Chapter One

Introduction

1.1 Background to the Study

Human Immunodeficiency Virus (HIV) and the resultant disease, Acquired Immune Deficiency Syndrome (AIDS), remain the foremost global health and development challenges. The epidemic has cut life expectancy by more than ten years in several nations. Clearly, HIV/AIDS is one of the biggest threats to the achievement of the Sustainable Development Goals (SDGs)[1]. HIV and AIDs: confront us with two challenges; The disease – the medical and epidemiological condition of HIV infection and/or AIDS in individuals and communities; and the developmental problem – the social and developmental impacts of widespread of HIV infection, when infected individuals are found across a country or region[2].

The rapid spread of HIV/AIDS in most of the Sub-Saharan Africa Countries over the past decade is no longer a health problem but a major cause of the ongoing development crisis. Across the regions of the world, sub-Saharan Africa remain most severely affected, with nearly 1 in every 20 adults (4.9%) living with HIV and accounting for 69% of the people living with HIV worldwide[2]. In Nigeria, HIV prevalence is 3.2% among the adult population, giving a total estimate of 3.4 million Nigerians living with HIV.

In Nigeria, as elsewhere, the Acquired Immune Deficiency Syndrome (AIDS) is perceived as a disease of "others" of people living on the margins of society, whose lifestyles are considered "perverted" and "sinful". Stigma is a term that involves both deviance and prejudice but goes beyond both. People living with HIV and AIDS (PLWHA) continue to be burdened by poor care and inadequate services, while those with the power to help do little to make the situation better[3]. A plethora of quantitative studies confirm that HIV-related stigma and discrimination are highly prevalent and feature prominently in the lives of people living with HIV in settings with epidemics as diverse as the United States, Vietnam, and South Africa. Comparison of prevalence across region or sample is complicated by the differences among stigmatizing incidents inquired about as well as different time-frames. The experience of stigma was universal among a small sample in Brazil, and nearly universal among a sample of women in Vietnam. One study in the US indicated that 8 out of 10 families experienced discrimination. In contrast, another study of women with HIV in the US found the prevalence of stigma to be lower, at around 17% of the sample[4].

Self-disclosure has been singled out as an essential safeguard and a valuable tool in many forms of counselling[5]. Self disclosure is the process of revealing information about oneself to another person. The process is most therapeutically effective if it is matched to the client's psychosocial characteristics. Young people disclose what is happening for them early in the treatment process, counsellors and mental health professionals are able to work collaboratively with the young person to provide holistic and personalized treatment plans. In addition, self-disclosure can serve to open clients up to self-reveal without excessive shame, a feeling that tends to shut clients down. The importance of client self-disclosure is further outlined by UNAIDS[6] as a critical component of behavioural HIV prevention interventions such as Voluntary Counselling and Testing (VCT). Existing counselling interventions rely on the assumption that they are likely to get the young persons to feel comfortable enough to disclose their highly intimate and personal issues to a relative stranger[7]. However, the process of client self-disclosure may be complicated when the counselling relationships are not based on trust, honesty, openness, safety, or good communication. Consequences of self-disclosure may also compound clients' willingness to self-disclose. In addition, self-disclosure is rather complex when discussing issues related to sex, sexual orientation, sexual acts, drug use, and disease[8].

HIV self-disclosure is the tendency of an individual to be free to autonomously discuss his/her HIV status with a sexual partner, family, or units of a society. Unfortunately, the potential for rejection, abandonment, physical and emotional abuse and other adverse consequences create substantial barriers to disclosing HIV status. HIV disclosure is a complex issue since quite often disclosure of status is also linked to disclosure of other clandestine behaviours (such as same sex activity, injection drug use, or any HIV risk behaviour[9].

In addition, significant disincentives and barriers to revealing one's HIV diagnosis persist. These include fears of rejection and abandonment, discriminating treatments such as eviction or termination of employment, retribution, violence, and other forms of abuse. Most of these possible outcomes are based on the social stigma that is widely acknowledged to be associated with an HIV diagnosis. Additionally, divulging that one is HIV -infected may expose other stigmatized behaviours or identities. Data throughout the world suggests that failure to disclose HIV status is related to three major problems. First, substantial numbers of new HIV infections could occur among partners of HIV-positive persons who do not disclose their status[10]. Second it could also hinder access to ante- retroviral therapy. Third, failure to disclose could hinder social support required for mental health. These problems emanate from stigma related to HIV/AIDS.

A clear link has also been shown between positive HIV cognition, low risk sexual behaviour and disclosure of HIV status. Disclosure is considered good for mental and physical health as it can increase positive HIV cognition, decrease anxiety and depression, and reduce isolation and high risk sexual behaviour[11]. In most societies, these subjects are often tabooed making them quite difficult to talk about openly and honestly. This complexity may be the reason why client self-disclosure has received minimal research attention in specialized therapeutic interventions. Many clients seeking HIV counselling are concerned about whether to tell others and if so, what to tell, and how. In most cases, people living with HIV are discouraged from disclosing their status to family members and sexual partners due to fear of stigma and discrimination directed either to themselves or to their loved ones. This suggests that disclosure is related to cues that relate to privacy. However, there is a dearth of research on how cues that relate to privacy predict clients' sexual self-disclosure in HIV counselling[12].

Quality of life (QoL) is a term that is popularly used to convey an overall sense of well-being and includes aspects such as happiness and satisfaction with life as a whole. World Health Organization has defined QoL as "Individuals perceptions of their position in life in the context of the culture and value systems in which they live and in relation to their goals, standards, expectations and concerns[13]." The Constitution of the World Health Organization (WHO) defines health as "A state of complete physical, mental, and social well-being not merely the absence of disease".

Quality of life relates both to adequacy of material circumstances and to personal feelings about these circumstances. It includes "overall subjective feelings of well being that are closely related to morale, happiness and satisfaction". Further as health is generally cited as one of the most important determinants of overall quality of life, it has been suggested that quality of life may be uniquely affected by specific disease process such as AIDS[15]. Previous studies have examined the relationships between health-related quality of life (HRQOL) and depression, social supports, HIV infection stage, functioning in daily living, employment, perceived health status, severity of HIV infection symptoms, stress and adverse effect of treatments for HIV infection among subjects living with HIV infection[14]. Living with HIV can impact upon many of the factors that affect their quality of life; not only their physical health, but also their mental and social wellbeing. After all, HIV is not simply a virus that causes disease, but also a social and historical event that impacts how others react towards. Issues including personal safety and human rights as well as other aspects of the political and social infrastructure can radically affect their quality of life.

1.2 Statement of the Problem

More than three decades after the first case, the human immunodeficiency virus (HIV) remains a major public health problem in Nigeria. International and national scale up efforts have seen many HIV infected people being put on antiretroviral therapy. Scientific advancement in antiretroviral treatments and care have resulted in people living with HIV surviving longer and the disease is now considered a chronic illness. Health outcomes from antiretroviral treatment have been based on increased length of life from the treatment. Clinically, the surrogate indicators such as CD4 count, viral load and clinical evaluations remain the major pointers of disease progression and treatment outcome. These clinical markers have been shown to provide an incomplete picture of the impact of disease and its treatment on an individual's life. Health related quality of life (HRQoL) measures in the context self-disclosure of HIV/AIDS.

It has been observed that most of the studies carried out on PLWHIV have been done in other African nations and other parts of the world. However, many studies have not been carried out regarding stress of PLWHIV in Nigeria. This is an issue of concern considering that statistics place Nigeria as one of the top African countries with the highest population of PLWHIV. Moreover, most of the studies that have been done regarding PLWHIV have been focused on HIV/AIDS.

There is hardly any study that combines all the psychosocial variables of self-disclosure and the state of quality of life as it will be done in this study. All of these psychosocial variables potentially have individual and collective impact on the health related quality of life of PLWHIV and which invariable reflects on the level of closeness in disclosing their health status. Since PLWHIV are faced with a myriad of self-disclosure and health related quality of life, empirical study of a combination of the self-disclosure and health related quality of life of PLWHIV is crucial and will provide a robust addition to already existing literature on stress of PLWHIV. Based on the various gaps in literature, this study seeks to investigate the self-disclosure and health related quality of life of HIV infected individuals in Mosan Okunola LCDA, Aimosho of Lagos State.

1.3 Aim and Objectives of the Study

The study aimed to examine the effects of HIV status disclosure on the quality of life of PLWHIV in Mosan Okunola LCDA, Alimosho of Lagos State.

Specific Objective

This study examined:

1. To assess the level of self-disclosure among HIV infected individuals in Mosan Okunola LCDA, Alimosho of Lagos State
2. The health-related Quality of Life among HIV-infected individuals in Mosan Okunola LCDA, Alimosho of Lagos State.
3. Factors influencing self-disclosure among HIV-infected individuals in Mosan Okunola LCDA, Alimosho of Lagos State.

1.4 Research Questions

The following research questions were answered in the study;

1. What is level of self-disclosure among HIV infected individuals in Mosan Okunola LCDA, Alimosho of Lagos State
2. What is the health-related Quality of life among HIV-infected individuals in Mosan Okunola LCDA, Alimosho of Lagos State?
3. What are the factors influencing self-disclosure among HIV-infected individuals in Mosan Okunola LCDA, Alimosho of Lagos State?

1.5 Justification of Study

Referencing the continuous increase of HIV/AIDs in Nigeria, the need for self-disclosure and health-related quality of life among HIV-infected individuals is an important factor in stopping the spread. The need to create awareness on the knowledge and healthy management of the infected and continuous spread of the virus in the public, also on the notion that the virus is not like before is not justification based on the interest in taking care of disclosed cases and managing existing recorded cases for healthy living among infected individuals. The combination of the self-disclosure and health related quality of life of PLWHIV is crucial and will provide a robust addition to already existing literature on stress of PLWHIV.

1.6 Significance of the Study

The literature indicates that PLWHIV are faced with many challenges as been an important factor affecting self-disclosure and health related quality of life of HIV infected individuals. The outcomes of the current study would draw attention to the ways in which they maintain a healthier lifestyle to cope with preventions and self-disclosure. This study will help to disabuse the mindset of the public towards people living with HIV/AIDS and influence a change of attitude towards caring and giving them social support rather than stigmatizing- discriminating and rejecting them.

The results of this study will also provide valuable information for care givers and social workers in primary health care contexts by offering them a practical framework for promoting the health of PLWHIV and inform ministry of health and policy makers. This will help in providing insight into policies that should be implemented to give adequate attention to the health of PLWHIV in Nigeria and to improve their lot as citizens of the nation. Some of the policies that can be implemented include the provision of quality education, healthcare, social support and a robust environment.

Furthermore, public health workers, through the outcome of this study, will become more conversant with the health-related quality of life that best predict the health and well-being of PLWHIV. In addition, the effectiveness of the psycho-educational programme in improving the health and well-being of PLWHIV will provide a tried, true, and efficient intervention strategy, which can be used by public health workers to help PLWHIV who are facing challenges in the area of their health and overall well-being. It will also facilitate and aid the development of more intervention and treatment programmes that will target the areas of concern to help in ameliorating the mental health of PLWHIV.

Non-Government Organisations (NGOs) and caregivers will have firsthand information, from the findings of this study, on the factors that are most crucial to the maintenance of the health of PLWHIV. This information will foster the development and adoption of strategies that are concerned with a reappraisal of the quality-of-care orphans are exposed to.

Finally, the findings of this study will be of help to prospective researchers in the field of education and self-development- the public will become aware of level as well as attitudes towards HIV and AIDS and can get more facts that will help them in developing their research works.

1.7 Scope of the Study

The study covers public health facility that involve HIV patients attending Care and Treatment Clinic (CTC) which will be patients at Aregbesola PHC, Okunola in Mosan Okunola LCDA, Alimosho of Lagos State. It will examine the determinant self-disclosure and health related quality of life among HIV infected individuals in Mosan Okunola LCDA, Alimosho of Lagos State.

1.8. Limitation of the Study

The researcher encountered a language barrier from some of the participants who could not speak English.

During the study, some respondents feared being interviewed, but the researcher told them that the research was strictly for academic purposes and, therefore, they should not fear.

1.9 Operational Definitions of Terms

For the purpose of this research, the following concepts are defined as:

Human immunodeficiency virus (HIV) is a retrovirus that infects cells of the immune system, destroying or impairing their function. (HIV) is a lentivirus (slowly replicating retrovirus) that causes acquired immunodeficiency syndrome (AIDS).

Self-disclosure: is a process of communication by which one person reveals information about himself or herself to another of HIV status. The information can be descriptive or evaluative, and can include thoughts, feelings, aspirations, goals, failures, successes, fears, and dreams, as well as one's likes, dislikes, and favorites.

Health Related Quality: is an important patient reported clinical outcome to better understand the effects of this infection and its treatment on patients' lives.

Endnotes

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Chapter Two

Literature Review

2.1 Conceptual Review

2.1.1 Overview of Human Immunodeficiency Virus (HIV)

The first case of the Acquired Immune Deficiency Syndrome (AIDS) was reported in 1981 in the USA. Within a short period of time the spread of the Human Immunodeficiency Virus (HIV) and AIDS has reached a pandemic form[15]. Now HIV has become one of the world's leading infectious killers, claiming more than 25 million lives over the past three decades. Based on recent UNAIDS World AIDS day report, there are 34 million people living with AIDS across the globe, 2.67 million people became infected with the virus and 1.8 million people died of HIV-related causes at the end of 2019. The same report showed increased access to HIV treatment in last few years, and decreased new HIV infections and AIDS-related deaths to the lowest levels since the peak of the epidemic. New HIV infections were reduced by 21% since 2011, and deaths from AIDS-related illnesses decreased by 21% since 2015. These reports support the fact that the global response to AIDS has demonstrated tangible progress toward the achievement of Millennium Development Goals 6 (MDG 6). However, AIDS had become one of the leading causes of death among adults in sub-Saharan Africa. This region with only 12% of the global population remains as the most heavily affected by HIV&AIDS in 2019. An estimated 68% of all people living with HIV resided in sub-Saharan Africa. The prevalence of HIV is comparatively lower in Asia than the other continents, but the actual size of the Asian population makes it the second largest grouping of people living with HIV[16].

Voluntary Counselling and Testing (VCT) is a package aimed at duly reducing the incidence and prevalence of HIV in a given population. It comprises of pre and posttestcounselling which enables the counselee give informed consent to do a HIV test having fully understood what the test involves and what the test means. VCT for HIV/AIDS is the process by which an individual undergoes pre-testing counselling to enable him/her make an informed choice before being voluntarily tested for HIV[17].

VCT enables people to receive confidential counselling ahead of testing, if they then decide to test, post-test counselling and on-going psycho-social support can be provided to help individuals take preventive measures, whether their result is positive or negative. HIV counselling is a confidential dialogue between a person and a caregiver aimed at enabling the person cope with stress and make informed personal decisions relating to HIV/AIDS. HIV counselling involves pretest counselling, post-test counselling, follow up counselling and referral for care and support if one is sero-positive. HIV counselling may involve scenario like requesting for test only, requesting for counselling only, premarital service, couple service, and group service. VCT is a client-initiated intervention that gives the client an opportunity to discuss his/her HIV risks confidentially and be assisted to learn his/her status for the purposes of prevention, treatment care and support.

