.157), the significance value (.013) and the number of respondents (N), (132). The correlation coefficient indicates a weak positive strength of the association and statistically significant correlation between Economic Environment, and HIV/AIDS prevalence, taking in to consideration all the interrelations among the study variables. The weak positive correlation value therefore indicates that when Economic Environment improves, then chances of reducing on the high HIV/AIDS prevalence rate in the district is likely. These findings therefore do not support the predetermined hypothesis that Economic factors do not significantly affect HIV/AIDS prevalence rates in Dokolo District.

4.6.2 Regression Results between Economic Environment and HIV Prevalence in Dokolo District.

The contribution of Economic Environment, on HIV/AIDS prevalence in Dokolo District was assessed by the use of regression analysis. The results of the analysis are presented in the table below.

Table 22: Model Summary: Economic Environment and HIV/AIDS prevalence.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.157[a]	.025	.017	.38673

a. Predictors: (Constant), Econ. Environ

The Model Summary table above, revealed that correlation coefficient *(R)*, using the predictor; Economic Environment, is .157 and the ***R*** (.025). The adjusted R square of 0.017 means that the economic environment explains only 1.7% variance on HIV/AIDS prevalence rate in Dokolo district, putting in to consideration all the study variables and the sample size of the study. The 98.3% is explained by other factors other than the Economic Environment.

Table 23: Showing Analysis of Variance (ANOVA)

ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	0.489	1	.489	3.267	.013[a]
	Residual	19.443	130	.150		
	Total	19.932	131			

a. Predictors: (Constant), Economic Environment

b. Dependent Variable: Prevalence

Analysis of variance (ANOVA) shown in the table indicated the overall significance of regression results with, degree of freedom (df)-(1,130), F value of 3.267 which was insignificant at a confidence level of (P value of .013). The ANOVA confirmed that the results were statistically significant. The researcher therefore continued to present the summary of coefficients that were obtained as indicated in the table above.

Table 24: Showing Coefficients of Economic Factors and HIV/AIDS prevalence

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.970	.322		9.211	.000
	Econ Envir	.200	.110	.157	1.808	.013

a. Dependent Variable: Prevalence

The coefficients above indicate that Economic Environment insignificantly contributes to the equation for predicting *prevalence, (y=a +bx)* where *y is the dependent variable, a is the constant and b is* Economic Environment *value.* The p-value (0.073) clearly reflects a statistically insignificant relationship. This

relationship was reliable and could be used to make predictions hence (Prevalence=2.970 + 0.200 Economic Environment). The standardized coeffient of .157 implies that a unit improvement in the economic environment will decrease on the HIV prevalence rate by 15.7%.

In conclusion there results showed that economic factors had an effect on HIV/AIDS prevalence rates in Dokolo district.

4.6.3. The Descriptive Analysis of Respondents views on HIV/AIDS Prevalence in Dokolo district.

This part presents the respondents views on all the indicators used to get information on HIV/AIDS prevalence in Dokolo district. Seventeen indicators were used to get information on the above as presented in the table below.

Table 25: Respondents' views HIV/AIDS Prevalence

HIV/AIDS Prevalence	**Mean**	**Std Dev (σ)**	**PERCENTAGE RESPONSES**				
			SD (1)	**D (2)**	**N (3)**	**A (4)**	**SA (5)**
Good PMTCT services has led to reduction of HIV/AIDS prevalence among children in my community	**3.80**	**.662**	0% (0)	11.4% (15)	0% (0)	86.4% (114)	2.3% (3)
Good HCT services in has led to reduction of HIV/AIDS prevalence in my community	**3.83**	**.595**	0% (0)	9.1% (12)	0% (0)	86.4% (114)	2.3% (3)
Good HIV/AIDS awareness programmes has led to reduction on HIV/AIDS prevalence.	**3.82**	**.719**	2.3% (3)	7.6% (10)	0% (0)	86.4% (114)	3.8% (5)
The presence of migrant labour in Dokolo District has led to high HIV/AIDS prevalence	**3.69**	**.802**	0% (0)	17.4% (23)	0% (0)	78.8% (104)	3.8% (5)
Limited Social institutions with organizational characteristics have led to high HIV/AIDS prevalence.	**3.37**	**.952**	0% (0)	29.5% (39)	7.6% (10)	59.1% (78)	3.8% (5)
The post conflict situation in Dokolo District contributed to high HIV/AIDS prevalence	**3.73**	**.866**	0% (0)	18.2% (24)	0% (0)	72.7% (96)	9.1% (12)
Low levels of education of most people in our community has led to high HIV/AIDS prevalence	**3.77**	**.705**	0% (0)	12.9% (17)	0% (0)	84.1% (111)	3.0% (4)
Poor economic development in Dokolo District has contributed to high HIV/AIDS prevalence.	**2.80**	**1.073**	5.3% (7)	52.3% (69)	0% (0)	41.7% (55)	0.8% (1)
The religious practices in Dokolo District have contributed to high HIV/AIDS prevalence.	**3.19**	**.997**	0% (0)	40.9% (54)	% ()	58.3% (77)	0.8% (1)
High levels of Poverty in Dokolo District have led to high HIV/AIDS prevalence via economically- driven adoption of risky behaviors.	**3.11**	**1.270**	15.9% (21)	22.7% (30)	0% (0)	56.8% (75)	4.5% (6)
Dokolo District being highly a fishing community as an activity has created vulnerable grounds for high HIV/AIDS prevalence	**3.93**	**.656**	0% (0)	8.3% (11)	0% (0)	81.8% (108)	9.8% (13)

Analysis indicated that, 86.4% of the respondents agreed that good PMTCT services has led to reduction of HIV/AIDS prevalence among children in their community, while only 11.4% disagreed that good PMTCT services has not led to reduction of HIV/AIDS prevalence among children in their community. This implies that PMTCT has helped in the reduction of HIV/AIDS prevalence in Dokolo district. The study also found out that the majority of people acknowledged that good HCT services has led to reduction of HIV/AIDS prevalence in their community where a total of 86.4% out of 132 respondents agreed to it and only 9.1% of respondents disagreed that good HCT services has not led to reduction of HIV/AIDS prevalence in their community. On the contribution of awareness programs towards the reduction of HIV/AIDS prevalence, 86.4% of respondents agreed that good HIV/AIDS awareness programs have led to reduction on HIV/AIDS prevalence in their community and only 7.6% of the respondents disagreed to the statement that good HIV/AIDS awareness programs have led to the reduction on HIV/AIDS prevalence in their community. This implies that good HIV/AIDS awareness programs have led to reduction on HIV/AIDS prevalence in Dokolo district.

Results from the analysis further found out poor social support systems were creating vulnerable grounds for HIV/AIDS prevalence in Dokolo district as 59.1% of respondents agreed that poor social support systems, creates vulnerable grounds for HIV/AIDS prevalence whereas only 29.5% of the respondents disagreed that poor social support systems do not create vulnerable grounds for HIV/AIDS prevalence. The study however noted that the presence of migrant labour in Dokolo

district has led to high HIV/AIDS prevalence as 78.8% of respondents agreed that the presence of migrant labour in the district has led to high HIV/AIDS prevalence and only 17.4% of respondents disagreed that the presence of migrant labour in Dokolo District has not led to high HIV/AIDS prevalence. This was confirmed when one of the people interviewed said,

"The incidence rate of HIV/AIDS in our community increased as a result of the presence of migrant labourers like Roko company construction workers especially those who constructed Olweny rice scheme and some of the roads and buildings in our district. The workers had a lot of money which they were using to lure girls in our community in exchange for unprotected sex". This therefore means that the presence of migrant labourers in Dokolo District has led to high HIV/AIDS prevalence. The study also found out that, out of 132 respondents, 59.1% agreed that limited social institutions with organizational characteristics and formal and informal rules and regulations for operation have led to high HIV/AIDS prevalence in the district and only 29.5% of respondents disagreed that limited social institutions with organizational characteristics and formal and informal rules and regulations for operation have not led to high HIV/AIDS prevalence in Dokolo.

Analysis indicated that 72.7% of respondents agreed with the statement that the post conflict situation in Dokolo District contributed to high HIV/AIDS prevalence while 18.2% of respondents disagreed that the post conflict situation in Dokolo District has not contributed to high HIV/AIDS prevalence. This implies that post conflict situation in Dokolo district contributed to high HIV/AIDS prevalence. A Local Council Member confirmed this when he had this to say;

"*Soldiers who were brought from Congo to help protect us from LRA rebels attack contributed a lot in spreading HIV especially during the time people were in camps. This occurred through rape and use of money to convince the girls and women to have sex with them".*

Low level of education was also found out to be contributing to the increase in HIV/AIDS prevalence rate in the district as 84.1% of respondents agreed that the low levels of education of most people in their community has led to high HIV/AIDS prevalence in the district while only 12.9% of the respondents disagreed on the above. An HIV/AIDS focal Person interviewed supported the above finding when he said that,

"Most of the people in our community who are not educated fail to follow advice from HIV/AIDS activists and medical workers as well so they become rebellious and engage in negative activities that expose them to HIV".

Poor economic development in the district was not contributing much to the high HIV/AIDS prevalence according to the findings as 52.3% of respondents disagreed that Poor economic development in Dokolo District was not contributing to high HIV/AIDS prevalence while 41.7% of respondents agreed that poor economic development in the district was contributing to high HIV/AIDS prevalence in the district. On The religious practices in Dokolo District contributing to high HIV/AIDS prevalence in the District, results showed that 58.3% of respondents agreed that the religious practices in Dokolo District have contributed to high HIV/AIDS prevalence whereas 40.9% of respondents disagreed that on the above meaning that religious practices have a fair contribution to the high HIV/AIDS prevalence in Dokolo District. High poverty level was also found out to be

contributing to the increase in HIV/AIDS prevalence in Dokolo district as indicated by 56.8% of respondents who agreed that high levels of Poverty have led to high HIV/AIDS prevalence via economically-driven adoption of risky behaviors leaving out only 22.7% of respondents who disagreed the statement above is not true. Analysis also noted that 81.8% of respondents agreed that Dokolo District being highly a fishing community carrying out fishing as an activity has created vulnerable grounds for high HIV/AIDS prevalence and only 8.3% of the respondents disagreed on the above. This therefore shows that the practices carried out along fishing grounds in the district have led to the increase in HIV/AIDS prevalence.

Before Conclusions, the researcher also went ahead and carried out an unobtrusive observation during the study and was able to realize that 5 out of the7 Health Centers visited had information on Voluntary Testing and other Information on HIV/AIDS clearly written and pinned on the notice boards and most of the walls around the Health Centers for example Bata Health Center III where the researcher observed that CD4 Counts are tested every after 15 days that is twice a month unlike Holistic Counsel ling and Testing that is done on a daily basis while ART Services were provided every Tuesday and upon further interview of the Health Center In-charge, he said;

> "this service provision depends a lot on the availability of the testing kits in the health centers and the ART"

CHAPTER FIVE- SUMMARY, DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.0. Introduction

This chapter summarizes the discussions, conclusions and recommendations on the effectiveness of prevailing HIV/AIDS preventive initiatives in Dokolo district and it starts with the summary of the study followed by discussions, conclusions and recommendations which have all been done objective by objective.

