

**STRESS AND DRUG ADHERENCE AMONG HIV ADOLESCENTS OF  
KAGADI HOSPITAL IN KAGADI SUB – COUNTY  
KIBAALE DISTRICT**


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**A DISSERTATION SUBMITTED TO THE COLLEGE OF HUMANITIES AND  
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### DECLARATION

I, Businge Denis, declare Stress and Drug Adherence among HIV Adolescents of Kagadi Hospital is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

Sign.....

Date.....23.05.2014

**BUSINGE DENIS**

### APPROVAL

I certify that this dissertation was done under my Supervision and is ready to be evaluated for the award of a bachelor's degree in guidance and counseling of Kampala international university.

Sign F. Nakalema

**Ms Nakalema Faith**

Date 23<sup>rd</sup> - 05 - 2014

## **DEDICATION**

I dedicate this study to my Dad Mr. Rukwizi Micheal Faith and my Mother Nakalule Dorothy for having financed this study together with all my brothers and sisters.

### **ACKNOWLEDGEMENTS**

Special thanks to God for giving me wisdom and guidance to complete this study. I also want to acknowledge my supervisor Ms. Nakalema Faith for her intellectual guidance that she rendered to me towards the successful completion of this study. In the same way, gave my sincere thanks to Francis, Rwabutogo Milton, Kwikiriza Micheal and the family of Mr. Damiano Kato and the family of Julius for the fair support offered on this study.

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## ABSTRACT

The purpose of the study was to assess how stress affects adherence of drugs among HIV positive adolescents in Kagadi Sub - County Kibaale District Uganda. The study was guided by three specific objectives and these include; i) To examine the level of stress among HIV positive adolescents in Kagadi Sub - County Kibaale District Uganda, ii) to find out the level of drug adherence, among HIV positive adolescents in Kagadi Sub County Kibaale District Uganda and iii) to find out if there is a significant relationship between stress and drug adherence among positive adolescents in Kagadi Sub - County Kibaale District Uganda. The study employed a descriptive correlation design that used both qualitative and quantitative methods of data collection and a sample size of 80 respondents was selected out of 100, A standardized questionnaire of a four likert scale was used, where 1=strongly disagree, 2=disagree, 3=agree and 4=strongly agree. The study findings revealed that the Level of stress among HIV positive adolescents was generally very often, and level of drug adherence was often on six categories and that is You have not missed taking your drugs (mean= 3.24.), You have not missed taking your drugs (mean=3.41), You have someone to remind you about taking ARVs (mean =3.18), You are able take your drugs in right time (mean=3.14) You are able to take ARVS around other People despite the fact that they are not on ARVS (mean=3.14) and You freely interact with your friends despite the fact that you are on ARVS and they are comfortable with it (mean = 3.10). Further still, only one category was rated very often and that is You were counseled about adherence before taking ARVs (mean = 3.3418) and the last category was rated rare, You are able to share with friends about your experience of being on ARVS (mean= 2.99), The findings also indicate that stress and drug adherence positively correlated and A conclusion was made that an improvement in stress management strategies program is likely to increase the level of adherence at 95% level of significance. The study recommends that there is need to sensitize HIV positive adolescents to adopt stress management strategies, despite the fact that they are stigmatized. There is need to uplift the educational level of HIV positive adolescents since most of them were in S5 and S6.

## CHAPTER ONE

### INTRODUCTION

This chapter consists of background to the study, statement of the problem, purpose of the study, objectives of the study, null hypothesis, research questions, and scope of the study and significance of the study.

#### **1.1 Background of the study**

HIV and AIDS is part of the daily life of vast numbers of people around the global. Today there are 34 million people living with HIV and AIDS (UNAIDS 2012) compared to 26.2 million more than a decade ago in 1999. The increase comes as a result of the significant scale up of antiretroviral treatment (ART) while has allowed many HIV-positive people not only to survive but also to lead normal and productive lives.

Globally, more than one million children are infected with human immunodeficiency virus (HIV) and in the United States it has become the sixth leading cause of death among 15–24-year-olds. Despite the trend of increasing rates of infection, advances in therapies have led to survival past 5 years of age for more than 65% of infected children. This global health threat will therefore continue to have a significant impact on child and adolescent psychiatry and psychology. This paper reviews current studies and reports on the consequences of the acquired immunodeficiency syndrome (AIDS) epidemic in the psychiatric care and development of children and adolescents infected by HIV. From a search of all the English-language-based literature on pediatric AIDS, 140 studies are reviewed which address HIV infection and its psychological and social implications. Several topics of mental health significance are examined: (1) the epidemiology of HIV, (2) neurocognitive development among those infected, (3) psychological impact of infection such as stress, stigma worries among others, and (4) the family and social context of HIV. The transition of HIV from an acute, lethal disease to a sub acute, chronic disease has enormous implications for the neurocognitive and psychosocial development of children and families. As children and adolescents infected with HIV continue to live longer, normal developmental milestones and educational needs will take on new significance. Many children will continue to be adversely impacted by non-HIV

factors such as poverty, inadequate medical services, and a lack of social support. This review outlines recent developments that hold promise to effectively reduce the treatment burden on the infected, their families, and health care providers and to decrease the incidence of transmission to the uninfected and increase rate of drug adherence to the HIV adolescents

In Africa, the incidence of HIV infection has stabilized and begun to decline in many countries with generalized epidemics. The numbers of people accessing treatment increased by 63 per cent from 2009 to 2011; however 7 million people eligible for treatment are not getting it. Of even more concern is the fact that 72 per cent of children worldwide who are eligible for treatments are not accessing it (UNAIDS 2012).

Moreover, most people receiving ART in high-prevalence countries in sub-Saharan Africa start treatment late, which limits the overall impact of such programmes. Health systems and medical staff are struggling to provide the quality and consistency of services as programmes are scaled up. Eastern and Southern Africa (ESA) continues to be the epicenter of the HIV epidemic. The Southern Africa sub-region, in particular, experiences the most severe HIV epidemics in the world, with one third (34 per cent) of all people living with HIV globally residing in the 10 countries of Southern Africa.

Nine of the Southern African countries (Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Zambia and Zimbabwe) have HIV prevalence rates among adults (15 to 49 years) of over 10 per cent.

Uganda was among the first hard hit countries of HIV/ AIDS in 1982, when the first HIV/AIDS case was identified along the shores of Lake Victoria. AIDS is mostly in rural areas and the most of people in Uganda live in rural areas.

The Ministry of health surveillance unit estimates that there were 1,055,555 people living with HIV/AIDS by the end of December 2001 and over 940,000 HIV/AIDS related death have occurred since the onset of the epidemic in the country. At the end of 2002, the national prevalence was estimated at an average of 6.2 billion of the total Uganda population. Following a history of declining national prevalence average of 18% with about 30% in the worst hit areas of the country in the early 1990s, the ministry of health

estimated new infections in 2002 alone at 70; 170 cases, new aids cases at 73,830 and death at 75290. This figures could however be an under estimated, due to constraints in aids repoting from the estimated surveillance system. The 2011 Ugandan aids survey indicator showed an increase in HIV/AIDS prevalence among people between 15-49 years from 6.4% to 7.3%.

This is stressful to adolescents that need a lot of guidance and advice. As a result of stress, long periods of high stress can damage a person's immune system and cause physical and emotional illness. Numerous studies have shown that stress can accelerate the progress of HIV. If adherence to HIV treatment is a challenge to adults, then it is even worse for children mostly the adolescents who are facing unmeant psychical needs (Mugynyi 2010) adolescent who are stigmatized become stressed, making it difficult for them to have interest in accessing medical facilities.