Human Immunodeficiency Virus (HIV) infection and AIDS remain a major public health crisis in Nigeria that harbors more people living with HIV than any other country in the world, except South Africa and India. Stigma and discrimination is a significant challenge to the success of achieving universal access to HIV prevention, treatment, care and support. According to UNAIDS, Nigeria has about 3.8 million people living with HIV, the second largest globally. Stigma and discrimination are major barriers to testing, treatment uptake, and adherence[18].

In addition, UNAIDS has noted that recent statistics shows 36.9 million persons were living with HIV as of the end of 2017. Out of this, 21.7 million people were accessing antiretroviral therapy in 2017, 1.8 million people became newly infected with HIV in 2017, while 940 000 people died from AIDS-related illnesses in 2017. In another study, it has been reported that 36.7 million people were living with HIV/ AIDS of which about 46% have access to treatment. Of these, Nigeria has the second highest number, 3.8 million with adult prevalence of 3.1%. About 44% of adults and children living with HIV have access to ART based on the eligibility criteria of CD4 count of 350 cells/mm[19]. HIV epidemiology in Nigeria indicates that infections are higher among women while prevalence varied across the six geopolitical regions. One of the main factors driving the infection in Nigeria includes low risk perception, concurrent sexual partnerships, and inadequate access to quality healthcare services[20]. At the center of these factors is the challenge of HIV-stigma and discrimination which are a major barrier militating against the national response to the epidemic.

Epidemiological studies throughout the world have reported only three main modes of HIV transmission. One is through sexual intercourse with an infected person; second, through exposure to blood, blood products or transplanted organs or tissues; and third, from an infected mother to her fetus or infant before, during or shortly after birth. Casual contacts such as touching, hugging and kissing an infected person with HIV/AIDS do not result in HIV transmission[21].

Stigma and discrimination. Some scholars have defined stigma as an undesirable or discrediting attribute that an individual possesses, thus reducing that individual's status in the eyes of society. Stigma can stem from a particular characteristic, such as a physical deformity, or from negative attitudes towards a group, such as homosexuals or prostitutes. Under Goffman's definition, society labels an individual or group as different or deviant. Another study defined stigma as an attribute that links a person to undesirable characteristics. In a further explanation, other scholars have indicated that stigmatized individuals are believed to possess some attributes or characteristics that convey a social identity that is devalued in a particular social context. Others have defined stigma as societal processes that are linked to societal power structures. Stigmatization can lead to prejudicial thoughts, behaviors, and actions on the part of governments, communities, employers, health care providers, coworkers, friends, and families[22].

Discrimination is an aspect of stigma defined as a form of exclusion, or restriction of expression, marginalization, or prevention from access to something or services. Thus, discrimination is normally expressed by force, from avoidance to life threats, lynching and death. Stigma has been classified by several authors. Some divide stigma into felt, or perceived stigma and enacted stigma. AIDS stigma by association with someone who is HIV positive is classified as secondary stigma or "courtesy stigma" which can affect family and friends of PLWHAs, as well as health care workers. Other classifications identify stigma and discrimination as operating at three levels; personal, community and institutional[23].

HIV/AIDS related stigma and the resulting discriminatory attitudes creates an environment that fuels the epidemic. This is often times because of inadequate knowledge about the disease in the general population, even among health care professionals. Several studies among nurses, physicians and laboratory scientist in Nigeria showed that these groups of caregivers still lack knowledge about the disease, thus enhancing their negative attitudes and often times refusal to treat and care for PLWHAs[24].

2.1.1.1 HIV among Gender Equity

Gender equity means fairness of treatment for both women and men according to their respective needs. If equality is the end goal, equity is the means of getting there. According to one of the reports titled "GENDER EQUALITY AND HIV IN NIGERIA: FACT SHEET 2016," gender is an inextricable part of the HIV/AIDS equation; and young women are disproportionately vulnerable to infection; elderly and young girls are also disproportionately affected by the burden of care giving in the epidemic's wake[25].

The NACA-produced report according to The Guardian Features Online, (2016, 3.09 am): "Globally, females make up to 50 per cent of People Living with HIV (PLHIV) while in sub-Saharan Africa, 60 per cent of PLHIV are females. In low and middle- income countries worldwide, HIV is the leading cause of death and diseases in women of reproductive age. Men and boys are affected by gender expectations that may encourage risk-taking behavior, discourage accessing health care services and narrowly define their roles as partners and family members. Rates of HIV testing and treatment tend to be lower among men compared to women. Gender inequality and poor respect for the human rights of women and girls are key factors in the HIV/ AIDS epidemic: both from the point of view of effectiveness and from the call of socialjustice"[26].

Other studies referred to WHO report that women in sub-Saharan Africa are ahead of men in the number of those living with HIV and that several factors are responsible for the variation. These include gender norms related to masculinity can encourage men to have more sexual partners and older men to have sexual relations with much younger women, raising the risk of more infection against women; Violence against women (physical, sexual and emotional), which is experienced by 10 to 60% of women (ages 15-49 years) worldwide, increases their vulnerability to HIV; and Forced sex can also contribute to HIV transmission due to tears and lacerations resulting from the use of force[27].

Furthermore, another study has shown that every week, around 7000 young women aged 15-24 years become infected with HIV. In sub-Saharan Africa, three in four new infections are among girls aged 15-19 years and young women aged 15-24 years are twice more likely to be living with HIV than men. More than one third (35%) of women around the world have experienced physical and/or sexual violence at some time in their lives. In some regions, women who experience violence are one and a half times more likely to become infected with HIV[28].

Sixty percent of about 3.5 million Nigerians living with the virus, are women, meaning that men account for the remaining 40 percent[29]. In addition, it has been suggested that violence against women and girls is a key driver of HIV. Demonstrating a strong links between gender-based violence (GBV) and HIV infection with violence as a risk factor for HIV as well as a consequence of being HIV positive. About 35.6 percent of women across the world have experienced either non-partner sexual violence or physical or sexual violence by an intimate partner or both. Gender-based violence and gender inequality are increasingly cited as important determinants of women's HIV risk. Forced sex increases the risk of HIV transmission among women due to lacerations. Women dreading or experiencing violence, are less likely to negotiate for safe sex, go for HIV testing, share their HIV status and access treatment[30]. For example, in Nigeria, women and girls abducted by the insurgency groups are forced to marry, convert and endure physical and psychological abuse, forced labor, and rape in captivity. More than 500 Nigerian women and girls have been abducted since 2009[31].

Various studies in Nigeria identified the following as factors that make women and girls more vulnerable to HIV, viz: most women and girls lack power to control key aspects of their lives including marriage and sexual negotiation in and out of marriage; most women and girls also lack social and economic power to control the impact of the epidemic in their lives (about 70% of Nigerian women live below the $1 a day threshold emphasizing the feminization of poverty in Nigeria); women and girls lack access to education at all levels, economic empowerment largely tied to property rights (10% of women in Nigeria own land); in Nigeria, 60-79% of the rural workforce is women but men are five times more likely to own land; Weak political commitment to domesticate and implement international and regional treaties and national laws that aim to address gender inequalities among others, remain a challenge for empowering women across board in Nigeria[32].

Masculinity norms impress on men to have more than one sexual partner and it is common for older men to have unprotected sexual relationship with much younger women, it stated that:

"... gender inequality has been identified as a key driver influencing the vulnerability of women and girls to HIV infection. This is evident in the current HIV prevalence among the general population in Nigeria of which women constitute 58 per cent. The rate among young women between the ages of 15 and 24 years is estimated to be three times higher than among men of the same age"[33].

Meanwhile, the National Policy on HIV and the National Strategic Framework and Plan over the years elucidate the strong commitment of the national response to promoting gender equality and upholding human rights of all Nigerians. Furthermore, another study has noted that: "This guiding principle is a clear indication of due recognition of the place of gender equality in the national HIV response". Within the ambits of the policies and legal frameworks, participation and involvement of women, girls, men, boys and the marginalized groups including key populations is encouraged. The federal nature of the country also allows each State to enact its own laws and develop its own policies[34].

There is however, a clear gap between rhetoric and reality. Available data continues to point to the fact that women, girls, men and boys are disproportionately affected. Women and girls vulnerability to HIV is deeply rooted in their biological make up and this is exacerbated by a complex mix of societal norms and value systems which not only affect women and girls but also men and boys. Gaps however exist both in implementation and provision of some of the laws that mitigate its efficiency. Punitive laws may reverse the gains in the HIV prevention achieved over the years especially among key vulnerable populations. Efforts are however being scaled up to make gender equality and human rights response a reality[35].

2.1.1.2 Causes of HIV among Nigerians

1. **Unprotected sexual intercourse:** In studying some of the causes of HIV among Nigerian women, some Nigerian and global scholars have suggested that the engagement into unprotected sexual intercourse and relationship as number one cause. This has accounted for about 80% of the cause of the illness very much referred to heterosexual intercourse relationship between male and female without intention of pregnancy. However, research has not been able to establish the rate of HIV connected to unprotected sexual behaviors among heterosexuals in Nigeria. Nevertheless, it has been established that this act is a very risky behavior practiced among heterosexual men and women. The consequences of such a risky behavior can be measured by the high rate of unwanted pregnancy and infection of sexual transmitted disease such as HIV/AIDS. Studies have also suggested that most Nigerian women tend to engage in unprotected sexual behavior due to lack or limited power to negotiate the need to use protective techniques such as condoms. Sometimes poverty and low access to capital some prevent women from protective sex[36].
2. **Patriarchy society:** Nigeria as a patriarchy society gives validation to the interest of men and women live subject to their dictates and interest most time. With this background,

women lack power to negotiate their sex partners or methods of intercourse. Such limited and lack of power of negotiation has its root in the paternal nature of Nigerian society. It is a society where women have less power to negotiate their health[37].

3. **Ignorance:** Nigerian women tend to engage in unsafe sexual behaviors because of limited or lack of knowledge related to the use and effectiveness of safe sex tools; inconvenience of the use of condoms and cost.
4. **Feel of sexual pleasure:** the cause of HIV/AIDS disease could be attributed to the fact that some Nigerian women tend to abandon the use of condoms in order to have that physical and emotional closeness attributed to sexual behavior. That, a lot of Nigerian women abandon protective sexual behavior in order to enjoy sexual pleasure; demonstrate love to their male counterpart; enhance mood and sometimes to please their partners; heighten sexual pleasure; strengthen romantic relationships and possibly the urgency to feel close or very connected to their male counterparts[38]. Thus, it has been suggested that the rate of condom use among some Nigerian women is very low because of the above- mentioned variables.
5. **Disempowerment:** Some national, continental, and global scholars have also suggested that one of the major causes and spread of this disease among Nigerian women rests on the several disempowerments experienced by Nigerian women. Thus, this form of risk factor ranges to areas of their lives, which include cultural, social, education and financial disempowerments. Such disempowerments tend to put Nigerian women in a vulnerable position of sexual exploitations. In addition, most recent national, continental, and global studies have suggested that formally married women are at higher risk than current married women regarding several forms of disempowerments[39].

6. **Prevalence of tuberculosis (TB):** In another sphere, scholars have suggested and identified the prevalence of TB (Tuberculosis) among Nigerian women to have some links to HIV/AIDS. It is important to note that Nigeria has been reported to have fourth highest prevalence of TB globally. Unfortunately, Nigerian government has not been able to provide comprehensive prevention and treatment strategies to combat the high level of prevalence associated with TB. In addition, most Nigerian women with TB have not been able to either complete their treatment regime or made use of the limited resources available to prevent or treat TB as it has been shown to be linked to HIV/AIDS disease[40].
7. **Sharing of needles and syringes:** In most recent studies associated with addiction and substance abuse, it has been suggested that addicts who engage in injecting drugs and sharing of needles and syringes are also vulnerable to been infected with HIV/AIDS disease. Thus, it has been demonstrated that 14% of women have been infected through this means. Other studies have also suggested that every year, 9% of Nigerians have been infected with this disease through sharing of needles and syringes. Overall, though there has been reduction at the rate of infection through sharing of needles and syringes, the rate is still high in Nigeria[41].

2.1.2 Spread of HIV/AIDS

2.1.2.1 Environmental, social, cultural & religious beliefs

It has been established through research on the national, continental, and international ground that Nigeria has the second highest record of HIV/AIDS globally[42]. Unfortunately, very much many of Nigerians living with HIV/ AIDS are either ignorant of their HIV/AIDS status or have decided not to seek treatment in order to prevent continuous spread of the disease. However, the question here is all about some of the causes of HIV/AIDS in Nigeria, especially among Nigerian.

2.1.2.2 Cultural attitudes toward HIV

According to Suleiman, the African conception of health assumes a holistic perception, which asserts that the state of health includes political, social, economic and “religious” well-being of individuals and communities. It suggests that health is a general well-being. HIV/AIDS has impact not only on the biological well-being, but also on the general well-being of individuals and that of the community.

2.1.2.3 Poverty and forced prostitution

Poverty affects fertility and sexual activity. African women bear the higher brunt of poverty because they have low access to capital. In traditional economy, they do not have access to cattle and land, while in modern economy they are discouraged from higher education and the labor market. They also face unequal opportunities in access to household resources. Consequently, women do not have access to the few available jobs and sufficient income- earning. Since women have to live, some women depend on marriage and sex to access resources. Among many young and unmarried women, sex is the instrument with which they get jobs, qualify for higher education and even fulfill their requirements for award of certificate, especially when they migrate to urban communities.

Poverty also makes it difficult for the people to use condoms to protect themselves against the infection. Because of poverty, when infected with sexually transmitted diseases they lack resources to visit clinics. In Nigeria, primary health care does not provide reproductive health care services freely. In addition, due to stigmatization, the victims of sexually transmitted diseases prefer treating their ailment secretly[43]. They therefore depend on medical quacks and self-medication.

2.1.2.3 HIV as sexual immorality

In a study, it was found that HIV/AIDS in some traditional communities is referred to as "akoatosi" (virulent gonorrhea). Sexually Transmitted Diseases are regarded as diseases caused by sexual immorality. Consequently, its victims cannot disclose as they would be treated with ridicule and embarrassed. The victims therefore only seek treatment secretly. Underlying that conception is the belief that HIV is similarly a disease caused by immoral conduct, thus its victims should be made to serve the punishment for their indiscipline. This position is in contrast with western perceptions of HIV. Because of these opposing views, many PLWAs do not have confidence in modern hospitals until the disease becomes advanced[44].

2.1.2.4 Reluctance to protective sex

Some people believe that using condoms is indirect sex, and it is not pleasurable and enjoyable, hence they are reluctant to use condoms. Thus, studies have noted that the reluctance to the use of condom is also supported by the perception that since World Health Organization (WHO) is busy promoting traditional methods of health caring and then local contraceptives should be encouraged. People believe that many of the local contraceptives are better than condom, but the local contraceptives are not promoted and that if there is need to protect illicit and unfaithful sex, why not use local contraceptives, which are affordable in cost, and accessibility[45].

2.1.2.5 Notion that HIV is incurable

The Yoruba people believe that HIV is an incurable and fatal disease and that no amount of care given to PLWAs will avert death through AIDS. The knowledge of Anti Retro- viral drug is very low among people. Even in the institutions caring for PLWAs, the use of ARVs is affected by some cultural factors. These include the side effect of the drugs. The PLWAs always complained that it makes them dizzy, and make them to lose their hair[46]. ARVs are also affected by irregular supply to those who want to use the drug. There are also many PLWAs who could not afford the cost of ARVs. In the context of all the above, the belief is that it is needless to care for the victims, because according to a respondent in a study conducted among the Yoruba people of South-West Nigeria.