5.1 Summary

According to the study findings, the provision of PMTCT services does not affect the prevalence rates of HIV/AIDS in Dokolo District of Northern Uganda. Therefore the hypothesis is disproved in regards to the relationship between PMTCT services and HIV/AIDS prevalence.

The study found that the relationship between HCT and the HIV/AIDS prevalence was of a positive nature. When HCT was available and accessible the HIV/AIDS prevalence rate decreased. This answers the of the nature of the relationship between HCT and HIV/AIDS prevalence.

The study showed that the behavior change initiatives had the least effect on HIV/AIDS prevalence. This demonstrates the ineffective relationship between behavior change initiatives and HIV/AIDS prevalence.

The study revealed that the economic environment is the second most impactful factor on HIV/AIDS prevalence. This proves that the economic environment has an effect on HIV/AIDS prevalence.

5.1. Discussion on the Findings

The discussions of the findings have been done objective by objective basing on the research study findings in chapter four and they are presented as follows.

5.1.1 Prevention of Mother to Child Transmission and HIV/AIDS Prevalence.

Regression results showed that Prevention of Mother to Child Transmission was the least significant predictor affecting HIV/AIDS prevalence in Dokolo district according to the ranking of all the predictor variables used in this study. Factor analysis was carried out and some of the factors of PMTCT that affected the prevalence rate of HIV/AIDS in the district were; awareness in form of having knowledge on HIV prevention services, awareness about government health centers and NGOs that provide HIV/AIDS preventive services, having access to HIV/AIDS prevention services, hearing about Mother to Child HIV transmission, knowing that Mother to Child Transmission of HIV/AIDS is preventable, having knowledge of where to get services for the PMTCT, availability of PMTCT services in health centers, having knowledge that PMTCT of HIV can be done during pregnancy, labour and delivery at health centers in addition to safer infant feeding and the use of antiretroviral drugs. Other PMTCT critical factors affecting HIV/AIDS prevalence in Dokolo district were having access to knowledge on formula feeds and how to prepare them, care and support (infant feeding inclusive) of mothers living with HIV, having ability to buy baby formula feeds and availability and safe use of breast milk substitutes. Other critical factors included having access to fuel and clean water to prepare replacement feeds, access of medical workers, and

access to Septrin or dapson for prophylaxis and finally happy provision of PMTCT services by health workers.

These results were in line with earlier findings that Mother-to-child transmission (MTCT) is when an HIV-infected woman passes the virus to her baby and this can occurs during pregnancy, labour and delivery, or breastfeeding (AVERT, 2010). World Health Organization, United Nations Children's Fund and UNAIDS, (2009) mentioned that the coverage for services to prevent mother-to-child HIV transmission rose from 10% in 2004 to 45% in 2008 leading to a drop in infections and the drop in new HIV infections among children in 2008 suggests that these efforts are saving lives. Muzaaya, (2009) also presented that, Mother – To – Child – Transmission (MTCT) takes place during late pregnancy, labour, delivery, and in pauperism, and is influenced by various factors namely; viral, maternal, obstetric, fetal and infant. He advised that in the implementation of PMTCT, behavioral, therapeutic, obstetric, modification of infant feeding, intrapatum care and postnatal care must be put into consideration and both husband and wife are important in PMTCT. The well project, (2010) advised women to get tested if they are pregnant or considering pregnancy as HIV+ mothers can pass the virus to their babies while pregnant, during birth, or by breastfeeding. Well project, (2010) further noted that advances in treatments (including Septrin and dapson for prophylaxis among others) have significantly reduced the risk of a baby getting HIV from its mother when precautions are taken. Jotham, (2009) further advanced that strengthening HIV testing and counseling of pregnant women, the use of ARVs during and after

delivery and safe infant feeding practices have seen developed countries reduce HIV transmission to children from 25% to between 1% and 5% in recent years.

UNAIDS, (2004) holds the view that; the response to HIV/AIDS must contain comprehensive prevention and treatment strategies in order to prevent new infections while providing critically needed care and treatment for those already living with HIV. WHO website, (2009) states that; Prevention is enhanced when delivered alongside treatment and care. AVERT (2010) advances that without treatment, around 15-30% of babies born to HIV positive women will become infected with HIV during pregnancy and delivery and further 5-20% will become infected through breastfeeding. According to AVERT, (2010), PMTCT has been virtually eliminated in high income countries due to effective voluntary testing and counseling, access to antiretroviral therapy, safe delivery practices, and the widespread availability and safe use of breast-milk substitutes. They further advanced that if these interventions were used worldwide, they could save the lives of thousands of children each year. UAC Report, (2007) presents that Mother – to – Child – Transmission accounts for 22 – 25% of new infections yet socio-cultural and economic factors such as failure to deliver in health facilities hinder women from accessing PMTCT services to avert risk of passing the infection to the baby. USAID, UNICEF & WHO progress report, (2008) states that; reducing transmission from pregnant woman living with HIV to her infant requires a range of interventions beginning with HIV testing and Counseling for pregnant women; followed by antiretroviral prophylaxis for pregnant women with HIV and their new born babies or antiretroviral therapy for the mother if eligible; safe obstetric

interventions; and counseling and support for safer infant feeding options. UNAIDS, (2009) further advanced that in ideal conditions, the provision of antiretroviral prophylaxis and replacement feeding can reduce transmission from an estimated 30% to 35% with no intervention to around 1% to 2%.

AVERT, (2010) also holds the view that effective prevention of mother-to-child transmission (PMTCT) requires a three-fold strategy which include; Preventing HIV infection among prospective parents - making HIV testing and other prevention interventions available in services related to sexual health such as antenatal and postpartum care; avoiding unwanted pregnancies among HIV positive women - providing appropriate counseling and support to women living with HIV to enable them to make informed decisions about their reproductive lives; preventing MTCT during pregnancy, labour, delivery and breastfeeding and finally; integration of HIV care, treatment and support for women found to be positive and their families. The last of these can be achieved by the use of antiretroviral drugs, safer infant feeding practices and other interventions.

5.1.2. HCT and HIV/AIDS Prevalence

From regression analysis, HCT was the most significant predictor in affecting HIV/AIDS prevalence rates in Dokolo district according to the ranking of all the predictor variables used in this study and factor analysis showed that the components of HCT that affect the prevalence of HIV/AIDS in Dokolo district were; availability of counseling and testing (HCT) services in the community, having knowledge on counseling schedules in health centers, being tested for HIV

from the health centers, discouraging phobia that prevent people from carrying out HCT, encouraging the majority of people to go for HCT, increasing access to treatment (ART inclusive) and care through HCT, and ensuring that people who have tested understood their results through proper explanation of the counselor. Other factors include ensuring that counselors/counseling assistants are available all the time and that people receive their HIV test results from counselors without waiting for too long, carrying out post test counseling in addition to ensuring that people continue to receive counseling from nearby health centers; adoption of proper behavior (ABCD) and ensuring that all HIV positive clients are in the post test club(s).

These results were in line with the U.S. centers for disease control and prevention, (2010) assertion that knowing whether you have HIV infection through counseling and testing would not only alert one on the need to seek medical care to prevent or delay life- threatening illness but the test result (positive or negative) would also help one's doctor determine the cause and best treatment of the various illnesses a person may have now or in the future. They advanced that knowing test results would help HIV positive people protect their sex partner(s) from infection and illness if their partners are not infected in addition to helping couples assess the safety of having a child and stress reduction as knowing your HIV status, even if you are infected (positive test result) may be less stressful for some people than the anxiety of thinking you might be infected but not knowing and if your result indicates you are not infected (negative), you can take action to be sure you don't become infected in the future.

Kitonsa, (2007) presents that; AIDS Information Centre(AIC) introduced the concept of Voluntary Counseling and Testing (VCT) in Uganda and that this was a unique concept, in that people who came to have their blood tested for HIV received counseling beforehand to prepare them to accept the results, whether positive or negative. Peter, (2009) further states that after the test, the clients receive post-test counseling in which those who tested positive are referred to either TASO or to another institution with facilities for providing care and support and for those who tested negative are encouraged to adopt safer sexual behavior in order to protect themselves from HIV infection. Centers for Disease Control (CDC) Report, (2009) mentions that learning one's status has been shown to result in substantial reductions in risk behavior. CDC, (2009) in addition maintains that Testing is a critical component of prevention efforts because when people learn they are infected, they can take steps to protect their own health.

U.S. centers for disease control and prevention, (2010), also points out some of the reasons why people may not seek counseling and testing among which include stress and phobia of a positive test result and the issues it would raise among family members, friends, and sex partners which people think would be more harmful than not knowing if they are infected, and fear that others may perhaps find out their result without their permission and concern about discrimination. Khobotlo et al., (2009) agrees with the above views when he cited surveys in Lesotho which indicate that sex work is regarded as morally reprehensible, and the country's national AIDS policy explicitly notes that the stigma associated with sex work deters sex workers from seeking HIV testing and other health services. It's noted

by Family Health International, (2009) that counseling and testing (CT) is one of the most rapidly expanding HIV program services in the world and propelling its increased demand is the recognition of CT's role in both preventing new HIV infections and increasing access to care and treatment (including antiretroviral therapy). It is suggest that improved access to HIV testing and counseling and to antiretroviral therapy could significantly reduce infection rates (Granich et al., 2009; Lima et al., 2008).

UNAIDS report (2004) states that; provision of voluntary counseling services enables identification of those who need treatment, helps to reduce mother – to – child transmission and is also an important entry for education to prevent further transmission. Annabel et al. (2009) further advanced that the first step in preventing mother-to-child HIV transmission (PMTCT) programmes is offering HIV counseling and testing to pregnant women as it represents a unique opportunity for many women to learn their HIV status especially in developing countries (Uganda inclusive) where HIV testing remains rare. To them, offering prenatal HIV counseling and testing is an efficient tool for sensitizing women and their partners to HIV prevention. HIV testing, counseling and prevention services in antenatal settings offer an excellent opportunity not only to prevent newborns from becoming infected but also to protect and enhance the health of HIV-infected women. In numerous countries in which testing data have been reported, women are significantly more likely than men to know their HIV serostatus, in large measure due to the availability of testing services in antenatal facilities (UNAIDS, 2009).

It is recommended that health-care providers inform women who are infected with HIV (after counseling and testing) of the potential negative immunological effect of pregnancy (as women living with HIV who become pregnant experience a sharper decline in CD4 cells than non-pregnant women), offer women contraception and prioritize pregnant women for antiretroviral therapy if eligible (Van der Paal et al., 2007) as cited by UNAIDS, (2009).

5.2.3. Behavior Change Strategies (ABCD) and HIV/AIDS Prevalence

Behavior change strategies (ABCD) had the second last effect on the prevalence rate of HIV/AIDS in Dokolo district putting all predictor variables used in this study in to consideration and the factors of behavior change strategies affecting the prevalence of the epidemic in the district include; acceptance of ABCD strategy as a good method for HIV/AIDS prevention, provision of advice to people to use the ABCD strategy in fighting HIV/AIDS, free disclosure of HIV status, sex education programs, abstinence, distribution and proper use of condoms.