## **1.2 Statement of the problem**

Living with HIV/AIDS and the side effects of its treatment can cause significant stress, poor adherence which can weaken the immune system(WHO 2012). If you are living with HIV/AIDS, chances are that you face stressors everyday and that stress can build up, taking a toll on your health David (2005). Although there is no direct correlation between stress and drug adherence, research has shown that stress can weaken the immune system, making it less able to fight off in Sections. And the effects of stress don't end there, “ when you are stressed, your nervous system get activated so you are more sensitive to pain and to emotional stimuli and more easily distressed” stress also increases the risk of depression, a risk that is already greater in people with HIV. Stress and depression can ‘trigger poor HIV self dare “certainly stress makes depression worse and depression can cause people to not take their medicines whether due to forgetfulness or lack of motivation Gray, et’al (2002): Not adhering to your medication, regimen can have serious consequences, allowing the virus to become resistant to the medications and more difficult to control, with the dangers of stress among adolescents in Kagadi sub county, therefore there is need for intervention.

### **1.3 Purpose of the study**

To assess how stress affects adherence of drugs among HIV positive adolescents in Kagadi Sub - County Kibaale District Uganda.

### **1.4 Objective of the study**

- i. To examine the level of stress among HIV positive adolescents in Kagadi Sub - County Kibaale District Uganda.
- ii. To find out the level of drug adherence, among HIV positive adolescents in Kagadi Sub County Kibaale District Uganda.
- iii. To find out if there is a significant relationship between stress and drug adherence among positive adolescents in Kagadi Sub - County Kibaale District Uganda.

### **1.5 Research questions**

- 1) What is the level of stress among HIV positive adolescents in Kagadi Sub - County Kibaale District Uganda?
- 2) What is the level of drug adherence among HIV positive adolescents in Kagadi Sub - County Kibaale District Uganda?
- 3) What is the significant relationship between stress and drug adherence on HIV positive adolescents in Kagadi Sub - County Kibaale District Uganda?

### **1.6 Null hypothesis**

There is no significant relationship between stress and adherence of drugs among HIV positive adolescents in Kagadi Sub - County Kibaale District Uganda?

### **1.7 Scope of the study**

#### **1.7.1 Geographically**

This study was carried out from Kagadi hospital in Kagadi sub county Kibaale District

#### **1.7.2 Contextual scope**

This study intended to examine the effect of stress as (independent variable) in terms of lack of appetite, over eating, over sleeping and adherence as (dependent variable) in terms of poor adherence, over dose and missing dose of drugs among adolescents.

### **1.7.3 Theoretical scope**

The study was based on the Social Readjustment Rating Scale (SRRS) developed by Holmes and Rahe (1967) which believes in identifying major stressful life events. Each one of the 43 stressful life events was awarded a Life Change Unit depending on how traumatic it was felt to be by a large sample of participants. A total value for stressful life events can be worked out by adding up the scores for each event experienced over a 12 month period. The researcher is using this theory of social support because of its nature of causal effect relationship. That is today; support an event in order to cause a positive effect.

### **1.8 Significance of the study**

The following disciplines were benefited from the findings of the study.

#### **Hiv Positive adolescents**

The adolescents with HIV/AIDS learnt more about stress and adherence to drugs hence developing socially, economically and politically.

#### **Counselors**

The study helped the counselor to learn how to handle persons with HIV/AIDS while counseling them hence improving and saving their lives from stress.

#### **Government**

The study helped the government to train more personnel to handle HIV positive youths in health centers.

#### **The researcher**

The research was of great importance to me as a researcher because I acquired research skills which I applied to conduct research in other subjects. Skills like developing questionnaires, interacting with new people and get the necessary information and analyzing data.

#### **Other researchers**

The research benefited the future researchers who carried out research about the same topic of stress and drug adherence among HIV adolescents

The future researchers utilized the findings of the study to embark on the related study.

## 1.9 Operational Definition of key Terms

**Stress;** a state of mental or emotional strain or tension resulting from adverse or very demanding circumstances such as worries, isolation, depressions impaired thinking, lack of concentration among others.

**Drug;** A substance intended for use in the diagnosis, cure, mitigation, treatment, or prevention of disease

**Drug adherence;** Adherence to (or compliance with) a medication regimen is generally defined as the extent to which patients take medications as prescribed by their health care providers.

**HIV;** H – Human – This particular virus can only infect human beings.

I – Immunodeficiency – HIV weakens your immune system by destroying important cells that fight disease and infection. A "deficient" immune system can't protect you.

V – Virus – A virus can only reproduce itself by taking over a cell in the body of its host.

**AIDS;** A birth. – Acquired – AIDS is not something you inherit from your parents. You acquire AIDS after

I – Immuno – Your body's immune system includes all the organs and cells that work to fight off infection or disease.

D – Deficiency – You get AIDS when your immune system is "deficient," or isn't working the way it should.

S – Syndrome – A syndrome is a collection of symptoms and signs of disease. AIDS is a syndrome, rather than a single disease, because it is a complex illness with a wide range of complications and symptoms

**Adolescence;** Is a transitional stage of physical and psychological human development that generally occurs during the period from puberty to legal adulthood (age of majority) which is 12 -18 years.



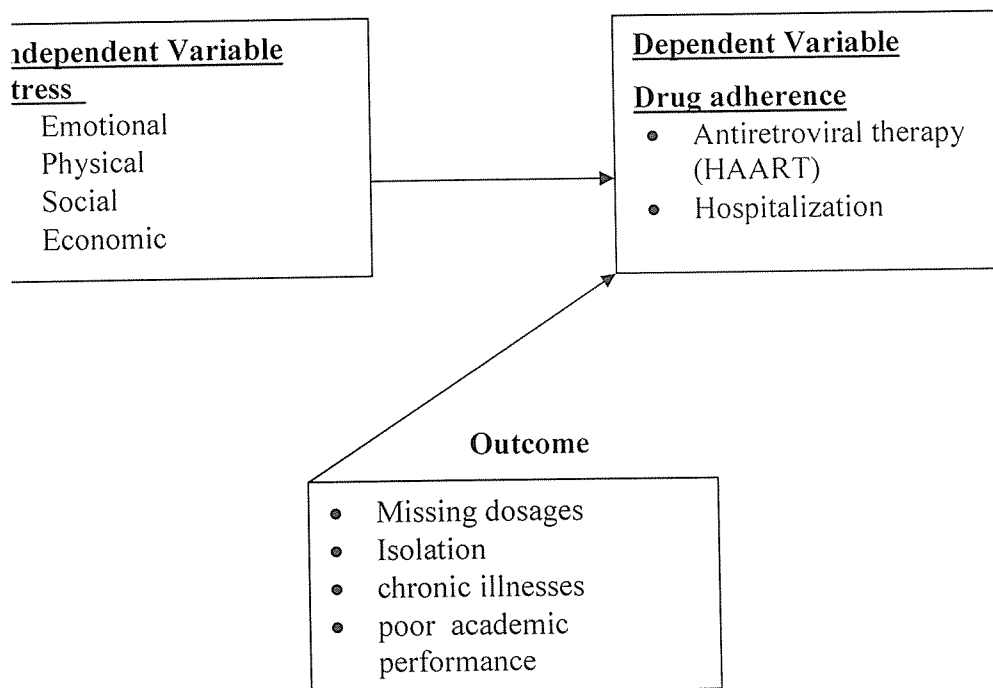
## CHAPTER TWO

### LITERATURE REVIEW

#### 2.0 Introduction

This chapter presents related literature on the variables under investigation. The researcher drew literature from various sources to establish the relationships between stress and drug adherence.