2.1.3 Caring for an HIV patient is a sheer waste of both money and time.

2.1.3.1 Vulnerability of Women to HIV

Unequal treatment given to women compared to men in the Yoruba society forms the basis of women being more vulnerable to HIV than men are. The fact that women do not have equal access to society's resources such as capital, land and other social needs like their male counterparts exposes women to finding means of access to such resources. For many women, the available means is sexuality, which becomes an indiscriminate tool of access to resources. Such women are exposed to illicit pre-marital sexuality and after marriage they are exposed to extra-marital sex. While engaged in this practice, they are not usually mindful of the health conditions of their sex partners. Generally, among the Yoruba, and indeed in many sub-Saharan Africa, women are betrothed for marriage upon payment of marriage goods or dowry by their prospective husbands, thus selling out their sexual rights to men[47]. Women then bequeath their sex rights to their husbands. Even if the husband is known to have health problems, in so far those problems have not impaired his manhood. Women do not have 'cultural' right to refuse sex. In many circumstances, the combined effect of the gender inequality is sexually related problems in women[48].

Furthermore, it is very important we understand that not all Nigerian women are equally vulnerable to this disease at the same level/rate. Thus, other determinants position most Nigerian women to be categorized as the most vulnerable population. These determinants include but not limited to the following: educational level; location; marital status; economic power; and age.

These can be labeled key determinants that tend to significantly increase the vulnerability of any Nigerian women in general. The point is that some Nigerian women are more vulnerable than the rest of the well-placed Nigerian women who are highly educated; with high economic power; well experienced with life (age); married, etc[49].

2.1.3.2 Social Attitudes toward HIV Patients

HIV/AIDS is a complex disease associated with social, political and economic disabilities of the societies affected. It is not only a biological infection, but also political, social, economic and psychological. The pattern of spread, its prevalence, and the care and support in AIDS show that there are many interlocking variables contributing to the epidemic. These variables include gender inequity economic imbalance, and misplacement of priorities in government policies[50]. The impact of public beliefs and perceptions about HIV/AIDS and the quality of their attitude toward PLWHA, conducted in Iran, the prevalence rate of discriminatory attitudes toward PLWHA in this study was very high and most of participants had discriminatory and negative attitudes toward PLWHA. It shows that PLWHA are extremely stigmatized in Iran. It was found that negative and discriminatory attitudes towards people living with HIV/AIDS (PLWHA) are one of the biggest experienced challenges by people suffering from HIV, and these attitudes have been regarded as a serious threat to the fundamental rights of all infected people who are affected or associated with this disease in Iran[51].

Knowledge, beliefs and attitudes of nurses and laboratory technologists towards people living with HIV/AIDS (PLWA) and the factors responsible for these attitudes. The fear of being infected at workplaces, educational institutions and in the community has led to irrational and discriminatory treatment of people living with HIV/AIDS (PLWA). Their rights to employment, housing, education and even health and nursing care are being violated because of their HIV status. This practice unfortunately exists despite strong evidence from research that has revealed that non-sexual contact with HIV positive individuals carries little or no risk. This is even more so if careful precautions with blood products are taken, as this further protects people from contracting the infection. The resultant effects of such negative attitudes include poor patient management, with people being denied most needed treatment, care and support. This in turn could affect their morale, self-esteem and self-determination to live quality lives devoid of stigma, fear, repression and discrimination[52].

According to the study, though, most of the respondents (96.0%) knew the causative agent of AIDS to be a virus and the main modes of transmission to be sexual intercourse, blood transfusion, sharing sharp objects and perinatal transmission, yet. There were also erroneous beliefs by the majority of the respondents that the HIV could be transmitted through insect bites (84.3%), touching and hugging (90.6%), sharing of toilet facilities with infected persons (90.6%), and poor levels of health and nutrition (92.9%). The fear of contracting HIV through accidental inoculation of infected blood has assumed alarming proportions, affecting not only the career choices of young people and discriminatory practices towards PLWAs, but it has also compromised the quality of care provided for them. Lack of confidence of health workers arising from the lack of knowledge and skills to provide AIDS counselling and advice has been identified as another factor that can explain the negative attitudes exhibited[53].

The spread of HIV in Nigeria has social, cultural, and economic attributes. These variables tend to leave Nigerian women very much vulnerable and at high risk. This has nothing to do with the womanhood; rather, it has to do with the way women are treated in Nigerian society in all these spheres of the society's life.

2.1.3.4 Psychological Impacts of HIV on Nigerian

Research and studies that have produced sufficient data have suggested that there are causes, population vulnerability, and of course rates of this disease. Such studies and research tend to run through ages, psychological development, gender, and sexual orientations. However, this portion of this paper will review and analyze data regarding some of the psychological impacts of HIV among Nigerian women. Other studies have suggested that these psychological impacts include direct victims of the disease and indirect victims (children, partners, family members, caretakers, etc).

In light of direct victims of the disease, recent studies have suggested that Nigerian women tend to display some symptoms of depression resulting from their mood whenever they learned of their diagnosis of HIV disease[54]. In addition, some of other recent studies have demonstrate that the prevalence of depressive symptoms is higher among women who are not educated, unemployed and disempowered women within the Nigerian society. This is in addition that most Nigerian women experiencing depressive symptoms due to this disease also display severe physical symptoms associated with depression. Other studies suggested that psychotropic medications and psychological intervention would go a long way to help these women not only managed their HIV, but also, their depressive symptoms[55].

Regarding social/cultural stigmatization of HIVpatients, most recent studies have suggested that victims of the disease tend to display symptoms of stigmatization associated with the cultural and gender role in the Nigerian society. This is because “Stigmatized persons lose social status; they are discounted and discredited reduced in the minds of others from being whole and acceptable individuals to those whose identities are spoiled and tainted”. Such an impact could affect their social, emotional, self-worth, self-perception and self-esteem, which tend to affect their employment, family, and social responsibilities. The impact tends to be extremely negative due to the societal perception of HIV; and the way it was transmitted. Thus, Nigerian women are held responsible personally, blamed and judged for the disease[56].

All these psychological impacts and more are very much on the increase as there is no consistent monitoring of the spread of this disease among Nigerians in general and women in particular. In addition, most of the women inflected by the disease have not been able to either have access to or seek psychological services in order to manage these psychological impacts. Though there have been some efforts by few to combat these psychological effects, HIV in Nigeria has been evolving overtime. This evolutionary movement of the disease also involves evolutionary movements of the effects to all Nigerians and to particular vulnerable population-Nigerian. The Nigerian government and the society in general need to reposition their attitude toward Nigerian. More also, there is need for planning, developing, implementing, monitoring and evaluation of evidence-based treatment for individuals with HIVin general and Nigerian[57].

2.1.3.5 Available Treatment Modalities (Traditional & Western approaches)

It will be incomplete to discuss treatment of HIV among Nigerian women without first attempting to discuss issues around prevention. Prevention as a strategy has been highly supported by many professionals, government agencies (state, national and global) as one of the most effective strategy toward combating HIVamong the most vulnerable population. Thus, prevention strategies should be identified as a priority for all including women themselves. In light of this assertion, most scholars and studies have identified three levels of prevention-primary, secondary and tertiary levels. These levels of prevention can come in the form of psycho education on the rate, risks factors, treatment availability, assessing treatment services, adherence toward treatment recommendation, management of stigma, etc.[58].

The need and urgency for the Nigerian government and agencies to develop prevention strategies that are very much contextualized and evidence based. In this sense, women and other sub-groups among women's needs should be included while preventionists develop any form of prevention program. In other words, these prevention programs need to be specific to the women and/or sub-group among women (racial, ethnic, young women, low socioeconomic, uneducated, former married women, etc.). Moreover, at the same time, these programs will have to be theory driven in their planning, development, implementation and monitoring stages[59].

This form of prevention and treatment modalities are very western oriented and they can be helpful toward the reduction of risk factors and enhancement of the protective factors among this population. These are treatments and prevention modalities that are theory-driven; evidence based. This means that they have been tested and proven to be effective and efficient. In addition, they have been shown to be very handy for many health professionals in Nigeria. Most of these professionals have been trained on the application and contextualization of these western-based prevention and treatment modalities. Although there may be some challenges in the application and contextualization of these western- oriented approaches, it has been recognized and accepted as effective, efficient and evidence based by Nigerian health workers. These health workers have been well positioned to make these approaches available and accessible to most women.

Although the Nigerian government, Nigerian health professionals and the Nigerian society have been proactive and progressive in harnessing, implementing and contextualizing these wester-oriented approaches, they seem to lack in the understanding of the effectiveness and efficiency of the traditional method of prevention and treatment. The fact that biomedical methods only cannot provide comprehensive prevention and treatment for individuals infected with the disease in Nigeria[60]. All forms of treatment and prevention approaches can really be effective if used appropriately in combination with biomedical forms. However, objecting to the benefits of traditional health practitioners (THP) toward prevention and treatment of HIV/AIDS. Therefore, there appears to be no consensus on whether THP is beneficial or not.

Opponents of THP assert that it is illogical and unscientific in its application and contextualization. In addition, other studies have suggested that THP does not have the capability of diagnosis and treatment. Rendering judgement that THP is non-evidence based. Nonetheless, THP practices can be used in a combined activity with the biomedical approaches. In reality, THP can play a supportive role such as psychoeducation, encouraging safe sex behavior, and providing community-based prevention and treatment[61]. Thus, it is important to recognize the role of THP and biomedical methods in developing a prevention and treatment programs in Nigeria for Nigerian.

2.1.4 Knowledge of Voluntary Counselling and Testing for HIV

Knowledge is defined by the Oxford English Dictionary as what is known in a particular field or in total facts and information[62]. It is also the confident understanding of a subject with the ability to use it for a specific purpose if appropriate. Voluntary Counselling and Testing education is one of the non-formal educations, which may be transmitted through printed materials and audios to arm people with enough information. Specific media a public health educator needs is determined by a place of meeting, interest level of group and time of meeting. Education on VCT is based on public health needs but clients' need will be attended to only when there is yieldedness to the service[63].

2.1.5 Compliance to VCT for HIV

Compliance as defined by Stedman's medical Dictionary is the consistency and accuracy with which someone follows the regimen prescribed by a physician or other health professional.

Compliance is also the extent to which patient's behaviour coincides with medical advice. It is the ability and willingness of a client to follow recommended health practices. Although so many strategies to improve compliance have been on, rate of compliance does not guarantee good medical health. Medically, compliance is not limited to taking drugs but expands to include life style practices. Compliance to VCT for HIV/AIDS is the willingness of a client to undergo HIV test through the process of pre-test, test and post-test counselling. This test is done at 6 months interval while the sexually active group is at 3 months interval. This is in consideration of the long incubation period of the disease[64].

Factors Affecting Compliance to Voluntary Counselling and Testing (VCT) Services for HIV/AIDS. There are many factors that may deter people from accessing VCT services and they include;

i. **Method of reporting HIV results:** During VCT services there are different methods of reporting test results; among them is the named and anonymous reporting method. Clients are less worried when their demographic profile is not required during testing[65].

ii. **Social factors:** Stigma and discrimination are the major social factors that hinder people from complying to VCT for HIV/AIDS because of some consequences like fear of loss of job and abandonment by friends.

iii. **Availability of treatment and anti-retroviral:** The interest to access VCT services depends on the availability of anti-retroviral, medical and social support services for people with HIV otherwise, they see it as a needless venture.

iv. **Quality of services:** VCT services should match the needs of the target group, including the medical and emotional needs to maximize client's access, participation and involvement. Some centres offer inadequate services such that clients do not undergo pre-counselling before test while others do not know the result of the test[66].

v. **Type of Test:** Test for HIV can give immediate to few hours result using simple- rapid (S/R) or same day testing while other types take weeks for result to be ready.

vi. **Cost of VCT Services:** Cost of VCT services may hinder people from going for HIV test. This includes the cost of going to the centre and the charges for the service. Government of Nigeria offers free VCT services and advocates affordable fees for the private sectors to ensure that low socio-economic groups can afford the services.

vii. **Community Mobilization:** Provision of adequate information, education, communication and community mobilization is thought to be an important element in ensuring access to VCT services[67].

viii. **Knowledge of VCT services:** Knowledge of VCT services is a major factor that affects peoples' compliance to VCT for HIV/AIDS. Information on where the services are provided can be disseminated to the public through awareness campaign (Mulugeta, 2003).

ix. **Knowledge of people living with HIV/AIDS (PLWHA):** The initial message about HIV/AIDS is that it kills and invariably scared people from going for the test. Presently PLWHA are living normal life with anti-retroviral, good diet and clean environment.

2.1.6 HIV Prevalence Rate in Nigeria

According to the 2018 National HIV Sero-prevalence, Nigeria has an HIV prevalence rate of 4.6%. All the 36 states and FCT have HIV prevalence above 1% with 17 states having HIV prevalence greater than 5%. This translates to about 2.95 people (1.2million men and 1.73

million women) living with the virus in the country. The number of new infections is put at 323,000 adults and 57,000 children. Infection rates among young people aged 15-19 put at 3.3%; 20-24 at 4.6% and 25-29 at 5.6% are considered very high[68]. Record shown that in Nigeria, the HIV prevalence rate among adults ages 15-49 is 3.9 percent. Nigeria has the third-largest number of people living with HIV. The HIV epidemic in Nigeria is complex and varies widely by region. In some states, the epidemic is more concentrated and driven by high-risk behaviours, while other states have more generalized epidemics that are sustained primarily by multiple sexual partnerships in the general population. Youth and young adults in Nigeria are particularly vulnerable to HIV, with young women at higher risk than young men[69]. There are many risk factors that contribute to the spread of HIV, including prostitution, high-risk practices among itinerant workers, high prevalence of sexually transmitted infections (STI), clandestine high-risk heterosexual and homosexual practices, international trafficking of women, and irregular blood screening[70].

Nigeria has the second largest HIV epidemic in the world. Although HIV prevalence among adults is remarkably small (3.1%) compared to other sub-Saharan African countries such as South Africa (19.2%) and Zambia (12.9%), the size of Nigeria's population means 3.5 million people were living with HIV in 2015[71]. An estimated 60% of new HIV infections in western and central Africa in 2015 occurred in Nigeria, together with South Africa and Uganda, the country accounts for almost half of all new HIV infections in sub-Saharan Africa every year. This is despite achieving a 35% reduction in new infections between 2015 and 2019. Unprotected heterosexual sex accounts for 80% of new HIV infections in Nigeria, with the majority of remaining HIV infections occurring in key affected populations such as sex workers[72].