This confirms findings that by promoting abstinence, being faithful, and condom use, safe(r) behaviors have been identified that are applicable to people in different circumstances (Okware, Kinsman, Onyango, Opio, & Kaggwa, 2005). Aids map, (2009) argues that given lack of other biomedical HIV prevention methods that work, abstinence, being faithful and condoms remain the three pillars upon which the prevention of the sexual transmission of HIV stands. It further presents that Abstinence, being faithful and condom use are three mutually reinforcing strategies which individuals may adopt at different times in their lives and with different

partners. It gives an example of Kenya, a country which has seen one of the most significant recent falls in HIV prevalence, from 13% in 2000 to 7.5% in 2004 and this was a result of using the three methods. Aids portal, (2009) website reports that; ABC strategy has long been used as the foundation of comprehensive HIV prevention programs around the world and according to UNAIDS, (2007), Thailand introduced 100% condom use program nationally and has contributed to the decline in HIV/AIDS prevalence in the country.

Achieving and sustaining health and HIV/AIDS targets among young people largely depends on their active involvement and individual commitment to access services and adopt positive behaviours while acknowledging their rights in addition to seriously taking on their roles and responsibilities (UAC& national youth council, 2007). Okware et.al (2005) also hold the view that primary abstinence is protective against HIV/AIDS. According to Stoneburner, & Low-Beer, (2004) there is strong evidence that a large portion of the Ugandan population has taken up the practice of zero grazing(faithfulness), a phenomenon that has been described as being ‘‘equivalent to a highly effective vaccine’’ for HIV. Okware et.al (2005) advanced that zero grazing (faithfulness) is a tried and tested strategy, and it should be firmly emphasized in a re-invigorated, comprehensive HIV prevention program in the era of ART.

UNAIDS, (2007) presented that a wide program of AIDS awareness-raising initiated in Uganda in 1986 led to demonstrable reductions in risky behavior and at least contributed to a two to fourfold reduction in HIV prevalence. Malcolm (1998) as cited by UNAIDS, (2007) argues that in Thailand, a single-minded campaign to

institute 100% condom use in commercial sex establishments brought down the HIV incidence in young men from 2.5% in 1991 to 0.5% in 1993. When used consistently and correctly, the male condom is effective for the reduction of sexual transmission of HIV and of other sexually transmitted infections (Holmes et al. 2004 & Ahmed et al. 2001). The well project, (2010) advised that to reduce the risk of HIV transmission, people should not have unprotected sex: use a condom every time they are having sex especially for anal and vaginal intercourse which are the riskiest sexual activities.

UNAIDS, (2009) points out the need for intensified prevention services to accompany initiatives to promote knowledge of HIV sero-status. Otti & Barh, (2001) advised that the gap between awareness and education on HIV and AIDS should be bridged by developing new strategies in disseminating information on HIV and AIDS. They argue that though most people have heard of AIDS, not all fully comprehend the situation and consequences, including modes of transmission and methods of prevention. Desmond, (2010) further argued that it is not simply that Information, Education and Communication (IEC) activities are unlikely to reach the poor (which is too often the case) but that such messages are often irrelevant and inoperable given the reality of their lives. Even if the poor understood what they are being urged to do it is rarely the case that they have either the incentive or the resources to adopt the recommended behaviours.

Low-Beer, Stoneburner, Barnett & Whiteside, (2,000) have made a convincing case that much of the difference between Uganda's response to HIV and southern Africa's lies firstly in the degree of direct exposure people had to AIDS and,

secondly and crucially, their willingness to talk to each other about it. Their 2000 study showed that while 90% of Ugandans reported discussing HIV with friends and family, only 35% of South Africans were.

5.2.4. Economic Environment and HIV/AIDS Prevalence

Regression results showed that economic environment was the second most significant predictor (after HCT) in affecting HIV/AIDS prevalence rates in Dokolo district and some of the factors under the economic environment that affected HIV/AIDS prevalence in the district were; Payment for ART by clients to the health workers in government health centers, affordability of prescribed drugs (including those to deal with opportunistic infections like TB & diahoria) to clients, having access to food support agencies, having microfinance institutions in the district which give loans at low interest rates and acquisition and use of loans for livelihoods improvement. Other factors include ensuring that all HIV/AIDS related programs in the area cover exact interests and needs of people, access and use of clean water and educating people on the importance of having a balanced diet on their health.

These results were in conformity to earlier findings reviewed in the literature that; the capacity of individuals and households to cope with HIV and AIDS will depend on their initial endowment of assets - both human and financial as the poorest are least able to cope with the effects of HIV/AIDS causing increasing immiseration for affected populations (Desmond, 2009). Stuart et al; (2007) mentioned that poverty and food insecurity increase sexual risk taking, particularly among women

who may engage in transactional sex to procure food for themselves and their children. They further advanced that women's economic dependence on their partners may also make it difficult for them to insist on safer sex (e.g. condom use) in addition, poor people are more likely to be food insecure and malnourished and malnutrition is known to weaken the immune system, which in turn may lead to greater risk of HIV transmission in any unprotected sexual encounter. A specific focus on protecting and promoting access to food may thus decrease exposure to HIV, especially among women (Stuart et al; 2007). Aidsmap, (2009) advanced that an important aspect of poverty is food insecurity, which may increase vulnerability to both HIV and AIDS in numerous ways. Adults and children may resort to sex work to survive. Malnutrition may harm the immune system and make people more susceptible to HIV, STIs and opportunistic infections like TB and salmonella and instructions to take HIV medications with food may make little sense where medications are supplied but food is hard to come by (Rafatellu, 2008) as cited by Aidsmap,(2009).

Desmond, (2010) further noted that HIV-specific programmes are neglectful of the interests of the poor and are rarely if ever related to their needs, and also unfortunately are other non-HIV related programme activities such as those relating to agriculture and credit (he argued that it is the absence of effective programmes aimed at sustainable livelihoods limiting the possibilities of changing the socio-economic conditions of the poor and unless the reality of the lives of the poor are changed, they will persist with behaviors which expose them to HIV infection and all the consequences of this for themselves and their families. Mermin et al., (2008)

showed concern on the affordability of antiretroviral drugs when they carried out a prospective cohort study in Uganda as they argued that although a combination of antiretroviral drugs and co-trimoxazole reduced mortality by 95% in comparison with no intervention, it's not clear whether these drugs are affordable to both government and all the people who are living with HIV/AIDS (Mermin et al., 2008) as cited by UNAIDS, (2009).

UNAIDS, (2009) supports this by arguing that, although evidence suggests that improved access to antiretroviral therapy is helping to drive a decline in HIV-related mortality, important access gaps in antiretroviral therapy remain as more than half of all people in need of treatment in Sub-Saharan Africa are still not receiving such services. According to Kihumuro, (2010) the availability of the life-prolonging anti retroviral drugs has resulted into more money being directed towards treatment compared to prevention programs. To him, the challenge has been making a choice between care and treatment and HIV/Aids prevention as the Aids epidemic has imposed a severe burden on the meager resources of the country (Uganda). The focus on treatment is putting a great strain on a health system that is already struggling to cope with thousands of people who are living with HIV/Aids but do not have access to the drugs (Kihumuro, 2010). UAC says there are 191,000 HIV positive people currently on ARVs, far below the 322,000 who require the drugs and most of the people who need treatment cannot be started on the life-prolonging drugs because funds are not enough to have all of them on the medication (Evelyn, 2010). Kihumuro, (2010) as cited by Evelyn, (2010) showed concern when he mentioned that a life time cost for ARVs for one patient is $11,500

(about Shs20 million). “Maintaining 191,000 people currently on ARVs requires $2.2 billion. This is not money that is easily available,” he revealed.

Clearly a society that cannot afford to give out condoms or where its citizens cannot buy them, let alone one that cannot afford antiretroviral, is going to be more susceptible to AIDS in the first place, less able to stop it when it does arrive, and lacking resources to help fight it, than a richer one Aidsmap,(2009). According to Desmond, (2010) HIV infected persons in Africa live for a shorter time after initial infection than in developed countries, and elements in the survival-time-differential of Africans which are undoubtedly important include the inability to purchase relatively inexpensive drugs to deal with HIV opportunistic infections (such as TB and diarrhea), poor basic health and nutrition, limited psycho-social support and generally poor quality care both in hospital and home settings. These factors are all remedial through programme activities which can be provided at relatively low cost by the state and NGOs, although they remain well beyond the capacity of poor households to provide for themselves (Desmond, 2010) and once provided they will extend and enhance the lives of those infected and will permit them to support both themselves and their families. He further showed concern when he noted that societies characterised by random events such as illness and death have developed mechanisms of social support -- traditional safety nets for those impoverished by disease and crop failure but what appears to be happening is that traditional systems of support are themselves in decline for structural reasons and are not being replaced by state mechanisms.

Poor families have a reduced capacity to deal with the effects of morbidity and mortality than richer families for very obvious reasons and these reasons include the absence of savings and other assets which can cushion the impact of illness and death (Desmond, 2010). He further advanced that the poor are already on the margins of survival and thus are also unable to deal with the consequent health and other costs. These include the costs of drugs when available to treat opportunistic infections, transport costs to health centres, reduced household productivity through illness and diversion of labour to caring roles, losses of employment through illness and job discrimination, funeral and related costs, and so on (Desmond, 2010).

AVERT, (2009) argue that although replacement feeding is the only 100% effective way to prevent mother-to-child transmission of HIV after birth, this benefit however must be weighed against practical difficulties and the risk from other illnesses which is increased by not breastfeeding. According to WHO infant feeding guideline, (2001) as cited by AVERT, (2010), mothers with HIV are advised not to breastfeed whenever the use of breast milk substitutes (formula) is acceptable, feasible, affordable, sustainable and safe (AFASS). However if they live in a country where safe water is not available then the risk of life-threatening conditions from formula feeding may be higher than the risk from breastfeeding. Desmond, (2010) supports the above as he argued that although mother to child transmission of HIV is avoidable, poverty is a clear factor in access to the methods for prevention of transmission to babies through breast milk. He advised that prevention of transmission through breast milk requires the ability to buy baby formula and

access to clean water, plus an understanding of why these changes in practice are needed and according to Desmond, (2010) neither clean water nor the income for purchasing formula are available to the poor, so they are unable because of their poverty to adopt a form of prevention known to be successful as a means of limiting HIV transmission. This problem is resolvable through relatively inexpensive program activities backed up by community mobilization to ensure support to families and there are, therefore, no good reasons why actions in this area are not being undertaken by governments, NGOs and donors (Desmond, 2010).