#### 2.1 Conceptual frame work



**Source: Researcher self developed**

Figure 1 shows a conceptual framework showing the relationship between stress, adherence and the possible outcome.

Adolescents who are HIV positive suffer effects such as suffer from social, economic, physical and social stress resulting from daily hassles. The impacts of stress on hospitalization and antiretroviral therapy may lead Missing dosages, Isolation, chronic illnesses poor academic performance

## 2.2 Definition of stress

According to Lazarus (1999) is the anxious or threatening feeling that comes when we interpret or appraise a situation as being more than our psychological resources can adequately handle.

While Hans seyle (1976) look at stress as the responses of psychological arousal elicited by trouble some events.

Thomas Holmes (1979), defined stress as a situation of events that parents difficult demands (for instance divorce. Stress is a normal physical response to events that make you feel threatened or upset your balance in some way. When you sense danger—whether it's real or imagined—the body's defenses kick into high gear in a rapid, automatic process known as the “fight-or-flight-or-freeze” reaction, or the *stress* response

## 2.3 Types of Stress

Basically, stress is divided into Eutress and distress. Eutress is positive or good stress, where as distress is the stress reactions to those events or actions appraised as being negative.

### Acute Stress

Acute stress is the most common form of stress. It comes from demands and pressures of the recent past and anticipated demands and pressures of the near future. Acute stress is thrilling and exciting in small doses, but too much is exhausting. A fast run down a challenging ski slope, for example, is exhilarating early in the day. That same ski run late in the day is taxing and wearing. Skiing beyond your limits can lead to falls and broken bones. By the same token, overdoing on short-term stress can lead to psychological distress, tension headaches, upset stomach, and other symptoms. Schlotz (2011).

Fortunately, acute stress symptoms are recognized by most people. It's a laundry list of what has gone awry in their lives: the auto accident that crumpled the car fender, the loss of an important contract, a deadline they're rushing to meet, their child's occasional problems at school, and so on.

## **Episodic Acute Stress**

There are those, however, who suffer acute stress frequently, whose lives are so disordered that they are studies in chaos and crisis. They're always in a rush, but always late. If something can go wrong, it does. They take on too much, have too many irons in the fire, and can't organize the slew of self-inflicted demands and pressures clamoring for their attention. They seem perpetually in the clutches of acute stress. Ogden, (2007).

It is common for people with acute stress reactions to be over aroused, short-tempered, irritable, anxious, and tense. Often, they describe themselves as having "a lot of nervous energy." Always in a hurry, they tend to be abrupt, and sometimes their irritability comes across as hostility. Interpersonal relationships deteriorate rapidly when others respond with real hostility. The work becomes a very stressful place for them.

The cardiac prone, "Type A" personality described by cardiologists, Meter Friedman and Ray Rosenman, is similar to an extreme case of episodic acute stress. Type A's have an "excessive competitive drive, aggressiveness, impatience, and a harrying sense of time urgency." In addition there is a "free-floating, but well-rationalized form of hostility, and almost always a deep-seated insecurity." Such personality characteristics would seem to create frequent episodes of acute stress for the Type A individual. Friedman and Rosenman found Type A's to be much more likely to develop coronary heart disease than Type B's, who show an opposite pattern of behavior. Ogden, (2007). Another form of episodic acute stress comes from ceaseless worry. "Worry warts" see disaster around every corner and pessimistically forecast catastrophe in every situation. The world is a dangerous, unrewarding, punitive place where something awful is always about to happen. These "awfulizers" also tend to be over aroused and tense, but are more anxious and depressed than angry and hostile. Schlotz (2011).

The symptoms of episodic acute stress are the symptoms of extended over arousal: persistent tension headaches, migraines, hypertension, chest pain, and heart disease. Treating episodic acute stress requires intervention on a number of levels, generally requiring professional help, which may take many months. Schlotz (2011).

Often, lifestyle and personality issues are so ingrained and habitual with these individuals that they see nothing wrong with the way they conduct their lives. They blame their woes

on other people and external events. Frequently, they see their lifestyle, their patterns of interacting with others, and their ways of perceiving the world as part and parcel of who and what they are. Sufferers can be fiercely resistant to change. Only the promise of relief from pain and discomfort of their symptoms can keep them in treatment and on track in their recovery program.

### **Chronic Stress**

While acute stress can be thrilling and exciting, chronic stress is not. This is the grinding stress that wears people away day after day, year after year. Chronic stress destroys bodies, minds and lives. It wreaks havoc through long-term attrition. It's the stress of poverty, of dysfunctional families, of being trapped in an unhappy marriage or in a despised job or career. It's the stress that the never-ending "troubles" have brought to the people of Northern Ireland, the tensions of the Middle East have brought to the Arab and Jew, and the endless ethnic rivalries that have been brought to the people of Eastern Europe and the former Soviet Union. Ogden, (2007).

Chronic stress comes when a person never sees a way out of a miserable situation. It's the stress of unrelenting demands and pressures for seemingly interminable periods of time. With no hope, the individual gives up searching for solutions. Schlotz (2011).

Some chronic stresses stem from traumatic, early childhood experiences that become internalized and remain forever painful and present. Some experiences profoundly affect personality. A view of the world, or a belief system, is created that causes unending stress for the individual (e.g., the world is a threatening place, people will find out you are a pretender, you must be perfect at all times). When personality or deep-seated convictions and beliefs must be reformulated, recovery requires active self-examination, often with professional help. Folkman, (2000). The worst aspect of chronic stress is that people get used to it. They forget it's there. People are immediately aware of acute stress because it is new; they ignore chronic stress because it is old, familiar, and sometimes, almost comfortable. Levo, (2003)

Chronic stress kills through suicide, violence, heart attack, stroke, and, perhaps, even cancer. People wear down to a final, fatal breakdown. Because physical and mental resources are depleted through long-term attrition, the symptoms of chronic stress are

difficult to treat and may require extended medical as well as behavioral treatment and stress management. ohen, (2007).

## **2.4 Sign and symptoms of stress**

According to Financial stress (2012), Everyone reacts to stress in different ways.

However, there are some common symptoms to look out for.

Psychological symptoms can include: constant worrying, an inability to concentrate poor judgment, seeing only the negative, anxious thoughts, memory problems

You can also get emotional symptoms, including: mood swings or changes in your mood, irritability or having a short temper, an inability to relax, feeling overwhelmed a sense of loneliness depression.

## **2.5 causes of stress among people living with HIV/ AIDS**

**Fatalism:** Death, like taxes, is an inevitable part of living for people living with HIV, morbid fixation in death and dying hastens the onset of Frank AIDS. (Leiphart, 1998)

**Chronic impatience:** Haste makes waste and HIV positive individuals with so called, type A personalities, haste can waste CD4 cells. (Leiphart, 1998)

**Lack of trusted support** the absence of a spouse, life partner, confidence, or trusted friend in the life of a person with HIV appears to be a source of stress to him or her. (Leiphart, 1998).

**Sleep disturbances;** Recent research has demonstrated that even one night of extreme sleep disturbance can cause substantial derangement in some parameters of immune function. (Leiphart, 1998).

**In adequate or in appropriate exercise;** people living with HIV experience stress because they do not participate in mild to moderate exercise regularly

**Repeated exposure to HIV and other infections;** many HIV positive individuals do not believe that they have to practice safer sex, because they are already infected they fail to appreciate that repeated re-infection can have extremely severe effects on their immune system, unprotected sex can expose them to more virulent strains of the virus and to viral isolates that are resistant to drugs, they are taking. It can also expose them to other sexually transmitted diseases, some of them, like hepatitis C, potentially lethal. (Joe, 1992).