HIV prevelance is highest in Nigeria's southern states (known as the South South Zone), and stands at 5.5%. It is lowest in the southeast (the South East Zone) where there is a prevalence of 1.8%. There are higher rates of HIV in rural areas (4%) than in urban ones (3%). Approximately 180,000 people died from AIDS-related illnesses in Nigeria in 2015. Since 2005, the reduction in the number of annual AIDS-related deaths has been minimal, indicative of the fact that only half (51%) of those living with HIV in Nigeria are accessing antiretroviral treatment (ART)[73].

i. Key Affected Populations and HIV in Nigeria

Sex workers, men who have sex with men and people who inject drugs make up only 3.4% of the Nigerian population, yet account for around 32% of new HIV infections. The Nigerian National HIV/AIDS Strategic Plan (NSP) 2010-2015 included plans to introduce behaviour change communication for key affected populations. To deliver this, peer education systems are being scaled-up, alongside social media messaging that aims to reach those populations who tend not to present for HIV services[74].

ii. Sex workers and HIV in Nigeria

18.6% of male sex workers and 24.5% of female sex workers in Nigeria are living with HIV. This is eight times higher than the general population. The 2012 National HIV/AIDS and Reproductive Health Survey found HIV prevalence to be even higher among female brothel-based sex workers, at 27.4%. There is marked difference between genders with only 17.5% of male sex workers testing for HIV compared to 44.8% of female sex workers. Similary, only 54.7% of male sex workers reported using a condom with their last client compared to 92.9% of female sex workers[75]. Both genders reported low condom use with regular partners.

iii. Men who have sex with men (MSM) and HIV in Nigeria

The number of men who have sex with men (sometimes referred to as MSM) who are living with HIV in Nigeria is increasing. This group now bears the heaviest HIV burden in the country whereas, before 2013, sex workers were the worst affected group. In 2007, 13.5% of men who have sex with men were living with HIV. In 2015, prevalence had risen to 23%. Men who have sex with men are thought to account for 10% of all new HIV infections in the country.

Despite NACA stating that "no provision of this law will deny anybody in Nigeria access to HIV treatment and other medical services", many Nigerian men who have sex with men do not access HIV services. In 2010, only 18% of men who have sex with men were reached with HIV prevention programming. In the same year, 51% reported using a condom the last time they had sex and 25% reported testing for HIV in the past 12 months[76].

iv. People Who Inject Drugs (PWID) and HIV in Nigeria

It is thought that 9% of new HIV infections in Nigeria every year are among people who inject drugs (sometimes referred to as PWID) Women who inject drugs are disproportionately affected; they are seven times more likely to be living with HIV than their male counterparts (14% compared to 3%)[77].

In 2015, NACA reported that around half (52.7%) of people who inject drugs share needles and syringes. 7.3% share needles and syringes all the time and more than a third (36.4%) shared needles some of the time. Although this is lower than in 2010, helped in part by efforts to reach people who inject drugs with HIV prevention services, these rates remain incredibly high[78].

A key issue is that harm reduction services such as opioid substitution therapy and clean needle exchanges are currently not available in Nigeria. Available services are limited to targeted information, education and communication, condom distribution and hepatitis C treatment. However, discussions on developing a national harm reduction strategy began in 2015[79]. In 2015, NACA began working with United Nations Office on Drugs and Crimes (UNODC) on a draft national HIV response strategy to target people who inject drugs. It has also begun to train staff from its National Drug Law Enforcement Agency and 11 civil society organisations working with people who use drugs on HIV responses targeted to this group's needs.

v. Young people and HIV in Nigeria

According to report submitted by NACA suggests that 4.2% of young people (ages 15-24) are living with HIV. Awareness of HIV prevention is higher among young men than women. In the 2013 Demographic and Health Survey (the most recent available), 70% of young men (ages 15-24) were aware that using a condom can reduce the risk of HIV transmission compared to 56% of their female peers. Young women have a higher HIV prevalence and are infected earlier in life than men of the same age group. In 2013, more than 34,700 young women were infected with HIV compared to 19,900 young men. Early sexual debut is common in Nigeria, which begins at less than 15 years old for 15% of Nigeria's youth. This is one factor that increases HIV vulnerability among young people, alongside very low HIV testing rates - only 17% of young people know their HIV status. However, only 12% have access to antiretroviral treatment.

Despite yearly increases, the number of pregnant women visiting health facilities remains low, as does the number of health facilities providing PMTCT services. To improve the situation, programmes designed to actively engage the private-health sector and traditional-birth attendants (TBAs) on HIV have been implemented. For example, the Agbebiyeprogramme in Ondo State set out to incentivize TBAs to refer women to public health facilities that provide quality mother and child care services. In 2019, the programmeresulted in 91% of the 45,000 pregnant women in the state accessing antenatal services in public health facilities. In early 2020, the telecommunications company Etisalat started rolling out SMS messages to its subscribers about PMTCT and where people could seek HIV services. It is hoped that large-scale communications like this will encourage women to come forward for testing to prevent their babies being born with HIV[80].

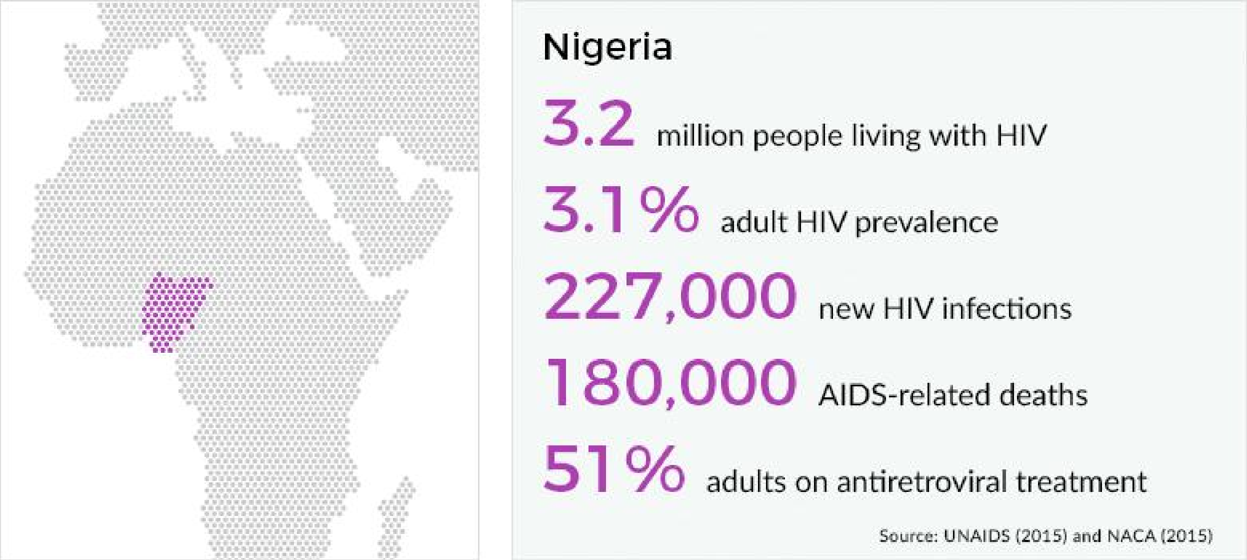
vi. Concept of HIV Education in Nigeria

Family Life and HIV Education (LLHE) lessons are part of the Nigerian school curriculum. In 2014, more than 1 million pupils attended LLHE lessons[81]. The requirements include a comprehensive list of topics relating to HIV, including the basic facts about HIV transmission and prevention, alongside more complex issues such as stigma and gender-based violence.

- **Preventing tuberculosis (TB) among people living with HIV:** Nigeria has the fourth biggest TB epidemic in the world. It is one of ten countries that together are home to 80% of all people living with HIV who also have TB. The risk of developing TB infection declines dramatically if a person living with HIV is on antiretroviral treatment. In Nigeria, 22% of people diagnosed with TB are also living with HIV[82]. The low uptake of HIV treatment in Nigeria could explain why so many people are developing TB, and why the country is not on track to meet its target of halving TB prevalence.

Multi-drug resistant TB is becoming an increasing problem, caused when treatment is started and not completed or taken incorrectly. Only 15% of TB cases in 2015 were diagnosed and treated successfully.

- **AIDs-related deaths in Nigeria 2015**



Nigeria

3.2 million people living with HIV

3.1% adult HIV prevalence

227,000 new HIV infections

180,000 AIDS-related deaths

51% adults on antiretroviral treatment

Source: UNAIDS (2015) and NACA (2015)

Figure 2.1: AIDs-related deaths in Nigeria 2015

Source: UNAIDS (2015) and NACA (2015)

- **Government commitment to HIV in Nigeria:** As well as the National Strategic Plan (NSP) on HIV and AIDS 2010-2015, the country initiated a Presidential Comprehensive Response Plan (PCRP) in 2013 as Nigeria was missing national targets in its HIV response. As of 2016, whether the PCRP has achieved its stated goal of preventing 105,000 new HIV infections in two years has not yet been reported. However, the PCRP initially led to a significant increase in government spending on its HIV response.

In early 2015, President Jonathan signed a new antidiscrimination bill into law which secured the rights of people living with HIV, protecting HIV-positive employees from unfair dismissal and from mandatory HIV testing. However, in 2016 UNAIDS reported that 21% of people living with HIV had been denied access to health services and reproductive health services due to their status[83]. Nigerian cities Abuja and Lagos are among 50 cities with high HIV burdens in the world to be included in the **International Association of Providers of AIDS Care's** Fast-Track Cities initiative. The initiative is led by each city's mayor and local administration to help cities become "more sustainable, secure, smart and healthy". As part of the initiative, Microsoft is implementing a programme that will help cities provide remote clinical services and other e-health initiatives. This will enable health centres to reduce costs without reducing services and provide real-time information to patients.

2.1.7 Barriers to HIV prevention in Nigeria:

Nigeria is Africa's most populous country, and is home to the third largest number of persons living with HIV/ AIDS in the world. Poverty, stigma, discrimination, and a poorly coordinated health system constitute major barriers to HIV treatment and prevention efforts. As of 2016, the Palladin Consumer Retail Partners (PCRP) has achieved its stated goal of preventing 105,000 new HIV infections in two years has not yet been reported. However, the PCRP initially led to a significant increase in government spending on its HIV response[84].

1. **Legal barriers on HIV prevention in Nigeria:** One of the major barriers to accessing HIV prevention programmes for men who have sex with men are laws that prohibit their activities. For example, same-sex relations in Nigeria are criminalised with 14 years imprisonment. This is not only limiting access for HIV prevention programming for this

community, but causing nationwide stigma and discrimination against people based on their sexual orientation. The feminisation of Nigeria's HIV epidemic is in part due to the gender inequality that is embedded in its society, culture and law.Although women do have land rights, their rights are weaker than men's[85]. The result is a high fertility rate of 5.5 children per woman, due to the pressure on her to give birth to boys who can inherit and own land, although this rate is slowly declining.

If a woman has a girl first, she is more likely to have more children, not use contraceptives, have short periods between pregnancies, and be subjected to polygamy. Each of these factors increases a woman's vulnerability to HIV. Although Nigeria had several strategies on gender equality and HIV, less than 1% of spending on HIV goes towards them[86].

2. **Structural barriers on HIV prevention in Nigeria**: A simple lack of sites that deliver HIV services (testing sites, PMTCT sites, and treatment sites) presents problems for the Nigerian population.

   Blood transfusion and unsafe medical injections do result in some new cases of HIV but the rates are minimal (0.5% and 1.2% of new HIV infections in 2010 respectively). As a result, enhanced efforts could almost eliminate this risk. Although there are guidelines for certain practices, the lack of universal precautions and failure to record blood safety information in all circumstances means this transmission route remains.

3. **Economic barriers on HIV prevention in Nigeria:** The funding of Nigeria's HIV response remains challenging. The vast proportion of money comes from international donors. Despite the PCRP initially leading to a boost to domestic funding this continues to fluctuate[87].

Funding problems arose in 2016 following an audit of NACA by the Global Fund to Fight AIDS, Malaria and Tuberculosis. The audit found evidence of “fraud and collusion in the amount of US$3.8 million”, causing the Global Fund to suspend its funds. The Global Fund has committed more than US$1.4 billion to Nigeria since 2003, with over US$800 million disbursed between 2012 and 2016. (US $545m on HIV, US $708m for malaria and US $155m for TB)[88]. In recent years, sustaining domestic funding for HIV responses has become a priority of donors. Pilot schemes on innovative financing mechanisms, such as taxes on imports and levies on telephone calls, are currently underway in countries including Nigeria. Nigeria has also begun developing investment cases for its six most affected states to mobilise domestic resources and make state-level responses more effective[89].

4. **HIV Counselling and Testing (HCT) in Nigeria**: The National HIV& AIDS and Reproductive Health Survey of 2072, the most recent available, found very low uptake of HIV testing in Nigeria - just 23% of males and 29% of females had tested in the last year. Less than 70% of these people had received their results. A push on the number of sites providing HTC services has resulted in a huge increase, from around 1000 in 2015 to more than 8000 in 2019. However, this number is woefully short of the estimated 23,600 sites needed to provide universal coverage. There are a number of reasons why more people are not testing for HIV in Nigeria. These include supply problems with testing kits and logistic issues getting further supplies. There is also a common belief that HIV testing and counselling (HTC) centres are where HIV-positive people go to access care, rather than them being testing centres for those who don't know their status.

2.1.8 Concept of Self-disclosure

HIV disclosure remains a general concern among PLWHA, disclosure is a reasoned process whereby the costs and benefits to oneself and others are weighed. HIV disclosure is often characterized as a dilemma; on one hand, it can promote health, support, and psychological wellbeing; on the other hand it can lead to negative consequences. Subsequently, HIV disclosure is a planned and selective behavior which responds to the PLWHAs' balance of the potential risks and benefits of secrecy and disclosure[90]. Studies indicate that disclosure of HIV positive status to sexual partners is an important public health strategy because it offers a number of benefits to the infected individual and to the general public. Disclosure of sero-status has been shown to promote engagement in preventive behavior, access to the necessary support for coping with the illness; motivate partners to seek testing, change behaviour and thus ultimately decrease transmission of HIV[91]. In addition, Voluntary Counselling and Testing (VCT) services place emphasis on HIV status disclosure among HIV-infected clients, particularly to their sexual partners.

In spite of the numerous benefits, individuals diagnosed with HIV often have substantial difficulty telling others that they are infected and may not disclose their status to anyone[92]. A number of studies indicate that some PLWHA are not likely to disclose their status to anyone at all. Overall, non-disclosure of a sero-positive status to sexual partners has generated a lot of debate and concern as it puts people at direct risk of getting infected and re-infected. Inspite of this, many PLWHA do not disclose their seropositive status to their sexual partners putting them at risk of infection. In spite of these trends, earlier studies on HIV disclosure have mainly been conducted among homosexuals and heterosexuals in the developed countries[93]. This makes the results less applicable to developing countries due to the difference in the social cultural contexts in the developed and developing countries.

Rates of PLWHAs' disclosure to sexual partners tend to vary by study, depending on the country. According to the study HIV disclosure rates are much higher in the developed countries and this may be attributed to the low levels of stigma and discrimination experienced by PLWHA in the region. In addition, the recent HIV prevention efforts in the developed countries have focused on promoting HIV counseling and testing with disclosure of HIV sero-status to all prospective sexual partners; this has increased the focus on disclosure. The high prevalence rates are collaborated by various studies; a cross-sectional study carried out in Hawaii and Seattle, among a racially diverse sample of HIV positive women established that 75.2% of the PLWHA had disclosed their sero-positive status to sexual partners. Another study carried out in London indicates that 86% of the sexually active PLWHA disclosed to their sexual partners[94]**.** These study results are however, not in agreement with those from a cross sectional survey carried out among PLWHA attending HIV care in French Antilles and French Guiana which indicated that 84.6% of those in a couple disclosed their sero-positive status to their steady partners. The results however, confirm that the steady partner was the first and most reliable confidant for those disclosing and that second hand disclosure was low[95].