AVERT, (2010) points out the limitation of using infant formula food in the PMTCT by arguing that the cost of infant formula often puts it beyond the reach of poor families in resource poor countries (Uganda inclusive), even if the product is widely available. According to AVERT, (2010), many women also lack access to the knowledge, potable water and fuel needed to prepare replacement feeds safely, or simply have no time to prepare them. If used incorrectly - mixed with unsafe water, for example, or over-diluted - a breast milk substitute can cause infections, malnutrition and even death.

5.2. Conclusions

Based on the study findings and discussions, conclusions were made objective by objective as follows.

5.2.1. Prevention of Mother to Child Transmission and HIV/AIDS Prevalence

Prevention of mother to child transmission was found out to be the least significant predictor affecting HIV/AIDS prevalence in Dokolo district. This implies that HIV/AIDS prevalence in Dokolo district could be reduced if the significant factors (indicated by factor analysis) under PMTCT that are affecting the prevalence rate are improved upon.

5.2.2. HCT and HIV/AIDS Prevalence.

HCT was the most significant predictor affecting HIV/AIDS prevalence in Dokolo district and under HCT dimension, it was noted that a number of factors were affecting HIV/AIDS prevalence in Dokolo district. Unless these factors are addressed, then the effectiveness of all HIV/AIDS preventive initiatives in the reduction of HIV/AIDS prevalence in Dokolo district might not work as HCT is so critical in any intervention aimed at addressing the problems related to HIV/AIDS.

5.2.3. Behavior Change Strategies (ABCD) and HIV/AIDS Prevalence

Behavior change strategies (ABCD) had the second last effect on the prevalence rate of HIV/AIDS in Dokolo district. This however does not mean that issues under behavior change strategies should be left out in the implementation of the projects aimed at the reduction of HIV/AIDS prevalence in the district as regression results showed the significance of its effect on HIV/AIDS prevalence. It was noted from the analysis that when the current behavior trend is reversed, then chances of

reducing HIV/AIDS prevalence are most likely going to increase and vice versa. This situation occurred because the current behavior of the majority of people in the district are so negative in that they are increasing the prevalence rate of HIV/AIDS instead of reducing it and this situation is not desirable for the success of projects meant to fight the scourge. The struggle to fight the HIV/AIDS scourge starts with a positive change in behavior of individuals and to ensure the effectiveness of HIV/AIDS preventive initiatives in the reduction of HIV/AIDS prevalence in Dokolo district, there is need to address the critical factors limiting behavior change strategies in the fight against HIV/AIDS pandemic.

5.2.4. Economic Environment and HIV/AIDS Prevalence

Economic environment was found out to be having the second highest effect (after HCT) on HIV/AIDS prevalence in Dokolo district and there were a number of factors under the economic environment that affected HIV/AIDS prevalence in the district. Unless all these factors are addressed together with those under HCT, PMTCT and ABCD, then chances of reducing the prevalence rate of HIV/AIDS pandemic in Dokolo district could be so minimal.

5.3.0. Recommendations

Recommendations from the study findings have been listed according to each study objective.

5.3.1. Prevention of Mother to Child Transmission and HIV/AIDS Prevalence

HIV/AIDS service providers should emback at addressing the epidermic strategically from the root cause but not at symptom level

A participatory Radio Campaign model would have a greater impact in changing behavior and attitude of intended beneficiaries towards PMTCT

5.3.2. HCT and HIV/AIDS Prevalence

CAP-AIDS Uganda in its research has approved that a Participatory Radio Campaign Model has a great impact not only on up scaling HCT but also male participation. A strategy that combines various approaches in promoting HCT will have greater impact on reducing HIV/AIDS prevalence

5.3.3. Behavior Change Strategies (ABCD) and HIV/AIDS Prevalence

The study confirms that lack of participation of intended beneficiaries in decision making has limited the would be impact of the activities HIV/AIDS service providers, therefore these study recommends a participatory approach to behavior change strategies inorder for reduction in HIV/AIDS prevalence.

5.3.4. Economic Environment and HIV/AIDS Prevalence

The study also confirms that despite people being knowledgeable about HIV/AIDS, economic reasons particularly poverty normally makes them vulnerable to HIV/AIDS thus the study recommends that HIV/AIDS Service providers should

always assess the economic environment and streamline it within its HIV/AIDS activities so as to tackle the challenge from a root cause level and not at symptom level.

5.4 Areas for Further Research

Findings showed that PMTCT, HCT, behavior change strategies (ABCD) and economic environment affect HIV/AIDS prevalence rate in Dokolo district and according to findings, these factors significantly explained only 42.1% of the variance in HIV/AIDS prevalence rate in Dokolo district leaving a balance of 57.9% unexplained. This implies that there are other variables not considered in this study explaining the remaining 57.9% balance like, participation of donors, community participation and attitude of HIV/AIDS prevention service providers among others. This therefore calls for further research in the above mentioned areas.

This study investigated the effectiveness of HIV/AIDS preventive initiatives on the prevalence rate of HIV/AIDS in Dokolo district and yet preventive initiatives considered in this study alone does not guarantee the reduction in HIV/AIDS prevalence rate but should be capacitated by other factors like availability and access to health services, gender equality, ownership and access to land, access to clean water, having information and access to good markets for farm produce among others. There is therefore need to carry out research on other factors that affect HIV/AIDS prevalence other than the ones captured by this study.

REFERENCES

Ahmed S, Lutalo T, Wawer M, et al. (2001).HIV Incidence and sexually transmitted disease

prevalence associated with condom use: a population study in Rakai,Uganda. AIDS; 15:2171–9.

AIDS 2002 today, (Friday, July 12th 2002). Abstracts from AIDS 2002 Barcelona; XIV

International AIDS conference, retrieved 20th September 2009 from; www.hdnet.org

Aidsmap, (2009).The socioeconomic determinants of HIV infection. Retrived March, 25th, 2010

From: http://www.aidsmap.com/cms1065515.aspx

Amin, M. E. (2005). Social Science Research: Conception methodology and analysis,

Makerere University Printery, Kampala, Uganda

Annabel Desgrées-du-Loû, et, al. (2009). From prenatal HIV testing of the mother to prevention

of sexual HIV transmission within the couple. Retrieved March,20th, 2010 from http://www.aidsportal.org/Article_Details.aspx?ID=11160

Annabel , Hermann , Annick, Gerard , Renaud & Valeriane, (2009). From prenatal HIV testing

of the mother to prevention of sexual HIV transmission within the couple. Retrieved March, 15th, 2010 from: http://www.aidsportal.org/Article_Details.aspx?ID=11160

Arrive et al, (2007). Prevalence of resistance to nevirapine in mothers and children after single-

dose exposure to prevent vertical transmission of HIV-1: a meta-analysis', International Journal of Epidemiology 36(5), October 2007.

Attia S et al. (2009). Sexual transmission of HIV according to viral load and antiretroviral

therapy: systematic review and meta-analysis. AIDS, 23:1397–1404.

AVERT, (2010). Preventing mother-to-child transmission of HIV (PMTCT). Retrieved

February, 25th, 2010 from: http://www.avert.org/motherchild.htm

Babcock, A. (2009). From prenatal HIV testing of the mother to prevention of sexual

HIV transmission within the couple**,** Social Science and Medicine.

Barnett T and Whiteside A, (2002). AIDS in the twenty-first century: disease and globalization.

Palgrave Macmillan, UK,.ISBN 1-4039-0006-X.

Bosu WK et al. (2009). Modes of HIV transmission in West Africa: analysis of the distribution of HIV infections in Ghana and recommendations for prevention.

Center for AIDS prevention studies, (2002). Is mother to child HIV transmission Preventable?

University of CA Retrieved on 30th September 2009 from; www.caps.ucsf.edu

Center for Disease Control & Prevention, (2003). Advancing HIV prevention: New strategies for

a changing epidemic morbidity & mortality weekly Reports 52(15): 329-332.

Center for Disease Control & Prevention (2005); Trends in HIV Diagnoses – 33 states, 2001 –

2004. Morbidity & Mortality weekly reports. 54(45): 1149-1153

Center for Disease Control & Prevention, (2006). Comprehensive HIV prevention: Essential

components of a comprehensive strategy to prevent domestic HIV.

Chatterjee, (2003)."Mother-to-child HIV transmission in India", Lancet Infectious Diseases

3(12).

Cohen, M. H. (1998). Complementary and alternative medicine: Legal Boundaries and

Regulatory Perspectives. Johns Hopkins University Press.

C.R. Kothari, (1990). Research Methodology, Methods and techniques.

Damme, V, Wim, Kober, Katharina, Laga, Marie, (2005). The real challenges for scaling up

ART in sub-Saharan Africa, Institute of Tropical Medicine, Antwerp, Belgium.

Desmond Cohen, (2010). Poverty and HIV/AIDS in sub-Saharan Africa. Issues Paper No.

27. Retrieved March, 21st, 2010 from:

http://www.undp.org/hiv/publications/issues/english/issue27e.html

Evelyn Lirri, (2010, February 26). Focus on treatment affecting HIV fight. Daily monitor.

Family Health International, (2009). Counseling and Testing for HIV. Retrieved on March, 1st,

2010

from:http://www.fhi.org/en/topics/voluntary+counseling+and+testing+topic+page.htm

Fisher A., Foreit R. J, Laing J, Stoeckel, Townsend J. (2002); Designing HIV/AIDS Intervention

studies: An Operational Research Handbook, Population Council Inc., Washington DC.

Garbus L et al. (2004). Beyond ABC: understanding key contextual elements of HIV prevalence

decline and future challenges in Uganda. International Conference on AIDS (15th: 2004:

Bangkok, Thailand). Retrieved on 16/3/2010 from

http://gateway.nlm.nih.gov/MeetingAbstracts/ma?f=102280303.html

Glynn M. et al. (2005). Estimated HIV prevalence in United States at the end of 2003, 2005

national HIV Prevention conference, June 12 – 15, 2005, Atlanta, GA Abstract 595.

Granich RM et al. (2009). Universal voluntary HIV testing with immediate antiretroviral therapy

as a strategy for elimination of HIV transmission: a mathematical model. Lancet, 373:48–57.

Guay et al, (1999). Intrapartum and neonatal single-dose nevirapine compared with zidovudine

for prevention of mother-to-child transmission of HIV-1 in Kampala, Uganda: HIVNET 012 randomised trial', The Lancet 354(9181), 4 September .

Holmes KK, Levine R, Weaver M, (2004). Effectiveness of condoms in preventing sexually

transmitted infections. Bull WHO;82:454–61.

Hoover F. John, (2009). HIV/AIDS: Time to renew our commitment to prevention. The Daily

Monitor, pp 10.

Jotham Mubangizi, (2009, December 6). Saving babies from HIV infection. Sunday monitor.

Jourdain et al, (2004). Intrapartum Exposure to Nevirapine and Subsequent Maternal Responses

to Nevirapine-Based Antiretroviral Therapy', NEJM 351(3), 15 July 2004.

Kaiser Daily HIV/AIDS Report, (2004). Toronto Globe & Mail examines health care workers'

exodus from African countries; Impact on fight against HIV/AIDS, Retrieved September 10th, 2009, from;

http://www.kaisernetwork.org/daily_reports/sep_index.ctm?DR_10=25951

Kakaire A Kirunda, (2009, December 6). Mother to child transmission ranked second in HIV

spread. Sunday monitor.