**Limited capacity for self — care when sick;** most people with HIV lacks capacity to care for themselves when sick this may be how to ensure that one is adequately hydrated and how to give oneself a sterile infusion.

**Limited involvement in Understanding of HIV related health issues;** all those who have provided continuing care to people with HIV recognize that the patients who do well are the ones who are active participants in their own health care. They take the time that is needed to understand how their medications work and why compliance is important. They often elect to investigate a range of alternative or complementary therapies. (Leiphart 1998).

**Passive, uninformed relationship with primary care providers.** By and L large, patients who do well are also patients who work co- operatively and actively to establish and maintain good relationship with their primary care providers they use their appointments efficiently, often arriving at each session with a written list of symptoms, questions, and comments. Extreme passivity in the face of a serious illness is both a symptom of despair and a contributor to physical and emotional decline. Patients who ask few questions, -manifest little affects appear listless and withdrawn, and / or seem isolated and resigned to death may be patients in crisis. (De Gruy, 2012)

**Financial problems;** are the number one source of stress to people living with HIV , you cannot be able to do what you want to do because of lack of money example to transport yourself to a health centre. (Holmes and Rahe, 1999).

**Unemployment;** joblessness is a major source of stress to people living with HIV. Discoll, (1973), states that when the joblessness rates rises so do first admission to psychiatric hospitals, infants mortality and deaths from heart diseases, alcohol related disease and suicide.

**Fear of disclosure.** WHO (2010) states that disclosure is a stress factor to most people living with HIV and if not handled carefully brings negative consequences such as divorce.

**Few Health workers** is another cause of stress to many people living with HIV this makes them to delay as they wait to be attended to (MOH, 2010)

**Adherence;** factors associated with adherence to medications include knowledge and attitudes, and social-behavioral characteristics of the patient. (Stewart, 1989)

**Substance abuse;** this may include alcohol amphetamines, caffeine, nicotine. Patients who consume excessive amounts of one or more of these substances impose stresses on their bodies which end up harming their immune system.(J.M. Leiphart, 1998).

**Protracted grieving;** some individuals experience life disrupting grief for more than six months and cause stress to them. (UCSF, 1998).Depression; depression often goes undiagnosed and untreated in people with HIV disease in part, because many of the classic symptoms of depression such as fatigue , sleep disturbances are common to symptomatic HIV disease itself.(J.M Leiphart, 1998).

## **2.6 Consequences or dangers of stress**

According to Leiphart (1998), Stress is costly, it is a major contributing factor to coronary artery diseases, cancer, respiration disorders, accidental injuries and cirrhosis of the liver and suicide; it is estimated that over two thirds of office visits to physicians are for stress- related illness, these contacts with the medical system cost over one billion dollars per year in the United States.’

Stress also erodes the immune function and hastens the onset of AIDS, it is believed that the immune system is directly influenced by psychological process and the immune system is directly linked to the psyche by a complex network of nerves, hormones and Neuro-peptides, this network of specific physiological pathways allows thoughts and emotions to have a direct impact on immune function and consequently on physical health. (Elizabeth & Lehmann (2012)

Research evidence shows that stress can weaken the immune system, making it less able to fight off infections and he effects don’t end there.

When you are stressed, your nervous system gets activated so you are sensitive to pain and to emotional stimuli, and more easily distressed (Treisman, 2012).

Stress also increases the risk of depression, a risk that is already greater in people with HIV. Stress and depression can trigger poor HIV self care “certainly stress makes depression worse and depression can cause people to not take their medicine”. Says Treismann, (2012) whether due to forgetfulness or - lack of motivation. Not adhering to

the, medication regimen can have serious consequences, allowing the virus to become resistant to the medications and more difficult to control.

Stress can indirectly affect a person's health by prompting behaviors that Jeopardize physical well being such as eating or sleeping properly. Leads to high rise in substance abuse, example increased level of alcohol consumption, cigarette smoking, and marijuana.

Can interfere with cognitive abilities such as attention, concentration and memory in turn, such cognitive disruptions can increase the likelihood of accidents and injuries.

Stress can also affect physical health by altering body functions, leading to symptoms, illness or disease for example headache.

Can lead to physical disorder such as ulcers, high blood pressure and heart disease.

Severe stress, acting through the central nervous system to change the hormonal balance can also impair the organism's immune response decreasing its ability to fight off invading bacteria and viruses. It is also the leading cause of the coronary and artery diseases, cancer, accidents and respiratory disease.

Stress that continues for a long period of time can lead to poor concentration, irritability anger and poor judgment. Stress can raise your risk of depression, which may in turn contribute to heart disease and diabetes. Stress can also lead to marriage breakups, family fights, suicides and violence. Stress causes mental breakdowns.

## **2.7 Drug Adherence**

According to David (2005), Adherence means "to stick firmly." So for people with HIV, medication adherence means sticking firmly to an HIV regimen—taking HIV medicines every day and exactly as prescribed.

## **2.8 Causes of non-adherence**

Reasons for patient non-adherence are complex. Researchers have found that the relationship between information given to the patient and the extent to which instructions are followed is not always strong. Information alone does not seem to affect the degree to



which patients follow recommendations given by health professionals. Situational, personality, or socioeconomic factors often play a more important role in the extent to which patient follow recommendations than do the knowledge and understanding about what they are to do, Harmon, et'al. (2008)

According to Santrock (2000), both internal and external factors seem to influence whether a patient follows health care advice. Internal factors include patient characteristics such as age, culture, social background, values, attitudes, and emotions caused by the disease. External factors include the relationship between the patient and the physician or the nurse; support from family, health care personnel, and friends; and the impact of health education. Studies have shown than men adhere less frequently than women. In addition, unemployed people or those who smoke or drink alcohol are also less adherent. Internal and external factors have a powerful influence on patient decision making and behavior change.

Santrock (2000), states that some studies have found that several features of the therapeutic regimen itself have been correlated with adherence. For example, the more the patient must change his or her lifestyle, the less likely the patient is to follow recommendations. In addition, the less complicated the treatment regimen, the higher the rate of adherence. These findings are consistent with the Health Belief Model. The Health Belief Model proposes that patients act on treatment recommendations when they believe that the benefits of treatment outweigh treatment barriers. They also believe that potential complications are severe and believe that they are at risk of developing complications.

Huffman (1987) states that it is clear that the patient must have the knowledge he or she needs for health care management and must accept the recommendations of health care professionals as something they can accept and successfully achieve. Patients cannot carry out recommendations they do not understand and will not carry out recommendations they do not accept. Nurses and other health care professionals must do more than merely give the patient information. They must also be able to identify potential barriers to patient learning and the ability to follow treatment recommendations. They must act as learning facilitators and problem solvers, helping the patient to clarify

issues and reach a decision or develop a plan that is compatible with his or her own priorities and lifestyle. Ultimately, patients control what they do with the recommendations they are given. The health care professional's responsibility is to enable patients to act on their own behalf by providing information, helping with the practical problems of carrying out recommendations, helping them be aware of alternatives, and supporting them in integrating new knowledge.