The review indicates lower rates of disclosure to sexual partners in Russia, the Caribbean and Asian countries which may be attributed to the cultural attitudes in these countries. A study carried out among Injectable Drug Users (IDUs) in St. Petersburg, Russia indicated that 44% of those who were positive disclosed to any sexual partner. In Indonesia, 67% of IDUs living with HIV/AIDs disclosed to their spouse. A cross-sectional survey carried out to examine factors related to disclosure of HIV status among clinic attendees at the university hospital in Jamaica indicates low HIV disclosure rates (51%) among the clinic attendees. In another study, gender differences in the rates of disclosure were observed; females were observed to be more likely to disclose sero-status (60%) than the males (49%)[96].

5. Regional prevalence of HIV status disclosure

A number of studies have documented that rates of disclosure in Sub-Saharan countries are generally low, although they vary substantially in different populations. A review of literature by Medley, Garcia-Moreno and Maman 2017 reported that the rates of disclosure from various studies in low income countries range from 16.7% to 86%, with the lowest rates (16.7% to 32%)[97] being among pregnant women tested in antenatal care in Sub- Saharan Africa. Another study carried out in South Africa has also reported low disclosure rates, only 36% of a rural sample of 55 women had disclosed their status 5 months after diagnosis. On the other hand, a study among PLWHA at the South African AIDS service organizations indicated that 58% of the respondents disclosed their status to the recent sexual partners. These study points to slightly higher rates of HIV disclosure which may be attributed to the difference in the study settings.

Surprisingly, a study carried out in North East Ethiopia among adult clinical service users indicated very high rates of sero-positive status disclosure to sexual partners (93.1%)[98]. Another study focusing on the factors that influence disclosure of HIV positive status in Mityana district of Uganda revealed that most of the PLWHA (80%) with sexual partners had disclosed to them. A study involving a sample of 630 HIV infected men and women with recent sexual contact attending Anti-Retroviral Therapy (ART) clinics in Cape-Town, South Africa found out that only about 20% of the sample had not disclosed their HIV status to their most recent partners[99]. The variations in the HIV disclosure rates may be attributed to differences observed in the study periods and the study settings. Disclosure rates recorded were much higher in the later study due to the passage of time which may be attributed to reduced stigma and increased access to ART. Moreover, the studies were based in a clinic setting which is accompanied by provider-initiated counseling which may promote disclosure.

Disclosure patterns in the region also indicate that PLWHA are more likely to disclose an HIV negative test result than an HIV positive one. Research carried out in Abidjan established that 96.7% of the HIV negative women and 46.2% of the HIV positive women disclosed their HIV status to their sexual partners during a 2 year follow-up[100]. Despite this, studies investigating issues related with disclosure in sub-Saharan Africa have been limited to one or two questions included in quantitative studies of social support or stigma (Miller & Rubin, 2007). Therefore, an in-depth study to understand the predictors HIV self disclosure is very important in informing policy and interventions that can increase rates of disclosure among couples.

2.1.9 Concept of Health-Related Quality

Quality of life (QoL) had been conceptualised and developed by different disciplines. Hence, many definitions and conceptual frameworks had been hypothesized. Wellbeing within communities was the sociologists' concern, and was assessed by evaluating objective social indicators such as economic indices, environment quality and family status. On the other hand, psychologists acknowledged subjective wellbeing and defined QoL in terms of satisfaction with different life domains. The term health-related quality of life (HRQoL) was introduced in the medical literature and examined the effect of illness and its treatment on patient's QoL[101]. To understand the meaning and conceptual development of the concept of QoL/HRQoL, a literature search of QoL/HRQoL conceptual models in the Western literature was performed followed by a critical analysis of the existing models as will be presented in the current section.

Quality of life (QoL) is a term that is popularly used to convey an overall sense of well-being and includes aspects such as happiness and satisfaction with life as a whole. World Health Organization has defined QOL as Individuals perceptions of their position in life in the context of the culture and value systems in which they live and in relation to their goals, standards, expectations and concerns. The Constitution of the World Health Organization (WHO) defines health as a state of complete physical, mental, and social well-being not merely the absence of disease[102].

"Quality of life relates both to adequacy of material circumstances and to personal feelings about these circumstances. It includes overall subjective feelings of wellbeing that are closely related to morale, happiness and satisfaction. Further as health is generally cited as one of the most important determinants of overall quality of life, it has been suggested that quality of life may be uniquely affected by specific disease process such as AIDS[103].

Previous studies have examined the relationships between health-related quality of life (HRQoL) and depression, social supports, HIV infection stage, functioning in daily living, employment, perceived health status, severity of HIV infection symptoms, stress and adverse effect of treatments for HIV infection among subjects living with HIV infection. Living with HIV can impact upon many of the factors that affect our quality of life; not only our physical health, but also our mental and social wellbeing. After all, HIV is not simply a virus that causes disease, but also a social and historical event that impacts how others react towards us. Issues including personal safety and human rights as well as other aspects of the political and social infrastructure can radically affect our quality of life[104].

Living with HIV can impact upon many of the factors that affect our quality of life; not only our physical health, but also our mental and social well-being. After all, HIV is not simply a virus that causes disease, but also a social and historical event that impacts how others react towards us. Issues including personal safety and human rights as well as other aspects of the political and social infrastructure can radically affect our quality of life[105].

There have been many publications from studies on factors influencing the QoL in patients with HIV, but the results from our study are interesting because of intervention that we are using to change/improve QoL in PLWHA. QoL in males and females of PLWHA. Females showed lower quality of life in comparable domains than males. The differences in life satisfaction and health worries were statistically significant. The effects of a 10-week group-based cognitive-behavioral stress management/expressive- supportive therapy intervention (CBSM+) and a time- matched individual psycho-educational. While women in the CBSM+ group condition showed a significant improvement in mental health QOL from pre- to post-intervention, women in the individual condition did not change. Patients with HIV infection should receive better psycho-education and psychological intervention[106].

Health-related quality of life (HRQoL) was introduced in the literature, the concept of QoL was still used in the medical studies. This concept misuse might be because QoL is a general concept that investigates several life domains in addition to health status whereas HRQoL investigates the QoL in relation to illness symptoms, complications and treatment outcomes. Hence, researchers might have preferred to assess the overall QoL of their patients. Uses of the HRQoL is questioned in health research while there is lack of consensus on the definition of QoL. In the field of nursing, QoL research is an interest and it's assessment is a measurable outcome of nursing interventions, the concept is poorly conceptualized and there is a need for concept development within the nursing discipline[107].

2.2 Theoretical Review

2.2.1 Locus of Control Theory and PLWHA

Locus of control is a term introduced by psychologist Julian Rotter that represents social learning theory's concept of internal versus external control of reinforcement. Locus of control refers to a predisposition in the perception of what causes reinforcement. Essentially, it is the degree to which individuals feel that they have control over reinforcements or outcomes of behaviours. One would have an internal locus of control if he or she feels as though consequences of his or her actions are contingent on personal behaviours or characteristics. On the other hand, an individual with an external locus of control would expect that the outcome or reinforcement is a function of luck, fate, or chance and that this consequence is generally unpredictable[108].

A multitude of research has been conducted regarding Rotter's aspect of locus of control. Study that looked at the relationship between locus of control and life stress, as measured by depression and anxiety. It was found that the less internal locus of control an individual perceives, the greater the likelihood for stress and depression[109]. When an individual perceives that he or she has control over a situation, he or she will be less likely to perceive the situation as stress-inducing. Also, intemal-locus-of-control individuals tend to experience lower anxiety than others therefore, externality may act as a stress buffer. Likewise, externality was found to be positively correlated with general stress[110].

A psychological theory that explains People Living with HIV/AIDS (PLWHA) is the locus of control theory. The locus of control theory, which originated from Julian Rotter, postulates that every human being has a "place" the locus where he/she feels the control of his/her life rests; this place or locus of control can either be internal or external; and it is this position that creatively determines how much "in control" an individual feels about his/her life[111]. Locus of control is defined as an individual's generalized expectancies regarding the forces that determine rewards and punishments. Individuals with an internal locus of control view events as resulting from their own actions. Persons with an external locus of control view events as being under the control of external factors such as luck[112]. For instance, a person with an internal locus of control will attribute the failure to meet a desired goal to poor personal preparation, whereas, one with an external locus of control will attribute failure to circumstances beyond the individual's control. The way individuals interpret such events has a profound effect on their psychological well-being. If people feel they have no control over future outcomes, they are less likely to seek solutions to their problems. The far-reaching effects of such maladaptive behaviours can have serious consequences[113].

People who have internal locus of control are generally the happiest in life; even when surrounded by negativity, they still feel they are in control and that the ability to make a desirable change lies within them. Those with external locus of control easily give in to feelings of helplessness in difficult times and they are generally the most miserable in society. This agrees with the Law of Control, which posits that, an individual's state of happiness or unhappiness depends on how much the individual feels in control of his or her life. An individual's levels of confidence will, therefore be, mainly determined by how much of control he has over his life and everything happening to him[114]. Locus of control theory is related to this study because PLWHA may have the tendency to attribute happenings in their lives to external situations and circumstances, believing that if they had better opportunities, their lives would have had better outcomes. This makes them exhibit external locus of control, which negatively influences their levels of confidence in themselves and overall satisfaction with life leading to poor psychological well-being and other forms of psychopathology like depression.

2.2.2 Ecological Theory of Human Development (1979)

This study was guided by Bronfenbrenners' Ecological Theory of Human Development (1979) and the Consequence Theory of Human Development. The theory takes into consideration the individual's development as he/she interacts with the environment. The ecological perspective focuses on the nature of people's interactions with their physical and socio-cultural surroundings. In this theory, the social world is divided into five ecological systems designated as the microsystem, mesosystem, ecosystem, macrosystem and chronosystem. Each of the five systems usually has an impact on the developing individual either directly or indirectly. This view supposes that a person's traits interact with the environment to create individual behavior that cannot be explained by simply adding the effects of the person's traits to the effects of the environment (Berk, 2000). Bronfenbrenner views the individual as being embedded in the different systems. These include:

6. **Microsystem:** is the pattern of activities, social roles, and interpersonal relations experienced by the developing person in a given face-to-face setting with particular physical, social, and symbolic features that invite, permit or inhibit engagement in sustained, progressively more complex interaction with the immediate environment which include the family, peers, religious group.
7. **Mesosystem:** comprises the linkages and processes taking place between the two or more settings containing the developing person, for example, between home and the peer group.
8. **Exosystem:** comprises the linkages and processes taking place between two or more

settings, at least one of which does not contain the developing person, but in which events occur that indirectly influence processes within the immediate setting in which the individual lives for example the neighbourhood context.

9. **Macrosystem:** includes the overarching pattern of the micro, meso- and exosystem characteristic of a given culture or sub-culture, with particular reference to the belief systems, customs, ideologies and values.
10. **Chronosystem:** this encompasses change or consistency over time not only in the characteristics of the person but also of the environment in which that person lives, for example, changes in ability in everyday life[115].

Each system has an impact on the developing individual either directly or indirectly[116]. The model recognizes the active role of the individual in shaping as well as being shaped by the environment. According to the theory says people are but one component of the larger behaviour setting system, which restricts the range of their behavior by promoting and sometimes demanding certain actions and by discouraging or prohibiting others. Their decisions are based on the experience they get when interacting with factors from the immediate and outer environments like the family, peers, religious group, workplace and the community culture". The study aimed to establish how the interactions with the immediate and outer environment influence their decision making on HIV status disclosure. This information is important as it guides policy on promoting healthy environments where people talk freely about the disease and are willing to disclose their status. The ecological theory however, only focuses on the space outside the individual and not on the mental processes that goes on within the individual before they make the decision on whether to disclose or not to disclose[117].

The Ecological Theory of Human Development focuses on how the PLWHAs' interactions with their immediate social contexts like the family, friends and neighbourhood and cultural contexts influence their decisions on HIV self-disclosure. The ecological theory however, only focuses on the influence of the external factors outside the individual and not on the individual mental processes that determine the decision made.

The scope of the theory in relation to concept of the topic is on the focus that person's traits interact with the environment to create individual behavior that cannot be explained by simply adding the effects of the person's traits to the effects of the environment.

2.2.3 The Consequence Theory of Human Development

The theory is based on the individuals' perception of the consequences anticipated as a result of disclosure. The theory contains two single indicator exogenous variables (consequence) and one endogenous latent variable (HIV status disclosure). The theory looks at the mental evaluations of the possible outcomes of the interactions that the PLWHA is engaged in and this affects their decision on seropositive status disclosure. This theory suggests that PLWHA may evaluate the consequences of disclosure to the social network particularly the rewards, before disclosure occurs[118]. The Consequence Theory looks at the thought process that goes on within the individual before they arrive at a decision on whether to disclose their sero-positive status or not[119]. The way individuals perceive their interactions with the social contexts in which they live and make assessment on how it will benefit or harm them makes them to decide to disclose their HIV-positive status or not.

The relevance of the Consequence Theory is premised on the idea that HIV status self-disclosure is often characterized as a dilemma. Whereas on one hand disclosure it can promote access to social support and psychological wellbeing for PLWHA, it can also lead to stigmatization, rejection and other negative social interactions. According to the Consequence Theory, the decision on HIV self-disclosure is based on the individuals' perception of the outcomes anticipated as a result of disclosure[120].

Thus, the Consequence Theory compliments the Ecological Theory as it considers the thought process that goes on within the individual before they arrive at a decision on whether to disclose their sero-positive status or not. When the benefits are perceived to outweigh costs, disclosure is highly probable. When the costs are seen to outweigh the benefits, concealment is more likely[121]. Therefore, the potential for rejection, abandonment, physical abuse and other adverse consequences create substantial barriers to self disclosure of seropositive status of PLWHA and further explain the extend of individuals' perception in disclosure attribute and decision.

2.3 Empirical Studies

2.3.1 Studies on Health-Related Quality of Life among HIV Infected Individuals

Chronic obstructive pulmonary disease is a major cause of morbidity and mortality worldwide and has a significant impact on an individual's quality of life[122]. To assess the quality of life of patients suffering from chronic obstructive pulmonary disease in Chitwan, Nepal. A cross-sectional hospital-based study was conducted in a private hospital among 40 patients with chronic obstructive pulmonary disease. Data were collected from June 8, 2014, to July 8, 2014, using a pretested instrument ($\alpha = 0.954$) with 56 items answered on five-point rating scales. The total score varied from 0 (worst) to100 (best). The data were analyzed using descriptive and inferential statistics. The mean score of the total quality of life was 54.97 ± 13.83, while 47.80 ± 16.66 was for physical, 59.26 ± 12.69 for social, and 59.51 ± 15.17 for psychological domains, which showed a higher impairment on physical health. In subscales, the mean score of quality of life was higher on social support (67.34 ± 12.30), whereas lower on symptoms (45.76 ± 19.09) and activities (48.44 ± 18.0 for social and 49.32 ± 16.84 for physical). The quality of life was significantly higher among the patients aged 60–69 years, literate, absence of comorbidity, absence of hospital admission, and not on regular medicine, whereas the quality of life was not associated with sex, marital status, residence, income, duration of diagnosis, and smoking status. Patients with chronic obstructive pulmonary disease have an impaired quality of life on physical health compared with psychological and social health because of frequent symptoms and limitations on physical activities. Hence, physical health and factors affecting the quality of life need to be considered while planning interventions to improve the quality of life of patients[123].