Keith, F. P. (2000). Developing effective research proposals. London: Sage Publications.

Kenya Ministry of Health (2009). Kenya AIDS indicator survey 2007. Nairobi, Kenya Ministry

of Health.

Khobotlo M et al. (2009). HIV prevention response and modes of transmission analysis. Maseru

Lesotho National AIDS Commission.

Kihumuro Apuli, (2010). Current national Aids response and funding. Meeting held with

HIV/Aids civil society organisations in Kampala.

Lehman, Dara A et al. (2009) Risk of Resistance After Short-Course HAART Compared With

Zidovudine/Single-Dose Nevirapine Used for Prevention of HIV-1 Mother-to-Child Transmission; JAIDS Journal of Acquired Immune Deficiency Syndromes - Volume 51 - Issue 5.

Lima VD et al. (2008). Expanded access to highly reactive antiretroviral therapy: a potentially

powerful strategy to curb the growth of the HIV epidemic. Journal of infectious diseases,198:59-67

Low-Beer D et al. (2000). Knowledge diffusion and personalizing risk: key indicators of

behaviour change in Uganda compared to Southern Africa. Thirteenth International AIDS Conference, Durban. Abstract ThPeD5787.

Malcolm, E and Dowsett G, (1998). Partners in prevention: international case studies of effective

health promotion practice in HIV/AIDS. UNAIDS Best Practice Collection, report no. 98.29,1998. Retrieved September, 8th, 2009 from; http://data.unaids.org/Publications/IRC-pub01/JC093-PartnersInPrevention_en.pdf

Malinga, S (2008, December 1). Statement of the Minister of Health on commemoration of World Aids Day 2008, The New Vision special pull out, pp xxiii

Ministry of Health, (2003). Uganda national policy implementation guidelines for HIV voluntary counseling and testing services, Ministry of Health, Kampala, Uganda.

Ministry of Health, (2005). HIV counseling and testing: A national counselors training
Manual, Ministry of Health, Uganda.

Ministry of Health. (2006) Uganda HIV/AIDS sero-behavioural study (UHSBS) 2004-2005, Ministry of Health, Uganda.

Mishra V et al. (2008a). Evaluating HIV seroprevalence estimates from Ethiopia: further analysis
of the 2005 Ethiopia demographic and health survey. Calverton, USA, Macro International.

Mngadi S et al. (2009). HIV prevention response and modes of transmission analysis. Mbabane

National Emergency Response Council on HIV/AIDS Swaziland.

Mugenda and Mugenda, (1999). Research Methods (Rev.ed). Nairobi. Kenya.

Mugenda, O.M & Mugenda, A.G, (1999). Research methods: Quantitative and Qualitative approaches, Acts Press, Nairobi, Kenya.

Munanura Robert, (2009).Factors affecting positive living with HIV/AIDS in prison – a case of

luzira-upper prison inmates. A dissertation a dissertation submitted to the higher degrees department in partial fulfillment of the requirements for the award of a masters degree in management studies of Uganda management institute.

Ndayiragüe A et al. (2008b). Enquete combinee de surveillance des comportements face au

VIH/SIDA/IST et d'estimation de la seroprevalence du VIH/SIDA au Burundi. Bujumbura, Conseil National de Lutte contre le SIDA.

Nkoli I & Aniekwu, (2002). Gender & Human Rights; Dimensions of HIV/AIDS in Nigeria; African Journal of Reproductive Health, Vol. 6 N more, Women Health and Action Research Center (WHARC).

Okware S, Kinsman J, Onyango S, Opio A, & Kaggwa P,(2005).Revisiting the ABC strategy:

HIV prevention in Uganda in the era of antiretroviral therapy. Retrieved on 7/4/2010 from:

http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1743366/pdf/v081p00625.pdf

Otti, P. N. & Barh, B. (2001). A study on socio-cultural barriers to HIV/AIDS prevention iniatiative in Monrovia Liberia.

Oumar Boure, (2009). Modeling contextual Determinants of HIV/AIDS prevalence in South Africa to inform policy, Retrieved 11th October 2009 from; http//ssrn.com/abstract 1395698.

Peter Kitonsa, (2009). United Against AIDS: The story of TASO, First Edition, G&A

Williams, Oxford UK.

Physicians for Human Rights, (2007). Health Action AIDS, Success stories from the field

:Curbing the spread of HIV/AIDS among drug injectors; innovative and effective programs in Brazu, India, Russia and the China – Vietnam Boarder, Physicians for Human Rights, Cambridge

Sekaran, U. (2003). Research methods for business: A skill building approach (4th ed.)

Hermitage publishing services, River street, Hoboken, NJ.

Sharma A, (2006). "A cow dies with grass in its mouth" – Fishermen's response to "zero

grazing" in Kisumu, Kenya. Sixteenth International AIDS Conference, Toronto, abstract THAX0302.

Sherr L et al. (2007). Voluntary counselling and testing: uptake, impact on sexual behaviour, and

HIV incidence in a rural Zimbabwean cohort. AIDS, 21:851–860.

Stoneburner RL, & Low-Beer D, (2004). Population-level HIV declines and behavioural

risk avoidance in Uganda.

Stuart ,Suneetha & Robert, (2007). Is poverty or wealth driving HIV transmission? Retrieved

March, 29th, 2010 from:

http://data.unaids.org/pub/BaseDocument/2007/20072307gillespie%20et%20al%20poverty%20hiv%20summary_en.pdf

Terje J., Atkins D., Baker C., Bayer R., Beadle de Palomo K. F, Bolan A. G et al. (1999),

Revised Guidelines for HIV Counseling, Testing, and Referral Technical Expert Panel Review of CDC HIV Counseling, Testing, and Referral Guidelines, Atlanta, Georgia ; Retrieved on 10th September 2009 from; http://www.cdc.gov/mmwr/Preview/Mmwrhtml/rr5019a1.htm

Tiruneh Gizachew, (2006). Determinants of HIV/AIDS prevalence in Africa, A paper presented

at the Southern Political Scienece Association Annual Meeting, January 5-7 2006, Atlanta, Georgia, Retrieved October, 11th, 2009 from http://www.allacademic.com//meta/p_mla_apa research citation/c.

Uganda AIDS Commission, (1993). A report by Uganda Aids Commission AIDS Control in Uganda: The Multi-sectoral approach, UAC, Kampala:

Uganda AIDS Commission, (1997). A strategic plan by Uganda Aids Commission National strategic framework: 1998-2002, UAC, Kampala.

Uganda AIDS commission, (2005). Situational Analysis Report: A review of HIV/AIDS studies in the North and proposed response for the CHAP/CAP and NACES process, UAC. Kampala.

Uganda AIDS Commission in Partnership with the National Youth Council, (2007). Health,

HIV, AIDS and Development. A case for Uganda .. A paper presented at Commonwealth Youth Forum 2007 in Munyonyo Resort in Kampala, Uganda. Retrieved on 16/3/2010 from http://www.aidsuganda.org/yeah/comnwealth.pdf.

Uganda Human Rights Commission (2009) ; Report on Human Rights Abuse in Uganda, UHRC, Kampala.

Uganda National HIV/AIDS Sero Behavioral Survey (UNHSBS, 2004). Status and impact of

HIV/AIDS /Adult HIV prevalence and incidence.

UNAIDS, (1998). A UNAIDS report: A measure of success in Uganda. Geneva:

UNAIDS, (1999). A UNAIDS case study knowledge is power: Voluntary HIV counseling and testing in Uganda. Geneva

UNAIDS, (2004). A UNAIDS Report on the global HIV/AIDS epidemic.

Geneva:

UNAIDS (2005) A UNAIDS Report on the global HIV/AIDS epidemic. Geneva:

UNAIDS, (2005). AIDS in Africa; Three Scenarios to 2025. Retrieved September, 11th, 2009 from; http://www.unaids.org/en/AIDS+in+Africa_Three+scenarios+to+2025.asp

UNAIDS, (2008). Report on the global AIDS epidemic. Geneva, UNAIDS.

UNAIDS, (2009). AIDS epidemic update. Retrieved March, 17th, 2010 from http://data.unaids.org/pub/Report/2009/jc1700_epi_update_2009_en.pdf

USAID, UNAIDS, WHO &UNICEF, (2004). The Policy Project; Coverage of selected services for HIV/AIDS Prevention, care and support in low and middle income countries in 2003. Washington, DC.

U.S. centers for disease control and prevention, (2010). HIV counseling and testing: facts, issues, and answers. Retrieved on April, 4th, 2010 from: ttp://www.thebody.com/content/art17037.html

Wabwire- Mangen F et al. (2009). HIV modes of transmission and prevention response analysis. Kampala, Uganda National Aids Commission.

Well project, (2010). An Overview of the Basics of HIV Transmission. Retrieved April, 14th,

2010, from:

http://www.thewellproject.org/en_US/HIV_The_Basics/basicPres_5.jsp

WHO,(2003) Treating 3 million by 2005. The WHO strategy, Geneva. Retrieved September,

11th, 2009 from;

http;//journals.Lww.com/aidsonline/pages/articleviewer.aspx

Wind-Rotolo et al, (2008).Identification of nevirapine-resistant HIV-1 in the latent reservoir

following single-dose nevirapine',15th Conference on Retroviruses and Opportunistic Infections, February,2008. Retrieved, March, 14th, 2010, from: http://www.retroconference.org/2008/Abstracts/32629.htm

World education, (2010). HIV and AIDS. Retrieved April, 14th, 2010, from:

http://www.worlded.org/WEIInternet/projects/ListProjects.cfm?Select=Topic&ID=17&ShowProjects=No&gclid=COXdsbWhiKECFY6X2AodG0TFNw.

Yin, R.K. (2003). Case study research, design and methods (3rd ed.). Thousand Oaks: Sage

Publications.

APPENDIX 1

QUESTIONNAIRE:

EFFECTIVENESS OF PREVAILING HIV/AIDS PREVENTIVE INNITIATIVES; A CASE STUDY OF DOKOLO DISTRICT, NORTHERN UGANDA

You have been identified as resourceful enough to provide the required information. I kindly request you to spare a few minutes of your valuable time to fill in this questionnaire. All information provided will be held with utmost confidentiality and will only be used for the purpose of this study. You may not put your name on the questionnaire.

INSTRUCTIONS: Please tick the most appropriate answer.

SECTION A: PERSONAL INFORMATION

1	Sex	**1.** Male **2.** Female
2	Age	**1.** Twenty and below **2.** 21-30 **3.** 31- 40 **4.** 41- 50 **5.** 50>
3	Religion	1.Catholic 2.Anglican 3.Moslem 4.Pentecostal

		5.Other
4	Marital status	**1.** Single **2.** Married **3** widow(er) **4.** Divorced **5.** Others (specify)……
5	Level of education	**1.** Primary and below **2.** Secondary **3.** Tertiary **4.** University **5.** Others (specify)…….
6	Occupation	**1.** Student **2.** Peasant Farmer **3.** Trader **4.**Teacher **5.** Others (specify)……
7	Number of years lived with HIV or (known your HIV status)	**1.** Less than 1 yr **2.** 2-5 yrs **3.** 5-10 yrs **4.** 10-15 yrs **5.** 15-20 yrs

Please tick (√) on a scale of 1-5 how you agree or disagree with the following statements by ticking the appropriate number that best represents your opinion from the scale provided.