## **2.9 Effects of drug adherence**

For diabetes and hypercholesterolemia, high levels of medication adherence are generally associated with a net economic benefit in disease-related costs. Higher drug costs are more than offset by reductions in medical costs, yielding a net reduction in overall healthcare costs Dorow (1998). This pattern is observed at all adherence levels for diabetes and at most adherence levels for hypercholesterolemia. These results are consistent with earlier studies that have reported linkages between medication adherence and health outcomes for these conditions. For hypertension, medical costs tended to be lowest at high levels of medication adherence, but offsets in total healthcare costs were generally not found. The cost impacts of adherence may be less salient for conditions like hypertension, for which a large fraction of the treated population has a relatively low risk of near-term complications.

Adherence-based savings in medical costs appear to be driven primarily by reductions in hospitalization rates at higher levels of medication adherence. For all of the conditions studied here, hospitalization rates were lowest for patients who had high levels of adherence. Hospitalization is the largest component of medical costs in these study samples, so it is likely that the changes in hospitalization risk are the primary driver of the cost savings observed at higher levels of adherence. This is consistent with results reported elsewhere on the impact of pharmacotherapy on hospitalization rates. Greenberg (1993),

According to Singh (1993) Social/economic: People who have social support from family, friends, or caregivers to assist with medication regimens have better adherence to

treatment. Unstable living environments, limited access to health care, lack of financial resources, cost of medication, and burdensome work schedules have all been associated with decreased adherence rates.

**Provider-patient/health care system:** The relationship of the doctor-patient is one of the most important health care system-related factors impacting adherence. A good relationship between the patient and health care provider, which features encouragement and reinforcement from the provider, has a positive impact on adherence. Poor or lack of communication concerning the benefits, instructions for use, and side effects of medications can also contribute to nonadherence, especially in older adults with memory problems. Lahey (1997),

**Condition-related:** Long term drugs administration for many chronic illnesses and adherence to such treatment regimens often declines significantly over time. This often happens when patient have few or no symptoms and the absence of them is a barrier for people to take their medication. It is important for the patient to understand the illness and what will happen if it is not treated. **Therapy-related:** The complexity of the medication regimen, which includes the number of medications and number of daily doses required; duration of therapy; therapies that are inconvenient or interfere with a person's lifestyle and side effects have been associated with decreased adherence.

**Patient-related factors:** Physical impairments and cognitive limitations may increase the risk for nonadherence in older adults. Lack of knowledge about the disease and the reasons medication is needed, lack of motivation, low self-efficacy, and substance abuse are associated with poor medication adherence. Improving adherence enhances patients' safety. It is crucial for health professionals both to assess the patient and foresee the possible causes of nonadherence and follow a policy for increasing medication adherence and achieving the best health outcome. Wade and Tauris (1993)

## **2.10 Stress and Drug Adherence**

Incident stressful events are exceedingly common in the lives of HIV-infected individuals and negatively affect antiretroviral medication adherence and treatment outcomes. Interventions to address stress and trauma are needed to improve HIV outcomes.

(Overload: impact of incident stressful events on antiretroviral medication adherence and virologic failure in a longitudinal, multisite human immunodeficiency virus cohort study). Post-traumatic stress disorder was associated with medication non-adherence independent of psychiatric and medical co morbidities. Medication non-adherence may contribute to the increased morbidity and mortality observed in patients with PTSD (Wade and Tauris (1993).

Adherence is critical to the success of medications and treating illness, particularly infections. In order for potent combination anti-HIV therapy (commonly called ART or HAART) to result in sustained improvement in health, a very high rate of adherence at least 95% is required. There are many factors that can affect adherence in people with HIV and other conditions, including stress, depression, medication-related side effects and competing priorities such as substance use.

Cost issues are stressful in a way that they have been identified as one potential barrier that can affect adherence to ART certainly this is the case in low- and middle-income countries. In contrast, in high income countries such as Canada, Australia, the U.S. and Western Europe, the cost of HIV treatment is heavily subsidized by governments. Thus the cost of care and treatment is not expected to affect adherence, as in many high-income countries universal health care is available to citizens and permanent residents. (Impact on HIV adherence, HCV, and prescribing patterns) Since stress is linked to depression in such a way that people with a history of depression may be more likely to return to the state when they experience minor life stress. People who are depressed are less likely to adhere to medications for their chronic health problems than patients who are not depressed, putting them at increased risk of poor health, according to a new RAND Corporation study. Lahey (1997),

Due to pill fatigue which is brought up as a result of high pill burden (Limitations to Treatment Safety and Efficacy Adherence to Antiretroviral Therapy), stress arises. Those who are stressed may fail to remember to take their medication as they may concentrate on those stressing things resulting into poor adherence on ARVs thus failure on some drugs. This has been and is still a challenge as far as HIV management is concerned.

That is to say, the health units, and medical facilities (ARVs) are by far less than the HIV prevalence of the country at large, meaning that it is still impossible for a HIV patient to access treatment anywhere and in his /her convenient time and the majority are still ignorant about causes, prevention and the entire management of HIV/Aids in general. Gray, (2002):

## **2.11 Related studies**

**Stress:** When we think of stress, we usually think of feeling mentally and perhaps physically distressed from something external such as time pressure, work pressure, or family pressure. That implicit definition works pretty well, but its only part of the picture, when researchers investigate stress, they define the term in a slightly different way. Stress refers to a person's response to something in the environment that challenges the person known as stress response. Sometimes, for example, the little hassles of everyday life may accumulate and lead to considerable stress. (Pearlstone, Russell, & Wells, 1994) and even to reduce resistance to infection (Bross chot, Benschop, Godart & Olf, 1994). Sometimes, one major stressful event gives rise to a multitude of minor ones. For example, a divorce often leads to the need for an attorney, a new house, a new perspective on economic affairs and so forth (Pillow, Zautra, & Sandler, 1996). Chronic or accumulated stress can harm health and well being (House & Smith, 1985) and can lead to psychological dysfunctions (Eckenrode, 1994). Stress encountered on the job, for example, may ultimately lead to burnout, feeling of emotional exhaustion and distance from the people whom you serve and the sense that you are no longer accomplishing anything meaningful.

**Stressors:** surprisingly, stressors do not necessarily have to be things we perceive as negative. For example, having a new baby, getting married and moving to a new home are all stressors because they require the new parent, spouse or home dweller to adapt in many ways. Most of us would welcome certain stressors, such as outstanding personal achievement or marriage. Nevertheless, most stressors are negative events. Stressors can also vary in their intensity. Unhappiness in a marriage as well as divorce are major stressors (Kiecolt – Glaser et al, 1993) as is a feeling of being imposed on by people (Evans & Lepore, 1993), stressors also can be relatively minor or transient changes, such

as being on vacation, going away for a weekend, or having a treasured friend or family member visit for a few days. These pleasant changes are potential stressors because they cause you to adapt in some ways: in the middle of the night in your luxury hotel, you must find your way to the bathroom or while your best friend is visiting, you must cope with new demands on your time and on your physical space. Stressors even can be routine annoyances or challenges to your ability to cope, such as traffic hassles, disagreements with an acquaintance, disputes with a bureaucratic functionary, getting accustomed to new equipment or appliances, rearranging items in a cabinet, or having to have a vehicle repaired.

David (2005), states that Strict adherence to HAART is critical for sustained suppression of viral replication allowing for immune recovery and reducing the risk of the selection of antiviral resistance. Adherence appears to be a serious problem among HIV-positive adolescents. Better education, intervention to relieve depression, and efforts to improve ease of medication use are essential.