Considering the chronic and debilitating nature of HIV infection, health related quality of life (HRQoL) is an important patient-reported clinical outcome to better understand the effects of this infection and its treatment on patients' lives. The purpose of this study was to assess the HRQoL and its association with socio demographic, behavioural, clinical, nutrition related factors and social support in an Irish HIV cohort. A cross-sectional, prospective study using the Medical Outcomes Study HIV Health survey assessed the 10 dimensions of HRQoL and summarised as Physical Health Summary (PHS) and Mental Health Summary (MHS) scores. Participants were categorised as having good or poor PHS and MHS using the standardised mean score of 50. The variables independently associated with PHS and MHS were identified using multivariable logistic regression models. Overall, 521 participants completed the HRQoL questionnaire. The median (IQR) PHS and MHS scores were 56(47–60) and 51 (41–58) respectively. All the covariate groups had lower MHS than PHS. Participants with symptoms of

HIV reported the lowest median (IQR) PHS score 44.7 (32.–54.5) and MHS score 36.1 (28.6–48.4)[124]. Of the 10 dimensions of HRQoL, the lowest scores were for the energy level and general health. Symptoms of HIV, co-morbidities, social support, employment and ethnicity had independent association with both PHS and MHS. Gender, education, alcohol intake and HIV-complications were associated with PHS. Age, illicit drugs, Body Mass Index (BMI) and malnutrition were associated with MHS. However, CD4 count and viral load were not independently associated with PHS and MHS in multivariable regression models. Overall, HIV-infected people in this cohort had an average level of HRQoL. However, it is impaired in people with symptoms and co-morbidities, and not independently associated with CD4 and viral load. Alleviating HIV symptoms and preventing co-morbidities are important in managing HIV. Providing psychosocial supports for behaviour modification and return to work or exploring new opportunities will help to improve HRQoL. Healthcare providers and policy makers need to plan and implement programs to routinely assess the HRQoL in a systematic method to facilitate a holistic management of HIV[125].

2.1.2 Studies on factors influencing self-disclosure among HIV infected individuals

HIV/AIDS remain a major public health concern in Nigeria. People living with HIV/AIDS (PLWHA) face not only personal medical problems but also social problems associated with the disease such as stigma and discriminatory attitudes[126]. This study provides an insight into HIV/AIDS related stigma and discrimination against PLWHA in Nigeria. All men and women aged 15 - 49 years, permanent residents and visitors of the households were eligible for the interview. Several questionnaires were used in the survey, some covering questions on HIV/AIDS.A total of 56 307 men and women aged 15 - 49 years participated in this national survey. About half of the population in Nigeria have HIV stigma. Younger persons, men, those without formal education and those within poor wealth index are more likely to have stigma towards PLWHA. In addition, married people are more likely to have stigma on PLWHA and are more likely to blame PLWHA for bringing the disease to the community. Also, about half of the population discriminates against PLWHA. However, those with higher levels of education and those from higher wealth index seem to be more compassionate towards PLWHA. About 70% in the population are willing to care for relative with AIDS, even more so among those with higher level of education. Educating the population with factual information on HIV/AIDS is needed to reduce stigma and discrimination towards PLWHA in the community.

The prevalence of self-disclosure of HIV status among the post parturient HIV-infected women and to describe the correlates of disclosure in this population. Socio demographic data are routinely collected from all HIV-infected post parturient women[127]. Data on disclosure were collected through one-to-one interview of the consenting women included in this study. Women who had disclosed their HIV status were more likely to use condoms during all sexual encounters, less likely to have had subsequent pregnancy from a different sex partner, were more likely to have a partner who had been tested for HIV, and were themselves more likely to be attending the centralized HIV clinic for follow-up and care compared to those who did not disclose. A substantial proportion of HIV-infected pregnant women never disclosed their result to a partner or a close relative. Lack of disclosure may have limited their ability to engage in preventive behaviors or to obtain the necessary emotional support for coping with their sero status or illness.

HIV-related stigma and self-disclosure: the mediating and moderating role of anticipated discrimination among people living with HIV/AIDS in Akure Nigeria[128]. This study using a multi-factorial survey design investigated the role of stigma and other self-related factors (e.g., anticipated discrimination, self-esteem, HIV-related factors [e.g., drug use combination; knowledge of duration of HIV diagnosis] and socio-demographic factors. Product-term regression analyses demonstrated that perceived discrimination mediated the relationship between self-esteem (Sobel test: $z = 2.09$, Aroian = 2.06, $p < .001$), perceived stigma (Sobel test: $z = 2.78$, Aroaian = 2.75 $p < .01$) and self-disclosure. Interaction term analysis between HIV-related stigma $t (5, 137) = 1.69$, $p > .05$, self-esteem $t (5, 137) = .59$, $p > .05$ and anticipated discrimination were non-significant, suggesting a non-moderation effect of discrimination and disclosure. The results indicate that anticipated discrimination may impact HIV-related stigma to reduce self-disclosure among the PLWHAs in Akure, Nigeria. Interventions should incorporate anticipated discrimination in educational programs of HIV stigma in encouraging self-disclosure among PLWHAs.

2.1.3 Studies on Composite Effect of Self-Disclosure and Health Related Quality of Life among HIV Infected Individuals

HIV/AIDS is a major public health problem in many developing countries where it has contributed to undermining the health infrastructure and lowered life expectancy among those infected. Although no cure exists for AIDS, significant advances in therapies have transformed AIDS into a manageable chronic condition and improve wellbeing of those infected in developed countries. However, in developing countries, such transformations are yet to occur due to socio-economic, structural and environmental factors. This paper addresses the issue of how care and social support contribute to improving quality of life of People living with HIV or AIDS (PLWHA) in view of serious difficulties confronting them and the inadequate access to therapies. Fifty persons living with HIV/AIDS, 8 health personnel and 32 persons who provide care for

PLWHA were involved in the study. Qualitative data were obtained through participatory methodologies such as interviews and discussion sessions in Ibadan and Ilesa, both in Southwest Nigeria[129]. Analysis of data used the Grounded Theory (GT) approach. Themes that emerged, including personal/health concerns, family/children's needs, financial pressures, stigma, access to drugs/health services, and availability of care and social support, were considered by PHA as crucial determinants of their health and well-being. The activities of the support groups, however, appear to cushion the negative effects of these. The authors recommend that HIV/AIDS programmes should address issues that affect the quality of life of PLWHA given the socio-economic and structural constraints to care, particularly in resource-poor settings while governments need to provide a policy environment that strengthen support groups promoting the interests of PLWHA.

Studies on Health-Related Quality Of Life among HIV Infected Individuals

A cross-sectional study was done in Zaria, Nigeria to assessed the determinants of Health-related quality of life (HRQOL) among HIV-positive patients at Ahmadu Bello University Teaching Hospital (ABUTH) Zaria.The proportion of respondents with high HRQOL was highest in the level of independence domain (69.4%) followed by social relationship domain (65.7%), environment domain (64.9%), and psychological domain (56.9%). The proportion of those with low HRQOL was highest in the spirituality/religion/personal belief domain (64.0%) and physical domain (55.8%)The study revealed that most of the subjects had HIV-positive partners and only one-tenth of them had HIV-positive children. Possible explanations could be due to increased number of marriages (mate-matching) among the HIV-positive patients facilitated by the HIV-support group in the facility. Furthermore, scaled up preventive programs especially the prevention of mother-to-child transmission (PMTCT) services may be responsible for the low number of HIV-positive children. The major predictors of HRQOL in this study were having HIV-positive partner and highly functional family. This study recommends routine family counselling and strengthening the HIV social-support network should be incorporated into the routine patients' care in HIV treatment centers. [116]

A study was done to assess the quality of life and to identify factors associated with good global quality of life among people living with HIV/AIDS (PLWHA) in Togo. The total of 880 PLWHA was used for this study, most of them are female. Participants to the study were eligible if they were aged 15 years or more and it was carried out for a period of 4 months. This study shows that Patients were mostly at stage I (51.9%) or at stage II (28.8%) of WHO's clinical classification. Out of the 880 participants, 796 (90.5%) were on ART among whom 585 (73.7%) had been undergoing ART for 2 years or more. At the last check-up, 71.7% of the participants had a CD4 cells count more than 350 cells/mm3 and 431 (49.0) of the participants did not know the partner's HIV-status. The global score of quality of life was ranged from 42.6 to 112, more than the three-quarters (76.2%) of the participants had a good global quality of life. The proportion of patients with a good global quality of life was higher in those with secondary education. HIV-positive patients who were on ART reported better global QOL, whatever the duration of the ART. Overall the QoL of PLWHA in this region is good, also high level of education and HIV sero-status disclosure was associated with better overall QOL.[117]

Descriptive research was conducted in Yola to assess the quality of life from HIV counselling and social support among PLWHIV clinic attendees. A total of 370 PLWHA adult from the age of 18 years and above attending clinic at Specialist Hospital Yola consented and participated in this study. Children and adolescents below 18 years were excluded from this study due to how cumbersome it was to obtain their consent through their respective parents. The results indicate that most of the respondents were well informed (78.2%) about basic issues in HIV. This was like their levels of counselling and social support received (71.7%), perceived self-efficacy (63.8%), self-reported treatment adherence (80%) and self-reported quality of life (64.3%).Overall self-perception of QOL has been shown to be a useful screening item for assessing QOL. QOL relates both to adequacy of the material circumstances and to personal feelings about these circumstances. As health is generally cited as one of the most important determinants of overall QOL, it has been suggested that QOL may be uniquely affected by specific disease process such as AIDS. There is lack of clarity in defining QOL and concomitant operational difficulties in it but still there is urgency in evaluating the QOL in HIV-infected individuals [118]

A study was done to assess the quality of life of a sample of HIV-infected students at a South African university, as well as explain the internal consistency between questions within each of the QoL domains. A descriptive, cross-sectional study design using a quantitative approach was applied. A non-probability, purposive sampling approach was utilized and students enrolled in the antiretroviral therapy or wellness programme were invited to voluntarily participate in this study. The WHOQOL-HIV Bref was self-administered after explanation of the questions by a registered, trained health care professional. A total of 63 students returned completed questionnaires that were included in the analysis. Acceptable to good reliability scores were established for the following domains: Level of Independence; Social Relations; Environment and Spiritual or Personal Beliefs. Assessing QoL in the sample, the lowest score was for “Spirituality” and the highest “Social Relations”. The “Physical” and “Psychological” domain scores for females were significantly lower than the score for males. There was no significant difference between any of the domain scores among participants with CD4 cell counts above or below 350 cells/mm3. In general, the performance of this sample is encouraging and it is recommended that the measure be utilized for QoL screening, and further research. The WHOQOL-HIV Bref for students does not contain an academic wellness component which should be added considering the significant effects of HIV on neuropsychological functioning. Also, further investigation into the reasons for poor scores obtained in physical and psychological well-being in females should be encouraged.[119]

A study with a cross-sectional design was conducted on 296 HIV-infected patients. The aim of this study was to assess the HRQoL and associated factors among HIV-infected patients who were on highly active antiretroviral therapy (HAART). The majority of study participants were female (56.8%). More than half (53%) of the participants had low overall HRQoL, HRQoL was categorized into low and high for each domain using the mean of each domain as a cut-off point. Most of the respondents had a high score for low QoL in three domains: physical (57.1%), environmental (55.1%) and SRPB (53.4%). This study found that factors such as current illness, recent stage II disease, not having family with HIV and having three or more HIV-positive family members, low monthly income and not being married were negatively associated with the HRQoL of PLWHA. Not married, having current illness, having no HIV-positive family members, having three or more HIV-positive family members and recent WHO clinical stage were negatively associated with overall HRQoL.[120]

A survey was to assess health-related QoL of PLWHA receiving ART in North-eastern Nigeria using a mixed method approach. The study was based on the revised Wilson and Cleary

conceptual model (RWCM) which integrates both biological and psychosocial aspects of QoL.

The model has been widely applied to different population in high income countries but it has never been tested in PLWHA in resource limited countries such as Nigeria. A survey relating to various domains of QoL were completed by 443 PLWHA and path analysis was used to assess the associations between QoL domains. Structural equation modelling was used to assess the fit of the RWCM to PLWHA in North-eastern Nigeria. Furthermore, 14 in-depth interviews were conducted to explore the lived experience of PLWHA and throw light upon the associations identified in the quantitative analysis. Participants with better physical and cognitive functioning and better general health had significantly better overall QoL. Just over half of the participants (N= 232, 52.4%) were in the young age group (19 – 40 years), 199 (44.9%) were in the middle-aged group (41 – 59 years) and 12 (2.7%) were in the older age group (60 years and older). The majority of the participants were female (N= 282, 63.7%). More than half 244 (55.1%) of the participants were married, and 300 (67.7) had primary school/secondary education. The majority of the participants reported having not currently smoked tobacco (394; 88.9%), not currently consumed alcohol (417; 94.1%) and not currently used an illicit drug (439; 99.1%) during the time of the survey. Participants were only asked whether they currently smoke tobacco, use alcohol or uses illicit drug at the time of the study. Whether any of these substances were previously used but currently stopped at the time of the study was not asked as these behaviours were not common. The participants had a mean CD4+ count of 410.44 cells/mm3 and the mean time since HIV diagnosis was 5.66 years. Fewer than third of the participants had one or more forms of HIV related comorbidity 137 (28.7%). General health perception and characteristics of the individual and the environment explained 87.1% of the variance in overall QoL. The analysis of the qualitative data identified five themes which in part helped to explain the associations identified in the quantitative data. These include: QoL is more than being free of disease; impact of HIV on well-being; stigmatisation; coping with HIV; playing with ART. Additionally, the data examined the impact of insecurity on healthcare and QoL as during the course of the study there was presence of political insecurity in the area. The RWCM is applicable to PLWHA in North-eastern Nigeria and provides a useful framework to understand QoL in this context. Both the quantitative and qualitative data suggest that certain aspects, e.g. spirituality, stigma and treatment impact have a pronounced impact on QoL of PLWHA in this area. Recommendations are made to improve psychosocial support services for HIV-infected people.[121]