	1	2	3	4	5
	Strongly Disagree	**Disagree**	**Neither Agree nor Disagree**	**Agree**	**Strongly Agree**

		1	**2**	**3**	**4**	**5**
	I : PREVENTION OF MOTHER TO CHILD TRANSMISSION					
1	I have knowledge on HIV prevention services in my community.					
2	Government health centers in my community provide HIV/AIDS preventive services.					
3	The NGOs in my community provide HIV/AIDS preventive services					
4	I easily access HIV prevention services in my community.					
5	Most expectant women go for pregnancy tests in health centers.					
6	I have heard about Mother to Child HIV transmission.					
7	I know that Mother to Child Transmission of HIV/AIDS is preventable.					
8	I know where to get services for Prevention of Mother to Child Transmission of HIV.					

9	The PMTCT services are readily available in our health centers					
10	The health workers happily provide people with PMTCT services if approached.					
11	Appropriate counseling and support is given to HIV positive women in our health centers when pregnant.					
12	Appropriate counseling and support services given to HIV positive women in our health centers have enabled them & their spouses to make informed decisions about their reproductive lives.					
13	Pregnant women in our community prefer to seek ante-natal & post-partum care in our health centers					
14	Pregnant women in our community prefer to seek ante-natal & post-partum care from Traditional birth attendants					
15	Preventing Mother to Child transmission of HIV can be done during pregnancy, labour and delivery at health centers.					
16	Preventing Mother to child transmission of HIV can be done through safer infant feeding and the use of antiretroviral drugs					
17	It is easy for me to access a medical worker (Daktar) whenever I fall sick.					
18	It's easy for me and other people living with HIV to access Septrin or Dapson for prophylaxis from our health centers anytime we need them.					
19	Care and support (infant feeding inclusive) programs are given to mothers living with HIV in our community.					

20	HIV positive mothers in our community have access to knowledge on formula feeds and how to prepare them.					
21	HIV positive mothers in our community have the ability to buy baby formula feeds.					
22	HIV positive mothers in our community have access to clean water for preparing baby formula feeds safely.					
23	HIV positive mothers in our community have access to fuel to prepare replacement feeds safely.					
24	There is wide spread availability and safe use of breast milk substitute in our community.					
25	Lactating mothers living with HIV/AIDS in our community face pressure from others to breast feed their children as choosing not to breastfeed & use formula feeds reveal their HIV status.					
26	HIV positive mothers in our community are a target for stigma and discrimination if they stop breast feeding their children to Prevent MCT.					
	II : HIV COUNSELLING & TESTING (HCT)					
27	HCT is about going to a health centre to test if I have or do not have HIV					
28	It is very important for anyone to go for HIV Counseling & Testing.					
29	Counseling & testing services are available and done in the health centers within Dokolo.					
30	Counseling schedules in health centers are known.					
31	Counselors/Counseling assistants are available all the time.					

32	There are private places for counseling within the health centres.					
33	I have tested for HIV from a health centre in Dokolo district.					
34	Pre-test counseling is available in health centers within Dokolo district.					
35	I was counseled after being tested for HIV virus (post test counseling).					
36	I received my HIV test results from my counselor without waiting for too long.					
37	I understood my results through the explanation of the counselor.					
38	All HIV positive clients in my community are in the post test club(s).					
39	I continue to receive counseling from nearby health centres these days.					
40	Knowing my status has made me to start practicing & continue with faithfulness to my partner (avoiding extramarital sex)					
41	Since I tested HIV/AIDS positive, I have continued to have various sexual relationship.					
42	Counseling and testing (HCT) is preventing new HIV infections in our community.					
43	Counseling and testing (HCT) is increasing access to treatment (ART inclusive) and care in our community.					
44	The majority of people in my community go for HIV counseling and testing.					
45	Phobia of +ve test results and the issues it would raise among family members, friends, sex partners					

	etc make the majority of people in my community not to go for HCT.					
	III. HIV/AIDS BEHAVIOUR CHANGE INITIATIVES; ABCD STRATEGY					
46	Sex education programs (eg ABCD strategies) are carried out by government and NGOs in our community.					
47	The media for disseminating sex education information and other information related to HIV/AIDS are suitable to us the audience.					
48	Sex education programs (ABCD) and other programs related to HIV/AIDS also target schools and tertiary institutions in our community.					
49	The majority of youths in our community participate in HIV/AIDS preventive initiatives.					
50	Abstinence from sex is a means for prevention of HIV/AIDS in our community.					
51	The majority of People in our community abstain from pre-marital sex so as to avoid contracting STDS.					
52	I prefer having more than one sexual partner for self satisfaction					
53	It is easy for me to abstain from sex					
54	Being faithful to one sexual partner is a means of prevention of HIV/AIDS in our community.					
55	Most People in our community are faithful to one sexual partner or marital partners to avoid contracting HIV/AIDS.					
56	Extra marital affairs in our community have increased on HIV/AIDS prevalence.					

57	Trust of unknown sexual partners and intimacy has discouraged condom use in our community causing increase in HIV/AIDS prevalence.					
58	Condoms are distributed to our community members by government/NGOs free of charge.					
59	Condom use when having sex reduces on the risks of getting HIV/AIDS					
60	I use condoms to reduce on the risks of further infections.					
61	We use condoms to reduce on the risk of unwanted pregnancies.					
62	Getting a condom in my community is easy					
63	It is embarrassing to buy a condom in our community.					
64	I feel free to disclose my HIV/AIDS status to family members, relatives and friend.					
65	Disclosure of our HIV status has reduced the spread of HIV/AIDS in our community.					
66	The ABCD strategy is a good method for HIV/AIDS prevention in our community.					
67	I advice people in my community to use the ABCD strategy in fighting HIV/AIDS.					
	IV. ECONOMIC ENVIRONMENT					
68	Treatment prescribed by the Doctor is provided at the health centers near my home town free of charge.					
69	The health workers ask for money before you get the ART in government health centres					
70	My ART combination is available in the health centre near my home town.					

71	I do get all the combinations that I am required to take from health centers free of charge.					
72	The health centers in my District don't run short of the ARVs.					
73	I or sometimes my relatives buy me the prescribed drugs.					
74	Prescribed drugs (including those to deal with opportunistic infections like TB & dihaorreah) are affordable for me.					
75	I know what a balanced diet is.					
76	I can afford protein foods (milk, eggs, G. nuts, fish, etc).					
77	I can afford protective foods like cabbages, amaranthus (buga), pigeon pea leaves (boyo), panacium ethiopicum (nakati), etc					
78	Fruits like avocadoes, oranges, pineapples, mangoes, etc are affordable for me.					
79	I consume the fruits regularly to improve on my health.					
80	I have access to food support agencies like ACDI-VOCA, TASO, etc.					
81	I feed only on posho and beans					
82	I can afford clean drinking water.					
83	My house hold access and use clean drinking water					
84	We have local microcredit and savings associations and loan programs in our community.					
85	We have a cash float (alulu) that we rotate among group members in times of need.					
86	We have microfinance institutions in the district which give us loans.					

87	The micro finance institutions charge us low interest rates.					
88	We have got the loans and used them to improve on our economic livelihoods.					
89	The HIV/AIDS related programs & other non related programs (eg agriculture, credit etc) have greatly helped in improving our livelihoods (economically, socially and health wise).					
90	All HIV/AIDS related programs in our community cover our exact interests and needs.					
	V. HIV/AIDS PREVALENCE					
91	Good PMTCT services has led to reduction of HIV/AIDS prevalence among children in my community					
92	Good HCT services in has led to reduction of HIV/AIDS prevalence in my community					
93	Good HIV/AIDS awareness programmes has led to reduction on HIV/AIDS prevalence in my community					
94	Good Antiretroviral services in my community has led to reduction in HIV/AIDS prevalence					
95	Poor social support systems, including the family, work group, and friendships (eg giving food , safety nets etc to the impoverished) creates vulnerable grounds for high HIV/AIDS Prevalence					
96	Isolation of young men and women from traditional cultural and social networks has made them engage in risky sexual behaviors that have increased on HIV/AIDS prevalence in our community.					
97	The presence of migrant labour in Dokolo District has led to high HIV/AIDS prevalence					

98	Limited Social institutions with organizational characteristics and formal and informal rules and regulations for operation have led to high HIV/AIDS prevalence in Dokolo.					
99	The post conflict situation in Dokolo District contributed to high HIV/AIDS prevalence					
100	The cultural practices (circumcision, widow(er) inheritance etc) of the people living in Dokolo District has led to high HIV/AIDS prevalence					
101	Traditional healing practices & ideas about illness being a curse/witchcraft has increased on HIV/AIDS prevalence in our community					
102	The low levels of education of most people in our community has led to high HIV/AIDS prevalence in the district.					
103	Poor economic development in Dokolo District has contributed to high HIV/AIDS prevalence in Dokolo District					
104	The religious practices in Dokolo District have contributed to high HIV/AIDS prevalence in the District					
105	High levels of Poverty in Dokolo District have led to high HIV/AIDS prevalence via economically-driven adoption of risky behaviors.					
106	Dokolo District being highly a fishing community as an activity has created vulnerable grounds for high HIV/AIDS prevalence					
107	Poor working conditions of health workers in Dokolo district has contributed to high HIV/AIDS prevalence.					

APPENDIX 2.