Adherence continues to be a major barrier to successful treatment. With highly active antiretroviral therapy (HAART) for HIV infected individuals. HIV infected adolescents and young adults face a lifetime treatment with (HAART). Often individuals who struggle with adherence to HAART face multiple barriers that will therefore impact on the success of any single modality intervention. Thus, conducted a cross-section, observational study to determine the prevalence of personal barrier to adherence and to identify association between those barriers in infected subject 12 to 14. We studied the following personal barriers to adherence: mental health barriers, high/ low self- efficacy and outcome expectancy, and the presence of the specific structural barriers. There were 396 subjects infected after age 9 recruited from sites from the Adolescents Trails Network for HIV/ Aids. Seaward (1994)

According to Cohen,et al (2007): HIV infected individuals who require therapy must adhere to prescribed antiretroviral therapies to prevent progression to Aids, optimistic infection, and the development of the resistant virus. Adherence remains a significant problem for those who have been prescribed highly active antiretroviral therapy

(HAART). Factors influencing adherence can be divided into three major categories. Patient's factors, mediation factors and factors related to the system of care.

The barriers or obstacles that patients perceive as affecting their antiretroviral adherence have been investigated among adults in many studies. In a recent study, common reasons associated with nonadherence were sleeping through dose time, problems in following special instructions, and changes in daily .There has long been evidence that factors directly related to medication regimens can be barriers to adherence. A linear decrease in adherence with increasing number of doses per day has been verified across a number of studies of adults with other illnesses. The number of medications prescribed also has been found to affect adherence However, in addition to barriers directly related to regimens, patient perceptions of whether the medications will actually benefit them substantially seem to be a potentially significant barrier. Patient acceptance of therapy has been found to be associated with trust in the medications' efficacy and safety among adult women. Gray, et'al. (2002)

Cultural background and environment may also influence reasons for adherence. Statistically significant barrier differences by race, with whites more likely to report that medications were inconvenient, and that they were taking more medication than desired. African Americans were more likely to report they had no storage place for medications; they ceased medications when they felt better, they did not take medications when away from home, and they were embarrassed to get refills. These investigators reported that 2 barriers differed by sex, with women reporting they were more likely than men to forget to refill medications and to not understand how to take the medications. Among Latinos, the most frequently reported barriers were feeling depressed or overwhelmed, simply forgetting, and sleeping through a dose.

## **2.12 Conclusion**

In HIV/AIDS, symptoms of depression or post-traumatic stress may interfere with important self-care behaviors such as the ability to adhere to one's medical treatment regimen. However, these problems may frequently go undetected in HIV care settings. The present study used brief self-report screening measures of depression and post-

traumatic stress disorder (PTSD) in the HIV/AIDS care settings to examine (1) frequency of positive screens for these diagnoses; (2) the degree to which those with a positive screen were prescribed antidepressant treatment; and (3) the association of continuous PTSD and depression symptom scores, and categorical (screening positive or negative) PTSD and depression screening status, to each other and to ART adherence as assessed by the Medication Event Monitoring System, regardless of antidepressant treatment. Participants were 164 HIV-infected individuals who took part in a multisite adherence intervention study in HIV treatment settings in Massachusetts.



## CHAPTER THREE

### RESEARCH METHODOLOGY

#### 3.1 Introduction

This chapter consists of research design, population, and sample size, sampling procedures, instruments, validity and reliability of the instruments, data gathering procedures, data analysis, ethical considerations and limitations of the study.

#### 3.2 Research design

The study employed a descriptive correlation design that used both qualitative and quantitative methods of data collection. It was quantitative in the sense that it was based on methodological principles of description, and use of statistical measurements as expected by the researcher. Qualitative data was presented on tables (Wildler, 2002).

#### 3.3 Research Population

This refers to the group that the researcher focused on. The researcher believes that this group has vital information. Therefore, the target population was one hundred (100) HIV positive adolescents respondents in Kagadi Sub County Kibaale District.

#### 3.4 Sample Size

The Sloven's formula was used to determine the minimum sample size.

$$n = \frac{N}{1 + N \alpha^2}$$

N= Target population

n = Sample size

$\alpha^2=0.05$  (level of significance)

### **3.5 Sampling procedures**

The purposive sampling was utilized to select the respondents. From the list of qualified respondents was chosen basing on the inclusion criteria, depending on Age and sex, the systematic random sampling was used and finally select the respondents with consideration to the computed minimum sample size.

### **3.6 Research Instruments**

The research tool that used in this study include the following: (1) *face sheet* to gather data on the respondents' profile;- (gender, age, education qualification and marital status); (2) *researcher devised questionnaires* to examine the stress and drug adherence with a four likert scale. The response modes and scoring will be as follows: *for stress and drug adherence* - 1) strongly disagree (2); disagree (3); agree (4); strongly agree. Interview guide was used because it w the most appropriate method which was used to study the attitudes, values, beliefs and motives of people. It also has an element of flexibility. These people were interviewed individually so as to get independent answers.

### **3.7 Validity and Reliability of the Instruments**

Content validity was ensured by subjecting the researcher devised questionnaires on stress and drug adherence (who shall estimate the validity on the basis of their experience) such as HIV positive adolescents of Kagadi hospital.

The test-retest technique was used to determine the reliability (accuracy) of the researcher devised instruments to 15 qualified respondents. These respondents was not included in the actual study. In this test- retest technique, the questionnaires was administered twice to the same subjects.

### **3.8 Data Gathering Procedures**

An introduction letter was obtained from the college of humanities and social sciences for the researcher to solicit approval to conduct the study from respective officials on HIV positive adolescents, respondents was requested to answer completely and not to leave any part of the questionnaires unanswered and the data gathered was collated, coded into

the computer and statistically treated using the Statistical Package for Social Sciences (SPSS).

### 3.9 Data Analysis

The frequency and percentage distribution was used to determine the profile of the respondents.

The means and standard deviations were applied for the stress and drug adherence of HIV positive adolescents

The following mean ranges were used to arrive at the mean of the individual indicators and interpretation:

Mean Range	Response Mode	Description
3.26-4.00	strongly agree	you agree with no doubt at all
2.51-3.25	Agree	You agree with some doubt
1.76-2.50	Disagree	You disagree with some doubt
1.00-1.75	strongly disagree	you disagree with no doubt

To determine whether there is a significant relationship between stress and drug adherence, Pearson linear correlation coefficient (PLCC) was used to compute the influence of the independent variable to dependent variable.

### 3.10 Ethical Considerations

Confidentiality of the information provided by the respondents was maintained, a researcher sought for permission from officials and the respondents' names were not reflected.

Acknowledge the authors quoted in this study and the author of the standardized instrument through citations and referencing. Present the findings in a generalized manner

### 3.11 Limitations of the Study

*Extraneous variables* which are beyond the researcher's control such as respondents' honesty, personal biases and uncontrolled setting of the study.

Attrition: Not all questionnaires were answered and returned in time.

There was mounting pressure from the administration for student to complete the research on schedule which affects the quality of research.

The study required a lot of time to be dedicated to collect substantial data from one respondent to another making observations, continuous review of literature, data analysis and report writing and this was worked out by devoting more time on the research work by reducing on the leisure time at his disposal.

Some of the targeted respondents were not willing to set aside time to respond to the investigator's questions thus somehow end up frustrating the researcher's efforts to collect substantial data.

The researcher also faced a problem of some rude and hostile respondents, this was as well be solved by both seeking prior permission and remaining calm

## CHAPTER FOUR

### DATA PRESENTATION, ANALYSIS AND INTERPRETATION

#### 4.1 Introduction

This chapter shows the profile of respondents; examine the level of stress among HIV positive adolescents, the level of drug adherence, among HIV positive adolescents and the significant relationship between stress and drug adherence among positive adolescents in Kagadi sub county, Kibaale district. The presentation here is based on data as collected from the field and as analyzed by the researcher.