Studies on factors influencing self-disclosure among HIV infected individuals

A global systematic review was done in accordance with the 2015 Preferred Items for Reporting Systematic Reviews and Meta-Analysis tool to assess HIV self-disclosure among youth ages 13–24.5881 were identified during the initial search. After screening titles and abstracts and examining articles in greater detail, 33 studies (35 articles) were included in the synthesis. The disclosure process model was used to highlight antecedent goals to self-disclosure including common avoidance goals such as fear of rejection and isolation. While disclosure was associated with negative and positive emotional outcomes and improved medication adherence, there remain concerns regarding the impact of self-disclosure on sexual behaviors. Implications for practice and future directions for research are presented.[122] A study was done to disclosure among youth living with HIV (YLHIV) in Kenya, and the association between self-disclosure and antiretroviral therapy adherence, stigma, depression, resilience, and social support. Of 96 YLHIV, 78% were female, 33% were ages 14–18, and 40% acquired HIV perinatally. Sixty-three (66%) YLHIV had self-disclosed their HIV status; 67% to family and 43% to non-family members. Older YLHIV were 75% more likely to have self-disclosed than those 14–18 years. Of the 68 either married or ever sexually active, 45 (66%) did not disclose to their partners. Those who had self-disclosed were more likely to report internalized stigma. The association with stigma was stronger with self-disclosure to family than non-family. Support should be provided to YLHIV during self-disclosure to mitigate psychosocial harms.[123] HIV status disclosure is critical to HIV prevention and access to health care and treatment. Thus, disclosing ones HIV-positive status to one's spouse is crucial in HIV prevention. A study was done investigated factors influencing the disclosure of HIV positive status to one's spouse in Kirinyaga County in Kenya.The study employed qualitative methods of research. A convenience sample of 98 PLWHIV consisting of 34 males and 64 females were interviewed using semi-structured in-depth interview schedules (IDI). Seven key informants were also interviewed. The data was then analysed using thematic analysis. The study found that the decision to disclose or conceal one's HIV-positive status to a spouse is influenced by several factors including the stage of illness, fear and privacy. The study also found that perceived spousal communication behaviours influenced the decision to disclose or conceal a HIV-positive status. The study concludes that disclosure is influenced by a myriad of factors that either result in the PLWHIV disclosing or concealing their HIV positive status. The study recommends that couples should be encouraged to test together thus easing the process of disclosure.[124] A study aimed to understand the factors affecting HIV disclosure among partners attending the Care and Treatment Clinic (CTC) at the Mzinga Military Hospital in Morogoro.A hundred respondents participated in the study, of which 60%were above 36 years old and 42% were married. 65% had a primary education. A majority of the participants had completed primary education (65%) and almost everyone got children (98%).Most of the respondents knew the importance of HIV disclosure among partners; only11% had low knowledge. As for the respondents' perception of the cultural beliefs affecting HIV disclosure, 9% agreed that there are customs that act as barriers to HIV disclosure. Among them, four (44%)

identified female genital mutilation as a barrier. Of the participants,28% had disclosed their sero-status to their spouse. Regarding attitudes towards HIV status disclosure among partners, 96% and 98% had not disclosed their status due to fear of divorce and loss of financial support, respectively. The most common reasons for disclosure in those studies were the need for help, wanting the partner to go for testing, and wanting to let their relatives know their status. This variation could be influenced by the participants' exposure to the source of knowledge, which was not specifically assessed in this study. This study found that the majority of participants had not disclosed their HIV status. This nondisclosure was mostly influenced by issues such as the fear of being blamed, the belief that HIV status disclosure is against traditional practice, fear of divorce, fear of loss of traditional support, and fear of being abused. The most common reason was the fear of stigma and loss of friends. This study also found that cultural beliefs are not a barrier to HIV status disclosure among partners, as only a nine percent agreed that cultural beliefs hinder HIV status disclosure. Female genital mutilation was among the most commonly mentioned customs affecting disclosure. Small proportions of participants also mentioned other factors affecting HIV status disclosure, such as stigma, breastfeeding, mistrust of partners, prostitution, and multiple partners. Furthermore, this study revealed low HIV disclosure rates among partners, as only a quarter of the participants reported having disclosed their HIV status to their partners, his study found a moderate level of knowledge on the importance of HIV disclosure among partners. Although most participants acknowledged that disclosing their HIV status to their partner was important, a large number of participants had not disclosed their HIV status. The reasons behind their nondisclosure included the fear of being blamed, the belief that disclosure is against traditional practice, fear of divorce, fear of loss of traditional support, fear of being abusedand fear of stigma and loss of friends. The study recommends Stakeholders in the

HIV epidemic can conduct more educational forums, increase their advocacy for disclosure, and emphasise the involvement of couples instead of the male or female partner alone. More campaigns should be conducted by health workers with a focus on discouraging the stigma against persons with HIV in the communities.[125] A survey was conducted among a random sample of 232 adult Persons Living with HIV and AIDS in Nairobi, Kenya. Data was collected using interviews and focus group discussions. The survey aimed to establish whether anticipated stigma and discrimination from intimate partners and social support networks such as family, friends, neighbours, community, religious affiliates and workmates predicted the likelihood of self-disclosure of HIV seropositive status by People Living with HIV and AIDS (PLWHA) in Kenya. A semi-structured questionnaire and focus group discussions were used to collect data on the perceptions of stigma and discrimination expected from intimate partners, family, friends, neighbours, local community, religious groups and workplace affiliates. The independent variables were represented by the anticipated stigma and discrimination from intimate partners and significant others in their social support networks. The participants responded to each item of the questionnaire using a three-point Likert scale ranging from “Agree (3-points) to Disagree (1-point).” The dependent variable was HIV seropositive status disclosure by PLWHA consisting of 15 items that measured the likelihood of self-disclosure of HIV seropositive status tointimate partners and to significant others in the social support networks. Results revealed that 72.6% of the respondents were females and 27.4% were males. About half (50.5%) of the respondents had disclosed their HIV seropositive status while 49.5% had not. It was observed that females were more likely to disclose their HIV status (53.3%) than their male counterparts (43.1%). This could be attributed tothe greater need of females to access medical and financial support from their significant others which necessitated HIV status self-disclosure. With reference to significant others, the results revealed that about two-thirds (62.1%) of the respondents had disclosed their HIV seropositive status to a health care provider or counsellor, 44% to a friend, 19.2% to a religious leader, 12.9% to a teacher and 11.7% to a neighbour. These findings imply that majority of PLWHA in the study area were more likely to disclose their HIV status to a health care provider or counsellor than to other social support networks. The results from the focus group discussions showed that the health care personnel provided them with medication and psychological support needed to deal with their condition than any other group. The PLWHA felt that health professionals would not stigmatise or discriminate against them because as health care providers they had an obligation to maintain the confidentiality of their patients. Results further indicated thatwhile most of the PLWHA reported strong religious affiliations in the FGDs, only 19.2% of them had disclosed to a religious leader. The respondents were of the opinion that religious leaders were less supportive of PLWHA. On further probing, most respondents reported that they had disclosed their HIV seropositive status to teachers only in extraneous circumstances such as to explain why they had delayed in school fees payment or to explain the constant absenteeism of their children from school. Disclosure to neighbours was done to enlist support such as being taken to hospital or being helped with household daily chores when they were unable to perform their activities of daily living. The anticipated consequences of self-disclosure of HIV seropositive status by PLWHA were important as they determined to a large extent the outcome of the decision on whether or not to disclose their HIV serostatus to intimate partners and social support networks. Results showing the distribution of anticipated stigma and discrimination from the proximal social support networks such as intimate partners, family and friends. In addition participants anticipated negative outcomes from their spouses or intimate partners, family and friends network following self-disclosure of HIV seropositive status. More than half of the respondents anticipated malicious gossip from their intimate partners, about two-thirds (63.3%) anticipated intimate partner emotional violence 64.3%anticipated physical violence, 48.3% anticipated denial of conjugal rights and 69.4% expected desertion or divorce by their spouses. In terms of the close family unit, respondents anticipated physical abuse (18.5%), denial of financial support (35.3%), exclusion from family. activities and isolation from family social functions (55.1%) respectively and about half (50.9%) anticipated abandonment by their families. Results revealed that the respondents anticipated negative consequences from friends after self-disclosure of HIV seropositive status diagnosis. These rangedfrom malicious gossip (67.3%) to termination of friendship (59.0%).The study sought to investigate the anticipated reactions from the distal social support networks such as the neighbours, local community, religious group and the workplace affiliates. Overall, this study has established that there was an inverse relationship between anticipated stigma and discrimination and self-disclosure of HIV seropositive status among PLWHA. This study has demonstrated that the respondents who anticipated negative consequences from their intimate partners and social support networks were not likely to disclose their HIV seropositive status significant others. This implies that anticipated stigma and discrimination promoted the non-disclosure of HIV seropositive status instead of fostering disclosure. The study concluded thatanticipated stigma and discrimination against PLWHA were risk factors for non-disclosure of HIV seropositive status thereby putting intimate partners and significant others at risk of HIV infection. There is, therefore, need to develop programmes for counselling of PLWHA on the management of anticipated stigma and discrimination, living positively,self-disclosure and prevention of re-infection with HIV. This mayhelpto reduce theself-stigma experienced by PLWHA thereby encouraging self-disclosure of seropositive status to intimate partners and to significant others.[127] A cross-sectional study involving 325 consenting adults aged 18 to 65 years PLHIV attending ART clinic who were recruited using systematic random sampling method. The study aimed to assess the rate and determinants of self-disclosure of HIV sero-status among people living with HIV/AIDS (PLHIV) attending an Antiretroviral Therapy (ART) Clinic in North Central Nigeria with a view to promoting self- disclosure as an intervention for secondary prevention of HIV/AIDS. Data collected from the participants include socio-demographic data and medical history. The rate and factors affecting self-disclosure of HIV sero-status were obtained by using a structured interviewer-administered questionnaire. Data was analyzed using Statistical Package for Social Sciences (SPSS) version 20.0. The study revealed that most of the participants (66.2%) were females. 96% of the participants had disclosed their HIV sero-status. Self-disclosure of HIV sero-status had statistically significant association with age. Overall, Self-disclosure of HIV sero-status was high among the participants. Being female and within 15–44-year age group were statistically significant factors associated with disclosure of HIV sero-status. Multiple counselling sessions are needed to improve disclosure particularly in males and older PLHIV as self-disclosure of HIV sero-status is a process that requires ongoing support and encouragement. [130] A descriptive cross-sectional study was carried out in four centers offering ART treatment for adolescents and young adults in Lagos State.The respondents were young people aged 15-24 years living with HIV attending ART clinics and currently on ART therapy. The data was collected using semi-structured interviewer-administered questionnaire adapted from previous studies assessing stigma and discrimination. This consisted of five sections: socio-demographic characteristics, reported health indices, assessment of stigma, assessment of discrimination, disclosure and disclosure challenges of respondents. This study revealed that about half of (52.4%) being adolescents (15-19 years) and the rest of them being young adults (20-24 years). The majority of the respondents were female (64.5%) and the respondents currently attending school were more than half (53.2%). Also, 26.6% of the respondents live with single parents, 43.6% reside with both parents, 10.5% live with their spouse, 8.1% live alone, and 11.3% live with other relatives. About 1/3 of the respondents were diagnosed since birth (33.1%), and the mean age at diagnosis is 10±8.6 years. Less than half (43.6%) of the respondents assessed their health as very good while, 32.3% reported excellent and only 0.8% reported poor health status. Stigma variants were assessed and public stigma was the highest (48.4%). Anticipated stigma was 20.2%, internalized stigma 14.5% and enacted stigma 10.7%. the most common form of discrimination experienced by respondents is being treated with hostility by strangers (14.5%). Averagely, a tenth (11.3%) of the respondents have been avoided by people close to them, been rejected by a potential sexual or romantic partner, have been insulted or made fun of and have been treated poorly or made to feel inferior when receiving health care. The physically assaulted were 10.5% while 7.3% have had their personal properties damaged. This study reflected that 37.1% of the respondents have experienced one form of discrimination or the other within the past one year. Over half of the respondents (59.7%) felt that they should be responsible for disclosing their HIV status while 29.0% of them also felt the information should be disclosed by the doctors and 9.7% felt it should be disclosed by their parents. About 27.4%, 16.9% and 14.5% of the respondents disclosed to their parents, sexual partners and siblings by themselves respectively. The most predominant reason for disclosure was expectation of care and emotional support (34.7%). Others were the need for prayer and company (19.4%), so that the informed person could get tested (16.9%), and the expectation of financial support (10.5%) from such persons. On the other hand, reasons for non-disclosure were fear of other people getting to know their status (57.3%), fear of being gossiped about (47.6%), fear of bad treatment from informed person (33.9%), fear of sadness upon disclosure (30.7%), and fear of accusation of promiscuity (25.8%). Other reasons for non-disclosure were feeling of entitlement to private life and belief that other people need not know their HIV status. Over half of the respondents (59.7%) felt that they should be responsible for disclosing their HIV status while 29.0% of them also felt the information should be disclosed by the doctors and 9.7% felt it should be disclosed by their parents. About 27.4%, 16.9% and 14.5% of the respondents disclosed to their parents, sexual partners and siblings by themselves respectively. The most predominant reason for disclosure was expectation of care and emotional support (34.7%). Others were the need for prayer and company (19.4%), so that the informed person could get tested (16.9%), and the expectation of financial support (10.5%) from such persons. 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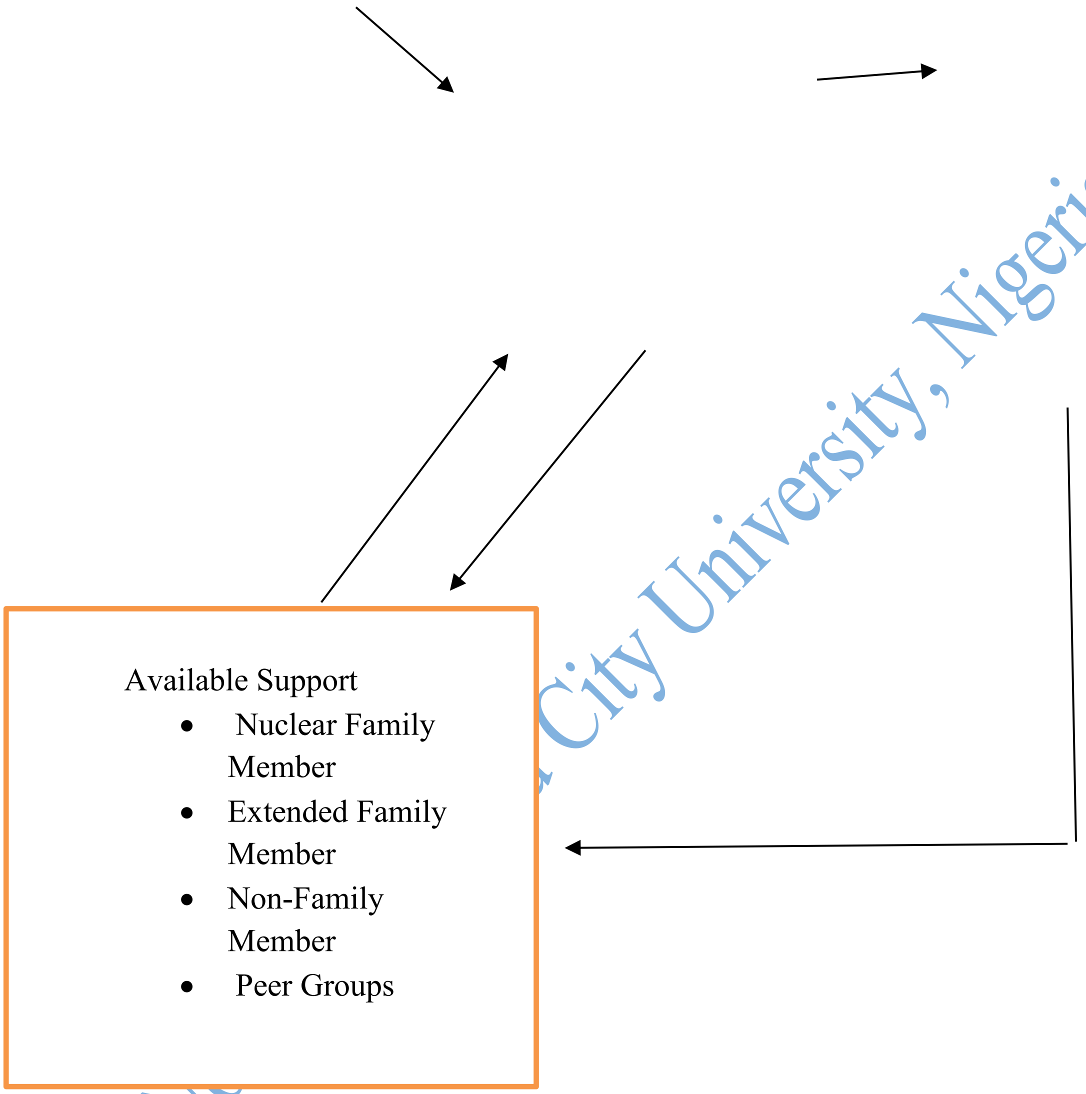
Studies on the Composite Effect of Self-Disclosure and Health Related Quality of Life among HIV Infected Individuals