INTERVIEW GUIDE FOR KEY INFORMANTS

1. What HIV/AIDS preventive initiatives are present in your community?
2. Who are the service providers of the HIV/AIDS preventive initiatives mentioned above?
3. What program/ initiatives exist in your community to encourage people to attain the HIV/AIDS preventive initiatives in your community?
4. Do the service providers of the HIV/AIDS preventive initiatives encourage one to access them?
5. To what extent has PMTCT been successful in Dokolo District
6. To what extent have HCT led to reduction in HIV/AIDS prevalence in Dokolo District
7. To what extent has the awareness creation particularly about the ABCD strategy led to reduction in HIV/AIDS prevalence in Dokolo District?
8. To What extent have ART services in Dokolo District led to reduction in HIV/AIDS prevalence
9. What are the main causes of high HIV/AIDS prevalence in Dokolo district?
10. What are the major challenges in provision of the HIV/AIDS preventive initiatives in your District?
11. What measures in your opinion should be taken to reduce/solve the above challenges and make things work better

APPENDIX 3

VILLAGE HEALTH TEAM GOUPS, LCI CHAIR PERSONS & CBO FOCUS GROUP DISCUSSION GUIDE

1. What do you know about HIV/AIDS Preventive initiatives?
2. What HIV/AIDS preventive initiatives are you aware about in your community?
3. Who are the service providers of the HIV/AIDS preventive initiatives mentioned above in Dokolo district?
4. What program/ initiatives exist in your community to encourage people to attain the HIV/AIDS preventive initiatives in your community?
5. Are there cases of denial of HIV/AIDS preventive initiatives in your community?
6. Do the service providers of the HIV/AIDS preventive initiatives encourage one to access them?
7. Do you think PMTCT as an HIV/AIDS Preventive initiative has been successful in your community?
8. Do you think HCT as an HIV/AIDS preventive initiative has helped reduce HIV/AIDS prevalence in your community?
9. What do you think about behavior change initiatives particularly about the ABCD strategy in relation to reducing HIV/AIDS prevalence in Dokolo District?
10. What do you think about Availability of Antiretroviral Therapy services in Dokolo District
11. How accessible are ART services in Dokolo District?
12. How has the issue of accessibility of ART Services affected HIV/AIDS Prevalence in Dokolo District
13. What are the main causes of high HIV/AIDS prevalence in Dokolo district?
14. What are the major challenges in provision of the HIV/AIDS preventive initiatives in your District

APPENDIX 4. OBSERVATION CHECKLIST

Item of Interest	**Status**				
	Very Good	**Good**	**Fair**	**Poor**	**Not Available**
* Pre test registration Book					
* Post test registration Book					
* HIV test result Book					
* Laboratory HIV testing record Book					
* Record of members in the ART Clinic					
* ART clients register					
* ART refill chart/ schedules					
* PHA register –Health centres					
* Counseling Schedule • Pre test Counseling • Group Pre test Counseling • Post test Counseling • Adherence Counseling • On going Counseling					
* PMTCT Record Book 2005 – 2009					
* VCT record for the year 2005-2009					
* RTC/RCT entries for 2005-2009					
* Notice board					
* ART Drug Inventory					
*Conditions of respondents' shelter.					
*Living conditions of clients					
*Conditions of water facilities in the sampled sub-counties.					

APPENDIX 5.

Morgan and Krejcie's table for determining sample size from a given population

Note: "N" is population size; "S" is sample size

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	246
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	351
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	181	1200	291	6000	361
45	40	180	118	400	196	1300	297	7000	364
50	44	190	123	420	201	1400	302	8000	367
55	48	200	127	440	205	1500	306	9000	368
60	52	210	132	460	210	1600	310	10000	373
65	56	220	136	480	214	1700	313	15000	375
70	59	230	140	500	217	1800	317	20000	377
75	63	240	144	550	225	1900	320	30000	379
80	66	250	148	600	234	2000	322	40000	380
85	70	260	152	650	242	2200	327	50000	381
90	73	270	155	700	248	2400	331	75000	382
95	76	270	159	750	256	2600	335	100000	384

APPENDIX 6.

1. FACTOR ANALYSIS OUTPUT FOR PMTCT

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.595
Bartlett's Test of Sphericity	Approx. Chi-Square	1571.558
	Df	136
	Sig.	.000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.369	20.651	20.651	5.369	20.651	20.651	5.188	19.952	19.952
2	4.761	18.310	38.961	4.761	18.310	38.961	3.216	12.369	32.321
3	3.126	12.025	50.986	3.126	12.025	50.986	2.689	10.344	42.665
4	1.881	7.236	58.222	1.881	7.236	58.222	2.683	10.319	52.984
5	1.685	6.482	64.704	1.685	6.482	64.704	2.533	9.743	62.727
6	1.487	5.718	70.422	1.487	5.718	70.422	1.547	5.950	68.677
7	1.228	4.724	75.146	1.228	4.724	75.146	1.468	5.644	74.321
8	1.057	4.066	79.211	1.057	4.066	79.211	1.271	4.890	79.211
9	.813	3.127	82.339						
10	.787	3.025	85.364						
11	.659	2.534	87.898						
12	.583	2.242	90.140						

13	.435	1.672	91.812						
14	.409	1.574	93.386						
15	.373	1.435	94.821						
16	.301	1.159	95.980						
17	.238	.916	96.896						
18	.200	.769	97.665						
19	.173	.666	98.331						
20	.143	.550	98.881						
21	.088	.337	99.218						
22	.062	.240	99.458						
23	.048	.186	99.644						
24	.043	.167	99.811						
25	.029	.112	99.923						
26	.020	.077	100.000						

Extraction Method: Principal Component Analysis.

Rotated Component Matrix(a)

	Component							
	1	2	3	4	5	6	7	8
I have knowledge on HIV prevention services in my community.	-.085	-.118	**.725**	-.559	-.026	.009	.157	.147
Government health centers in my community	-.088	-.200	**.768**	.003	.208	.103	.183	-.120

provide HIV/AIDS preventive services.								
The NGOs in my community provide HIV/AIDS preventive services.	.185	-.016	**.798**	.097	-.305	-.054	-.208	-.089
I easily access HIV prevention services in my community.	.141	.104	**.741**	-.030	-.439	-.020	.073	.013
Most expectant women go for pregnancy tests in health centers.	.165	.056	.313	-.437	-.070	-.033	**.544**	-.033
I have heard about Mother to Child HIV transmission.	**.927**	-.079	.023	-.100	.156	-.066	.037	-.090
I know that Mother to Child Transmission of HIV/AIDS is preventable.	**.813**	.288	.207	.093	-.063	.003	-.200	.035
I know where to get services for Prevention of Mother to Child Transmission of HIV.	**.908**	.079	.070	.137	-.046	.176	-.067	.095
The PMTCT services are readily available in our health centers.	**.865**	.093	-.094	.196	.120	.124	.048	.032
The health workers happily provide people with PMTCT services if approached.	.282	.095	-.070	**.775**	.017	.156	-.026	.243

Appropriate counseling and support is given to HIV positive women in our health centers when pregnant.	-.089	.095	-.009	.228	.132	.042	**.773**	-.027
Appropriate counseling and support services given to HIV positive women in our health centers have enabled them & their spouses to make informed decisions about their reproductive lives.	-.070	.061	-.103	.274	.106	.023	-.032	**.895**
Pregnant women in our community prefer to seek ante-natal & post-partum care in our health centers	.225	.073	.076	-.334	-.296	-.132	.480	.446
Pregnant women in our community prefer to seek ante-natal & post-partum care from Traditional birth attendants.	.162	.474	-.067	**.596**	.205	-.242	.016	.004
Preventing Mother to Child transmission of HIV can be done during pregnancy, labour and	**.796**	-.407	.030	-.120	-.166	.125	.051	.141

delivery at health centers.								
Preventing Mother to child transmission of HIV can be done through safer infant feeding and the use of antiretroviral drugs.	**.909**	.036	.056	.041	-.022	.005	.155	-.099
It is easy for me to access a medical worker (Daktar) whenever I fall sick.	.007	.022	.081	**.767**	.224	-.046	.110	.059
It's easy for me and other people living with HIV to access Septrin or Dapson for prophylaxis from our health centers anytime we need them.	.008	.193	-.220	.435	**.655**	.152	.139	-.018
Care and support (infant feeding inclusive) programs are given to mothers living with HIV in our community.	.047	**.774**	-.153	.076	-.047	.165	.057	.040
HIV positive mothers in our community have access to knowledge on formula feeds	**.552**	-.495	-.248	.189	.046	-.029	-.127	-.121

and how to prepare them.								
HIV positive mothers in our community have the ability to buy baby formula feeds.	-.022	**.842**	-.018	.081	.278	-.310	.030	.028
HIV positive mothers in our community have access to clean water for preparing baby formula feeds safely.	.042	-.217	-.234	.063	**.874**	.076	.127	.098
HIV positive mothers in our community have access to fuel to prepare replacement feeds safely.	.075	.314	.064	.177	**.798**	-.163	-.151	-.012
There is wide spread availability and safe use of breast milk substitute in our community.	.025	**.921**	-.023	.101	-.048	-.060	.051	-.003
Lactating mothers living with HIV/AIDS in our community face pressure from others to breast feed their children as choosing not to breastfeed & use formula feeds reveal	.219	-.201	-.018	-.081	.066	**.697**	-.220	.254

their HIV status.								
HIV positive mothers in our community are a target for stigma and discrimination if they stop breast feeding their children to Prevent MCT.	.062	.024	.042	.069	-.013	**.831**	.139	-.148

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.
a Rotation converged in 8 iterations.

2. FACTOR ANALYSIS OUTPUT FOR HCT

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.494
Bartlett's Test of Sphericity	Approx. Chi-Square	1233.298
	Df	171
	Sig.	.000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %

1	3.628	19.095	19.095	3.628	19.095	19.095	2.563	13.490	13.490
2	2.520	13.261	32.356	2.520	13.261	32.356	2.412	12.695	26.185
3	2.254	11.861	44.217	2.254	11.861	44.217	2.298	12.092	38.278
4	2.018	10.623	54.840	2.018	10.623	54.840	2.115	11.133	49.411
5	1.323	6.962	61.801	1.323	6.962	61.801	1.862	9.798	59.209
6	1.246	6.560	68.361	1.246	6.560	68.361	1.500	7.896	67.105
7	1.138	5.991	74.352	1.138	5.991	74.352	1.377	7.247	74.352
8	.928	4.884	79.236						
9	.840	4.422	83.658						
10	.737	3.879	87.537						
11	.536	2.821	90.358						
12	.475	2.501	92.859						
13	.358	1.884	94.744						
14	.300	1.577	96.321						
15	.214	1.126	97.446						
16	.172	.904	98.351						
17	.137	.723	99.074						
18	.098	.515	99.589						
19	.078	.411	100.000						

Extraction Method: Principal Component Analysis.

Rotated Component Matrix(a)

	Component						
	1	2	3	4	5	6	7

HCT is about going to a health centre to test if I have or do not have HIV	-.141	.167	.035	**.798**	.057	.044	-.016
It is very important for anyone to go for HIV Counseling & Testing.	.059	-.142	.049	.010	.289	**.866**	-.106
Counseling & testing services are available and done in the health centers within Dokolo.	.190	**.511**	.051	.066	-.090	**.696**	.097
Counseling schedules in health centers are known.	**.851**	.238	-.009	.101	.075	.114	-.142
Counselors/Counseling assistants are available all the time.	.223	.238	-.069	.427	**.606**	-.160	.052
There are private places for counseling within the health centres.	.028	.020	.085	.090	.020	-.068	**.835**
I have tested for HIV from a health centre in Dokolo district.	**.790**	-.195	-.176	.029	-.031	-.014	.166
Pre-test counseling is available in health centers within Dokolo district.	.463	-.096	.173	**.752**	-.030	-.050	.092
I was counseled after being tested for HIV virus (post test counseling).	.382	-.009	**.658**	.234	.032	.110	-.419
I received my HIV test results from my counselor without waiting for too long.	.109	.009	.202	-.015	**.846**	.153	-.076
I understood my results through the explanation of the counselor.	-.053	**.773**	.256	.092	.162	.158	-.122
All HIV positive clients in my community are in the post test club(s).	-.139	-.038	.234	-.063	**.693**	.127	.081

I continue to receive counseling from nearby health centres these days.	.027	-.030	**.852**	-.006	.321	.035	.112
Knowing my status has made me to start practicing & continue with faithfulness to my partner (avoiding extramarital sex).	-.285	.123	**.806**	-.042	.135	.029	.187
Since I tested HIV/AIDS positive, I have continued to have various sexual relationship.	.205	.210	.370	-.600	.042	-.123	-.384
Counseling and testing (HCT) is preventing new HIV infections in our community.	.302	.059	.242	.369	.061	.174	.397
Counseling and testing (HCT) is increasing access to treatment (ART inclusive) and care in our community.	-.070	**.902**	-.056	-.045	-.139	.015	.179
The majority of people in my community go for HIV counseling and testing.	.413	**.665**	-.101	.021	.144	-.200	-.103
Phobia of +ve test results and the issues it would raise among family members, friends, sex partners etc make the majority of people in my community not to go for HCT.	**.565**	.154	.199	-.372	.043	.232	.036

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

a Rotation converged in 9 iterations.