##### 4.1.1 Profile of the respondents

**Table 4.1: Gender of respondents**

Gender	Frequency	Percentage
Male	32	40
Female	48	60
Total	80	100

*(Primary source, 2014)*

Results from Table 4.1 indicate that most of the respondents were female that is to say 48% and minorities were males with 32% .Therefore, females dominated in this sample.

**Table 4.1.2 Age of respondents**

Age	Frequency	Percentage
12-14	34	42.5
15-18	46	52.5
Total	80	100.0

*(Primary source, 2014)*

As far as age is concerned, 42.5% respondents were in the age bracket of 12-14, followed by 15-18 years of age with 52.5%

#### 4.1.3 Educational levels of respondents

Education level	Frequency	Percentage
s1-s2	1	1.4
s3-s4	27	24.3
s5-s6	52	74.3
Total	80	100.0

*(Primary source, 2014)*

Pertaining the class of respondents, majority had reached s5-s6 with a frequency of 74.3% and s3-s4 with a frequency of 24.3% and minority were s1-s2 with a frequency of 1.4%. This means that a person is able to read and write hence getting correct information from them.

#### 4.2 Level of stress among HIV positive adolescents in Kagadi Sub County, Kibaale district

The first independent variable in this study was stress for which the researcher required to determine its level. It was measured using qualitative questions in which respondents were required to indicate the extent to which they agree or disagree with each of the items by indicating the number that suits their perceptions. Each of these questions were measured on a 4-point likert scale, means and standard deviations were used as indicated in table 4.2

**Table 4.2 To show the Level of stress among HIV positive adolescents in Kagadi Sub County, Kibaale district**

Categories	Mean	Std. Deviation
I am very careful who I tell that I have HIV	3.70	4.539
I am afraid of the side effects of pills	3.41	.791
Medical personnel's normally uses abusive language especially when they are taking to me	3.37	.603
I feel uncomfortable telling people that you are HIV positive.	3.36	.767
I find problems with poor diet	3.35	.863
I am worried to lose friends when they find out that you are HIV positive	3.35	.748
People with HIV are discriminated especially adolescents	3.35	.858
I do not have enough money to access HIV treatment and other related programs	3.34	.826
I feel not going to health centers because of how health workers look at you	3.32	.823
I have not missed taking your drugs	3.24	.830
I can't take my ARVS when people are around me.	3.20	.736
I do not have enough knowledge about HIV/AIDS.	3.15	.929
I am discriminated because of your being HIV Positive	3.12	.946
I fear to tell friends and relatives that you have HIV	2.97	.886
I ever suffer from headache, Anxiety, Indigestion or nausea, sleeplessness, Irritability, Backache, Neck ache Stomach disorders and inability to concentrate	2.02	1.205
<b>Average</b>	<b>3.1901</b>	<b>.33770</b>

*(Primary source, 2014)*

Mean range	Response mode	Interpretation
3.26-4.00	strongly agree	very often
2.51-3.25	Agree	often
1.76-2.50	Disagree	rarely
1.00-1.75	Strongly disagree	very rarely

The means in Table 2 indicated that the Level of stress among HIV positive adolescents was generally very often. This is indicated by the overall average mean (3.1901) and the first nine items were rated very often and that is I am very careful who I tell that I have HIV with a mean of (3.70) with a standard deviation of (4.539), followed by I am afraid

of the side effects of pills with a mean 3.41 of (.791), Medical personnel's normally uses abusive language especially when they are taking to me (mean= 3.37) of (.603) on average, You feel uncomfortable telling people that you are HIV positive mean (3.36), You find problems with poor diet mean (3.35). You are worried to lose friends when they find out that you are HIV positive with mean (3.35), and I People with HIV are discriminated especially adolescents mean (3.35), You do not have enough money to access HIV treatment and other related programs mean (3.34) and You feel not going to health centers because of how health workers look at you (mean= 3.32). In addition the last the items were rated often. The overall mean (3.1901) indicates that on average, most of respondents strongly agreed meaning that they have learnt to cope with HIV/AIDS with regardless of how they are treated and attitude towards them.

#### **4.3 Level of drug adherence among HIV positive adolescents in Kagadi Sub County Kibaale District Uganda**

The second dependent variable in this study was drug adherence among HIV positive adolescents for which the researcher required to determine its level. It was measured using qualitative questions in which respondents were required to indicate the extent to which they agree or disagree with each of the items by indicating the number that suits their perceptions. Each of these questions were measured on a 4-point likert scale, means and standard deviations were used as indicated in table 4.3



**Table 4: 3 Level of drug adherence among HIV positive adolescents in Kagadi Sub County Kibaale District Uganda**

n=80

Categories	Mean	Std. Deviation
You were counseled about adherence before taking ARVs	3.3418	.74912
You have not missed taking your drugs	3.24	.830
You are able to take your medication at any health center	3.21	.774
You have someone to remind you about taking ARVs	3.18	.859
You are able take your drugs in right time	3.14	.868
You are able to take ARVS around other People despite the fact that they are not on ARVS	3.14	.807
You freely interact with your friends despite the fact that you are on ARVS and they are comfortable with it	3.10	.851
You are able to share with friends about your experience of being on ARVS	2.99	.987
<b>Average</b>	<b>3.1635</b>	<b>.41203</b>

Mean range	Response mode	Interpretation
3.26-4.00	strongly agree	very often
2.51-3.25	Agree	often
1.76-2.50	Disagree	rarely
1.00-1.75	Strongly disagree	very rarely

Results in Table 4:3 reveal that the drug adherence among HIV positive adolescents was generally often (average mean=3.1635). The findings indicate that level of drug adherence was often on six categories that is You have not missed taking your drugs (mean= 3.24.), You have not missed taking your drugs (mean=3.41), You have someone to remind you about taking ARVs (mean =3.18), You are able take your drugs in right time (mean=3.14) You are able to take ARVS around other People despite the fact that they are not on ARVS (mean=3.14) and You freely interact with your friends despite the fact that you are on ARVS and they are comfortable with it (mean = 3.10).Further still, only one category was rated very often and that is You were counseled about adherence before taking ARVs(mean = 3.3418) and the last category was rated rare, You are able to share with friends about your experience of being on ARVS (mean= 2.99). This means that most of respondents oftently take their drugs in right time.

#### 4.4 Significant relationship between stress and dug adherence among positive adolescents in Kagadi Sub-County Kibaale District Uganda

The fourth objective was to establish whether there is a significant relationship between stress and dug adherence among positive adolescents in Kagadi Sub-County Kibaale District Uganda. The researcher tested a null hypothesis that there is no significant relationship between stress and dug adherence among positive adolescents. To test this null hypothesis, the Pearson's Linear Correlation Coefficient (PLCC) and the results are indicated in table 4.4

**Table 4.4 Significant relationship between stress and dug adherence among positive adolescents in Kagadi Sub -County Kibaale District Uganda**

Variables correlated	r-value	Sig	Interpretation	Decision on H <sub>0</sub>
Stress Vs Drug adherence	.743	.000	Significantly correlated	Rejected

The results in Table indicate a significant relationship between stress and dug adherence ( $r=0.743$ , sig. =0.000). The findings also indicate that stress and drug adherence positively correlated. The r coefficient of 0.743 indicates that the once stress is got rid of also the Hiv positive adolescents are able to go for medication and ARVs. Since the sig. values (.000) were far less than 0.05, which is the maximum level of significance required declaring a significant relationship. Basing on these results, the null hypothesis was rejected and the alternative was accepted. A conclusion was made that an improvement in stress management strategies program is likely to increase the level of adherence at 95% level of significance

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Introduction**

This chapter presents the findings, conclusions and recommendations following the study objectives and study hypothesis. The researcher also suggests areas for further research.

#### **5.2 Summary of Findings**

The purpose of the study was to assess how stress affects adherence of drugs among HIV positive adolescents in Kagadi Sub - County Kibaale District Uganda. The study had three specific objectives, which included; i) to examine the level of stress among HIV positive adolescents in Kagadi Sub - County Kibaale District Uganda. ii) To find out the level of drug adherence, among HIV positive adolescents in Kagadi Sub County Kibaale District Uganda and iii) to find out if there is a significant relationship between stress and drug adherence among positive adolescents in Kagadi Sub - County Kibaale District Uganda

The findings indicated that most respondents (48%) were females who are in vulnerable groups, aged between 15-18 years (52.5%), majority were in S5-S6 (74.3%)

The level of stress was generally often with mean (3.1901) which indicated that most of respondents agreed. The level of drug adherence is generally often (average mean=3.1635) they strongly agreed. And also indicated a positive-e significant relationship between the level of stress and drug adherence among HIV positive adolescents ( $r=0.723$ , sig. =0.000) the more the government and Non government Organizations have tried to eliminate the stress, the adolescents are now able to go for voluntary counseling and testing, able to disclose their status and get rid of stigma and adhere to drugs.

#### **5.3 Conclusions**

From the purpose of the study, the researcher generated the following conclusions

### **Strengths and Weaknesses**

There were more female respondents compared to the male, indicating a big gender gap.

Most respondents were in S5-S6, indicating a high level of adolescent qualification.

With stress, most of aspects were very often rarely and this was confirmed by the average mean (3.1901). This indicates a low and poor stress management among HIV positive adolescents in Kagadi Sub County.

With the level of drug adherence, one aspect was rated very rarely and this was; you are able take your drugs in right time (mean= 1.49). This indicates that adolescents adhere to drugs.

With the level of drug adherence, one aspect was rated very rarely and this was; you are able to share with friends about your experience of being on ARVS (mean= 2.99). This indicates that adolescents adhere to drugs.

### **5.4 To test null hypothesis of the study**

The null hypothesis of a significant relationship between the level of stress and drug adherence among HIV positive adolescents was rejected. A conclusion was made that an improvement in stress management strategies program is likely to increase the level of adherence at 95% level of significance

### **5.5 Recommendations**

From the findings and the conclusions of the study, the researcher recommends there is need to sensitize HIV positive adolescents to adopt stress management strategies, despite the fact that they are stigmatized.

There is need to uplift the educational level of HIV positive adolescents since most of them were in S5 and S6.

### **5.6 Areas for Further Research**

More studies can be conducted on counseling, adherence to Anti retroviral therapy and so on.

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## APPENDICES:

### APPENDIX A: RESEARCH INSTRUMENTS

#### QUESTIONNAIRE ON THE LEVEL OF STRESS AMONG HIV POSITIVE ADOLESCENTS

Dear respondents

Kindly I request you to fill for me this questionnaire, am carrying out an academic research on **“level of stress among HIV positive adolescents in Kagadi Sub - County Kibaale District”**. Within this context, may I request you to participate in this study by answering the questionnaires? Kindly do not leave any option unanswered. Any data you will provide shall be for academic purposes only and no information of such kind shall be disclosed to others.

May I retrieve the questionnaire within one week (7) days

Thank you very much in advance.

Yours faithfully,

MR. BUSINGE DENIS

#### Instruction

- i) Do not write your name any where
- ii) Tick in any appropriate box

#### Section A

##### 1 (a) Profile of respondents

Male ☐

Female ☐

##### (b) Age

A) 12-14 ☐

b) 15-18 ☐

##### c) What is your highest level education?

S1-S2 ☐ S3-S4 ☐ S5-S6 ☐

**Section II: QUESTIONNAIRE TO EXAMINE THE LEVEL OF STRESS AMONG HIV POSITIVE ADOLESCENTS IN KAGADI SUB - COUNTY KIBAALE DISTRICT**

**Direction:** Please describe the extent unto which you are stressed on each item by using the scoring scale guide below. Kindly write your best rating in the space before each item. Be honest about your options as there is no right or wrong answers.

Score	Response	Description
4	strongly agree	you agree with no doubt at all
3	agree	you agree with some doubt
2	disagree	you disagree with some doubt
1	strongly disagree	you disagree with no doubt at all

You ever suffer from headache, Anxiety, Indigestion or nausea, Sleeplessness, Irritability, Backache, Neck ache Stomach ,disorders and Inability to concentrate	1	2	3	4
You find problems with poor diet	1	2	3	4
You feel uncomfortable telling people that you are HIV positive.	1	2	3	4
You are discriminated because of your being HIV Positive	1	2	3	4
You fear to tell friends and relatives that you have HIV	1	2	3	4
You are worried to lose friends when they find out that you are HIV positive	1	2	3	4
I am very careful who I tell that I have HIV	1	2	3	4
I can't take my ARVS when people are around me.	1	2	3	4
Medical personnel's normally uses abusive language especially when they are taking to me	1	2	3	4
People with HIV are discriminated especially adolescents	1	2	3	4
You do not have enough money to access HIV treatment and other related programs	1	2	3	4
You feel not going to health centers because of how health workers look at you	1	2	3	4
You do not have enough knowledge about HIV/AIDS.	1	2	3	4
I am afraid of the side effects of pills	1	2	3	4



**Section III: QUESTIONNAIRE TO EXAMINE THE LEVEL OF DRUG ADHERENCE, AMONG HIV POSITIVE ADOLESCENTS IN KAGADI SUB COUNTY KIBAALE DISTRICT**

**Direction:** Please describe the extent unto which out the level of drug adherence, among HIV positive adolescents on each item by using the scoring scale guide below. Kindly write your best rating in the space before each item. Be honest about your options as there is no right or wrong answers.

<b>Score</b>	<b>Response</b>	<b>Description</b>
4	strongly agree	you agree with no doubt at all
3	agree	you agree with some doubt
2	disagree	you disagree with some doubt
1	strongly disagree	you disagree with no doubt at all

You have not missed taking your drugs	1	2	3	4
You are able to take your medication at any health center	1	2	3	4
You are able to take ARVS around other People despite the fact that they are not on ARVS	1	2	3	4
You freely interact with your friends despite the fact that you are on ARVS and they are comfortable with it	1	2	3	4
You are able take your drugs in right time	1	2	3	4
You are able to share with friends about your experience of being on ARVS	1	2	3	4
You have someone to remind you about taking ARVs	1	2	3	4
You were counseled about adherence before taking ARVs	1	2	3	4

**THANKS FOR YOUR PARTICIPATION**

# APPENDIX B: TIME FRAME

ACTIVITY	TIME IN MONTHS (2013)								
	1	2	3	4	5	6	7	8	9
Proposal writing									
Making corrections									
Data collection									
Data editing categorization and entry									
Data analysis									
Report writing									
Submission									

### Appendix C: BUDGET

Core activity	Item/Participant	Amount (in UGX)
Literature Gathering	Library search & photocopying	200,000
Pilot study	Researcher	150,000
Questionnaire Designing, printing and photocopying	Typists and research assistants	200,000
Administering and collecting Questionnaires (Travel & communication costs).	Researcher & research assistants	550,000
Data editing, categorization and entry	Researcher and research assistants	200,000
Data analysis	Researcher & research assistants	400,000
Miscellaneous	Researcher, research assistant	200,000
<b>Total</b>		<b>2,300,000</b>