3. FACTOR ANALYSIS OUTPUT FOR BEHAVIOR CHANGE STRATEGIES (ABCD)

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.494
Bartlett's Test of Sphericity	Approx. Chi-Square	1445.879
	Df	231
	Sig.	.000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.057	18.441	18.441	4.057	18.441	18.441	3.097	14.077	14.077
2	2.731	12.415	30.857	2.731	12.415	30.857	2.158	9.807	23.885
3	2.438	11.082	41.939	2.438	11.082	41.939	2.074	9.426	33.311
4	1.854	8.429	50.368	1.854	8.429	50.368	1.835	8.339	41.650
5	1.681	7.640	58.008	1.681	7.640	58.008	1.804	8.202	49.852
6	1.286	5.844	63.851	1.286	5.844	63.851	1.737	7.894	57.746
7	1.137	5.170	69.022	1.137	5.170	69.022	1.699	7.723	65.469
8	1.106	5.028	74.050	1.106	5.028	74.050	1.491	6.778	72.247
9	1.031	4.688	78.738	1.031	4.688	78.738	1.428	6.490	78.738
10	.802	3.644	82.382						
11	.725	3.295	85.677						
12	.607	2.761	88.438						
13	.507	2.306	90.744						

14	.470	2.136	92.880						
15	.395	1.794	94.673						
16	.286	1.302	95.976						
17	.229	1.041	97.017						
18	.194	.880	97.897						
19	.170	.771	98.668						
20	.128	.584	99.252						
21	.111	.502	99.754						
22	.054	.246	100.000						

Extraction Method: Principal Component Analysis.

Rotated Component Matrix(a)

	Component								
	1	2	3	4	5	6	7	8	9
Sex education programs (eg ABCD strategies) are carried out by government and NGOs in our community.	-.124	**.561**	-.051	.495	-.251	.135	-.216	.275	-.154
The media for disseminating sex education information and other information related to HIV/AIDS are suitable to us the audience.	.060	-.118	-.057	**.524**	.055	-.184	.199	**.574**	.153

Sex education programs (ABCD) and other programs related to HIV/AIDS also target schools and tertiary institutions in our community.	.083	.216	.229	-.081	.002	.436	.048	.442	.482
The majority of youths in our community participate in HIV/AIDS preventive initiatives.	.067	-.106	.090	.143	**.810**	.087	-.100	-.071	.172
Abstinence from sex is a means for prevention of HIV/AIDS in our community.	-.224	-.058	.033	-.223	.136	**.849**	.018	.063	-.075
The majority of People in our community abstain from pre-marital sex so as to avoid contracting STDS.	-.169	-.121	-.033	.109	-.019	.033	**.861**	-.024	.045
I prefer having more than one sexual partner for self satisfaction	.183	.055	.122	.026	.044	.110	-.133	**.803**	-.018
It is easy for me to abstain from sex.	-.193	**.870**	-.011	-.130	-.121	.044	-.030	.073	.108
Being faithful to one sexual partner is a means of prevention of HIV/AIDS in our community.	.146	.203	-.080	.105	-.477	**.680**	.001	-.022	.156
Most People in our community are faithful to one sexual partner or marital partners to avoid contracting HIV/AIDS.	.169	.181	-.132	-.261	-.044	.020	**.797**	-.035	.013

Extra marital affairs in our community have increased on HIV/AIDS prevalence.	.062	.056	-.109	**.811**	.047	-.103	-.112	.004	.068
Trust of unknown sexual partners and intimacy has discouraged condom use in our community causing increase in HIV/AIDS prevalence.	.164	.120	.029	.099	.070	-.035	.036	.017	**.867**
Condoms are distributed to our community members by government/NGOs free of charge.	.294	**.546**	-.002	.420	.224	.040	.278	-.032	.040
Condom use when having sex reduces on the risks of getting HIV/AIDS.	.106	**.537**	.199	.117	.315	.019	.100	-.143	.314
I use condoms to reduce on the risks of further infections.	.125	-.063	**.865**	-.233	.034	-.028	-.119	.075	-.035
We use condoms to reduce on the risk of unwanted pregnancies.	.112	.051	**.914**	.012	.045	.029	-.081	.066	.163
Getting a condom in my community is easy.	-.139	.235	**.512**	.215	.340	.461	.251	-.007	-.184
It is embarrassing to buy a condom in our community.	.274	.198	.003	-.180	**.706**	-.140	.051	.395	-.080
I feel free to disclose my HIV/AIDS status to family members, relatives and friend.	**.589**	.448	-.137	.367	-.114	.143	-.056	.079	.049

Disclosure of our HIV status has reduced the spread of HIV/AIDS in our community.	**.841**	-.040	.030	-.046	.157	-.005	.018	.017	.368
The ABCD strategy is a good method for HIV/AIDS prevention in our community.	**.839**	-.104	.208	.032	.066	-.124	.076	.169	.085
I advice people in my community to use the ABCD strategy in fighting HIV/AIDS.	.926	-.019	.071	.032	.058	-.071	-.090	.084	-.072

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.
a Rotation converged in 12 iterations.

4. ECONOMIC ENVIRONMENT FACTOR ANALYSIS OUTPUT

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.498
Bartlett's Test of Sphericity	Approx. Chi-Square	1775.844
	Df	253
	Sig.	.000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.112	22.225	22.225	5,112	22.225	22.225	3.606	15.678	15.678
2	2.429	10.559	32.784	2,429	10.559	32.784	2.537	11.031	26.709
3	2.134	9.278	42.063	2,134	9.278	42.063	2.238	9.730	36.438

4	1.943	8.447	50.510	1,943	8.447	50.510	1.826	7.941	44.379
5	1.740	7.566	58.076	1,740	7.566	58.076	1.737	7.554	51.933
6	1.339	5.820	63.895	1,339	5.820	63.895	1.668	7.254	59.187
7	1.099	4.777	68.672	1,099	4.777	68.672	1.533	6.664	65.851
8	1.083	4.708	73.380	1,083	4.708	73.380	1.396	6.069	71.921
9	1.031	4.483	77.864	1,031	4.483	77.864	1.367	5.943	77.864
10	.809	3.518	81.381						
11	.753	3.272	84.653						
12	.651	2.832	87.486						
13	.591	2.572	90.057						
14	.514	2.237	92.294						
15	.375	1,632	93,926						
16	.352	1,528	95,455						
17	.300	1,305	96,760						
18	.246	1,071	97,831						
19	.213	,928	98,759						
20	.143	,621	99,380						
21	.066	,289	99,668						
22	.041	,179	99,848						
23	.035	,152	100,000						

Extraction Method: Principal Component Analysis.

Rotated Component Matrix(a)

	Component								
	1	2	3	4	5	6	7	8	9

Treatment prescribed by the Doctor is provided at the health centers near my home town free of charge.	.099	-.023	.098	-.069	.067	.092	.041	.032	**.832**
The health workers ask for money before you get the ART in government health centres.	**.624**	.129	-.035	.039	.042	**.556**	.031	-.206	.066
My ART combination is available in the health centre near my home town.	-.203	.287	-.147	**.745**	.156	.001	-.130	.129	.262
I do get all the combinations that I am required to take from health centers free of charge.	-.027	.006	.089	.207	**.870**	-.145	-.026	-.149	.087
The health centers in my District don't run short of the ARVs.	-.063	.140	.049	-.048	.038	.066	**.790**	-.120	.051
I or sometimes my relatives buy me the prescribed drugs.	-.061	-.016	-.015	-.116	**.724**	.428	.096	.124	-.095
Prescribed drugs (including those to deal with opportunistic infections like TB & dihaorreah) are affordable for me.	**.568**	.190	.153	-.099	.142	-.155	.241	.425	-.069

I know what a balanced diet is.	.113	-.346	.216	-.036	.144	.001	**.504**	-.004	-.474
I can afford protein foods (milk, eggs, G. nuts, fish, etc).	.499	-.020	.496	.125	-.086	-.072	-.040	.219	-.042
I can afford protective foods like cabbages, amaranthus (buga), pigeon pea leaves (boyo), panacium ethiopicum (nakati), etc	.019	-.080	.089	**.827**	.018	.144	.054	.031	-.226
Fruits like avocadoes, oranges, pineapples, mangoes, etc are affordable for me.	.167	.070	**.906**	.032	.223	.049	.059	-.081	.084
I consume the fruits regularly to improve on my health.	.104	.037	**.937**	-.105	-.067	.099	.051	.018	.000
I have access to food support agencies like ACDI- VOCA, TASO, etc	**.599**	.349	.107	.177	.031	-.218	.214	-.046	.102
I feed only on posho and beans.	.251	**.614**	-.103	-.023	-.137	-.249	.081	-.160	.371
I can afford clean drinking water.	.270	**.865**	.099	.046	-.046	-.061	.011	.128	-.013
My house hold access and use clean drinking water.	.230	**.841**	.055	.023	.150	.302	.023	.078	-.057
We have local microcredit and savings	.225	.406	.248	-.347	.160	.174	-.479	-.282	-.038

associations and loan programs in our community.									
We have a cash float (alulu) that we rotate among group members in times of need.	.049	.150	.126	-.440	.447	.056	.376	.307	.353
We have microfinance institutions in the district which give us loans.	**.761**	.228	.057	.146	-.008	.248	-.327	-.253	.065
The micro finance institutions charge us low interest rates.	-.029	.011	.116	.114	.046	**.881**	.019	-.063	.080
We have got the loans and used them to improve on our economic livelihoods.	**.841**	.115	.134	-.218	.053	.025	-.113	-.075	.034
The HIV/AIDS related programs & other non related programs (eg agriculture, credit etc) have greatly helped in improving our livelihoods (economically, socially and health wise).	-.132	.053	-.017	.102	-.042	-.062	-.110	**.866**	.041
All HIV/AIDS related programs in our community cover our exact interests and needs.	**.793**	.200	.158	-.209	-.214	-.012	.000	-.005	.034

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

a Rotation converged in 9 iterations.

LIST OF TABLES