A study aimed to examine the association between disclosure to family members and H-QoL, and the role of social support in the relationship. A cross-sectional survey was conducted among 1104 PLWH (58.70% male, average age 37.05 years old) in Guangxi, China. Participants provided information on HIV disclosure to family members, perceived social support, H-QoL including physical and mental health dimensions (scored as Physical health score [PHS] and Mental health score [MHS]), and social-demographic characteristics. Descriptive statistics, bivariate analysis, and path analysis were applied to examine our hypotheses. Bivariate analysis demonstrated that HIV disclosure to family members was positively correlated with social support but not with PHS and MHS statistically. Social support was positively correlated with PHS and MHS. Path analysis revealed that the direct effects of disclosure on both physical and mental H-QoL were not significant. In contrast, the indirect effects of disclosure on both mental and physical H-QoL through social support were significant, despite of small effect size. The potential mediating role of social support was highlighted in improving PLWH's well-being. Future interventions targeting H-QoL promotion might incorporate disclosure management and communication skills that are likely to elicit social support and invite patients' family members to participate in the interventions as appropriate.[132] A study aimed to determine the relationship between HIV status disclosure and the quality of life of PLWHA in the Victory Plus Foundation, Yogyakarta showed that most of the HIV status disclosure of PLWHA in the Victory Plus foundation was classified into a moderate category (77.9%) and low quality of life (64 %). This study is descriptive-analytic correlation study with a cross-sectional approach was conducted in June-July 2019 on 68 PLWHA at the Victory Plus Foundation. Purposively, samples were asked to fill out a disclosure questionnaire and WHOQOL-BREF. Among those who disclosed their status to their family, they stated that most of them were satisfied with their decision because they got the support of their family, which increased from 90.4% at baseline, 91.8% at six months, 95.5% in a year, and 94.3% at 24 months. The relationship between HIV status disclosure and quality of life in this research is not only seen from general QoL but also seen through 4 other domains: physical, psychological, social and environmental domain. However, in this study, the physical domain's quality of life was mostly in the low category PLWHA in this research could have difficulty to perform some daily physical activities while managing their illness. The second-lowest outcome of the quality-of-life domain based on status disclosure is the environmental domain. Most PLWHA in this study worked in the private sector (42.6%) and did not work (29.4%). It could be one cause of the low quality of life in the environmental domain because people who do not have a job are prone to experience depression, anxiety, isolation, and low self-esteem. The third lowest domain in this study is the psychological domain. However, the result showed that 66.7% of the 77.9% PLWHA with moderate status disclosure had a low quality of life. The low quality of life of PLWHA in the psychological domain could happened since this study did not dig deeper into possible conditions that could reduce the QOL in psychological domain, such as stigma, health status, depression score, or nutritional status. The highest scored domain in this study is the social domain. The study result indicated that out of 77.9% of PLWHA with moderate disclosure, most of them have a low quality of life in the social domain (66.2%). The low QoL in the social domain could be caused by PLWHA's age. The average age of PLWHA in this study was 34.22 ± 9.28 years. Although the QoL in this domain is mostly low, the social domain has the highest PV value and closeness with status disclosure. It could be the case since the PLWHA in this study is under the same institution, namely the Victory Plus Foundation. Hanging out with the same fated could improve the social domain because they could open up, support each other and get information and psychosocial services. Overall, The HIV status disclosure of PLWHA has a significant relationship with the general quality of life and quality of life in physical, psychological, social, and environmental domains. Most of the HIV status disclosure for PLWHA in Victory Plus is in the moderate category

(77.9%) and has a low quality of life (64%). The low quality of life of PLWHA that disclose their status in this study requires further follow-up from policymakers, health workers and PLWHA. Policies are needed to help increase the disclosure of status to PLWHA, such as education regarding the stigma of PLWHA in the general public, counseling training for health workers and health promotion related to the prevention of HIV containing elements of HIV status disclosure. It is hoped that health workers will further improve their ability to conduct advocacy and will approach at-risk populations so that they are willing to conduct voluntary and counseling tests (VCT). PLWHA, who still have lowstatus disclosures or low quality of life, can be more active in joining the support or peer community to improve their quality of life. [133] A hospital based unmatched case control study was conducted between April and September 2017 in the Southern Highlands Zone, Tanzania. The objective of this study was to determine factors associated with HIV status disclosure and its effect on treatment adherence and health-related quality of life among children between 6 and 17 years of age living with HIV/AIDS. A total of 309 children between 6 and 17 years on ART for at least six months were enrolled in this study. Simple random sampling was employed in selecting the children from existing treatment registers. Data were collected using a structured questionnaire which included the WHO Quality of Life standard tool (WHOQOL-BREF 2012 tool) and treatment adherence manual. After initial random selection of 309 participants who were included in the analysis, only 102 (33%) had their HIV status disclosed to them. Among those with disclosed HIV status, the majority were in the 14–17-year age group (38.2%), male (51%), and in primary or less education level (63.7%) and had one or both of their biological parents (59.8%). he majority (75.5%) of the participants with HIV status disclosure had a comparatively higher quality of life than those with undisclosed HIV status (49.3%). Quality of life was high (66.4%) among participants living with caregivers other than their biological parents compared to only (46.0%) among children living with their biological parents. After adjusting for confounders, children with HIV status disclosure had more than three times high odds of having a good quality of life compared with those with undisclosed status.HIV status disclosure was significantly associated with the age of the child where children aged 10 years and above were more likely to know their HIV status. Overall, disclosure was significantly associated with quality of life. Despite existence of WHO guideline on HIV status disclosure to HIV-infected children and adolescents, prevalence of disclosure was found to be low in this study and often done later after 10 years of age. HIV status disclosure was found to be associated with improved treatment adherence and quality of life irrespective of other factors. Despite the available guideline, how disclosure takes place may vary from culture to culture and from place to place, depending on available resources and caregivers' desires and concerns. There is therefore a need for adapting the guideline to address important local cultural values relevant in sharing and handling sensitive information that involves the lives of children.[134]

2.4 Conceptual Framework

Conceptual Framework on HIV Disclosure and Quality of Life among HIV infected Individuals



Available Support

- Nuclear Family Member
- Extended Family Member
- Non-Family Member
- Peer Groups

2.5 Summary of Gaps in Literature

2.5.1 Summary of Gaps in Literature

Cultural settings, beliefs, and psychological elements can greatly influence one's quality of life. Disclosure of HIV seropositivity is a necessary first step in accessing treatment and support as well as in taking measures to prevent the transmission of the virus to others. HIV disclosure gives infected persons access to social support, which has been shown to improve health through a variety of mechanisms, including access to resources, enhanced immune response, and improved health-related behaviors. There is a gap in knowledge regarding the relationship between QOL and status disclosure among HIV infected Individuals and the role of support from persons disclosed to. Evidence on this relationship is very much relevant for improving QOL among HIV infected Individuals.

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Chapter Three

Research Methodology

3.0 Introduction

This chapter provides a description of the processes involved in eliciting and analyzing data for the study. It contains the study design, the study population, sample size and sampling technique, research instruments, administration of instruments and method of data analysis.

3.1 Study Design

This study adopted a facility based cross-sectional survey among HIV infected individuals in Mosan Okunola LCDA, Alimosho of Lagos State.

1.2 Study Setting

The study was conducted in Aregbesola Primary Health Care, Okunola in Mosan Okunola LCDA, Alimosho of Lagos State. The PHC provides health services for patients with HIV/AIDS in the local government. The choice of this health center within this local government area was based on their availability, easily accessibility and the hospital have a standard HIV/AIDS care center with many clients. It is also a recognized center by both NACA and SACA of Lagos State.

3.3 Study Population

The study participants were HIV infected individual attending Care and Treatment Clinic (CTC) at Aregbesola PHC, Okunola in Mosan Okunola LCDA, Alimosho of Lagos State.

3.4 Sample size and Sampling Technique

Sample Size

Yamane's formula was used to estimate the sample size for this study because the target population is finite with known population size[1].

$n = N/\ 1+N\ (e)^2$

Where n= Sample size

N= Population size = 1028 (estimate from the 2022 list of PLWH receiving care in Aregbesola PHC as at 31st May, 2022 was 1028 with 681 females and 230 males)

e= level of precision (0.05)

Hence substituting the values into the formula, n = 1028/ 1+ 1028 $(0.05)^2$ = 288

However, in considering a 10% adjustment on the sample size of 278 for incomplete questionnaires and non- response the study arrived at a minimum sample size of 316respondents as its sample size.

Sampling Technique

The study adopted a systematic sampling method for the selection of the participants until the required sample size of 316 was obtained. All HIV positive patients were eligible to participate and all those that were willing participated.

3.5 Instrument

A structured questionnaire was adapted to obtain relevant data from the participants an adopted WHOQOL-HIV BREF instrument which was to be used to examine the respondent's overall perception of quality of life as well as the respondent's overall perception of his or her health. The WHOQOL-HIV BREF instrument was used to evaluate respondents' quality of life from six domains and 28 facets. These facets are scored on a 3-point Likert scale with 3 corresponding to very good and 0 corresponding to very poor. In addition to the six domains examined, the respondents' overall perception of quality of life and general health were examined[1].

3.6 Method of Data Analysis

Data collated from the field was coded and entered manually into the Statistical Package for Social Scientist (SPSS) Version 25. Cleaning of data was carried out by running frequencies for all the variables observed. Demographic data was presented in frequencies and proportions. Chi-

Square test was used to examine the relationship between socio-demographic factors and HIV status disclosure. Welch's t-test was used to examine the effect of self disclosure on quality of life as well as to compare the mean scores for perceived quality of life. Pearson's correlation coefficient was used to determine the degree of correlation (relationship) between the scores of the quality of life domains. Meanwhile, factors influencing self disclosure were analyzed using logistic regression. The data obtained were presented as frequency tables.

Also, the WHOQOL-HIV BREF instrument which has 28 facets grouped into six domains with two separate items from the Overall quality of Life and General Health facets on the general quality of life was used for the study. All the 28 questions of the WHOQOL-HIV BREF were verified for completion with values between 0 and 3. Questions with answer scales inverted were reversed. Scores of the domain were obtained by calculating the sum of the scores of "n" questions per the domain divided by the number of domain questions[1].

Disclosure status of the HIV positive respondent is a nominal variable categorized into (yes and no) and used as in the test of association and also as a continuous variable in the model statistics.

3.9 Ethical considerations

Ethical approval were obtained from both Lagos State Primary Health Care research ethics committee and Lead City University Health Research and Ethics Committee.

Written and signed consent forms obtained from each participant. The identification of the respondents was possible only through numerical codes which were secured so that there is anonymity and confidentiality in completing the questionnaire. Health care workers were reassured of the information they provided for this study.

Endnote

[1] World Health Organization 2013. WHO Quality of Life-BREF (WHOQOL-BREF)

Chapter Four

Results and Discussion of Findings

This chapter presents the findings of the study and the discussion. The results are presented in the other, in which the objectives were stated in Chapter one of the study.

4.1.1 Demographic Data Analysis

Results of the analysis of the demographic data of the respondents are presented in the Table 4.1 below. A total of 288 respondents participated in the study with a mean age of 34.54 ± 9.5 years. The majority of the participants were female (54.2%) and 45.8% were Male. Most of the participants are Secondary school leavers (52.4%), 42% a had tertiary level of education, 4.1% had a primary level of education and 1.5% of the participant did not have any form of education. On marital status 45.5% of the participants are married, 41.7% were single, 9.4% were divorced and 3.5% were widowed. The majority of the participants were employed (62.2%) while 37.8% were unemployed. Most of the respondents were diagnosed with HIV in 1-5 years, 37.2% of the respondents were diagnosed with HIV in less than 1 year and 12.8% were diagnosed more than 3 years.

Table 4.1: Socio demographic Characteristics of Respondents

N=288

Variables	Frequency	Percent (%)
Age		
Mean ± S.D	34.54±9.531	
Sex		
Male	132	45.8
Female	156	54.2

Educational Level		
Primary	12	4.1
Secondary	151	52.4
Tertiary	121	42
None	4	1.5
Marital Status		
Single	120	41.7
Married	131	45.5
Divorced	27	9.4
Widowed	10	3.5
Employment Status		
Employed	179	62.2
Unemployed	109	37.8
Number of Years of Diagnosis		
< 1 year	107	37.2
1-5 years	144	50
>5 years	37	12.8

Source: Field survey 2022

4.2 **Presentation of Data**

4.2.1 Research Question One: The level of self-disclosure among HIV infected individuals in Mosan Okunola LCDA, Alimosho of Lagos State

Table 4.2.1 below shows that 82.6% of the respondents have disclosed their status, it also show respondent who first disclosed their HIV status and the various types of support received among respondents that have disclosed their status (238). The majority of them disclosed their status to their nuclear family (62.6%), and also receive support (84%). 45% of the respondents that receive support have their medical expenses covered.

4.2.2 Table 4.2.1 : Level of self-disclosure among HIV infected individuals in Mosan Okunola LCDA, Alimosho of Lagos State

Variables	**Frequency**	**Percentage**

Self-disclosure		
Yes	**238**	**82.6**
No	**50**	**17.4**

Source: Field survey 2022

Table 4.2.1.1: Descriptive characteristics among HIV positive patients who disclosed their status

Variables	**Frequency**	**Percentage (%)**	**P value**

First disclosed to (n=238)			0.000
Nuclear Family	149	62.6	
Extended Family	62	26.1	
Non-Family Relations	27	11.3	
Receive Any Support (n=238)			0.000
Yes	200	84	
No	38	16	
Type of Support Received (n=200)			0.000
Medical Expenses	90	45	
Cash For Upkeep	68	34	
Shelter	19	9.5	
Food	10	5	
Clothing	13	6.5	

Source: Field survey 2022

4.2.3 **Research Question Two**: The health-related Quality of life among HIV infected individuals in Mosan Okunola LCDA, Alimosho of Lagos State

Table 4.2.1.2 revealed that the Quality of life (QoL) domains used for this study scores were transformed with the mean domain scores on a scale of 0 to 15, the minimum score obtained by a participant was 0.0 and these were obtained in the physical, psychological and social domains whilst the maximum score of 15 was obtained by the environment domains. The mean score which rates the average quality of life of participants within a given domain shows that quality of life was highest within the environmental domains with a mean score of 8.24 ± 2.34 whilst the social domain indicated the lowest quality of life with the mean score for quality of life at 4.597 ± 1.96.

Table 4.2.1.2: Summary of the scores on the Quality-of-life domains

QoL Domain	**Mean ± S. D**	**Minimum Score**	**Maximum Score**
Physical	5.6 ± 1.93	0.00	11.00
Psychological	7.5 ± 2.73	0.00	13.00
Independence	6.17 ± 1.91	1.00	12.00
Social	4.597 ± 1.96	0.00	9.00
Environment	8.24 ± 2.34	2.00	15.00
Spiritual	5.61 ± 2.10	0.00	12.00

QoL: quality of life. SD: standard deviation.

Source: Field survey 2022

Figure 4.2.1 shows the Quality of life as perceived by the respondents. Of the 288 respondents, 77% perceived their Quality of life to be good and 23% perceived their lives to be of poor Quality of life.

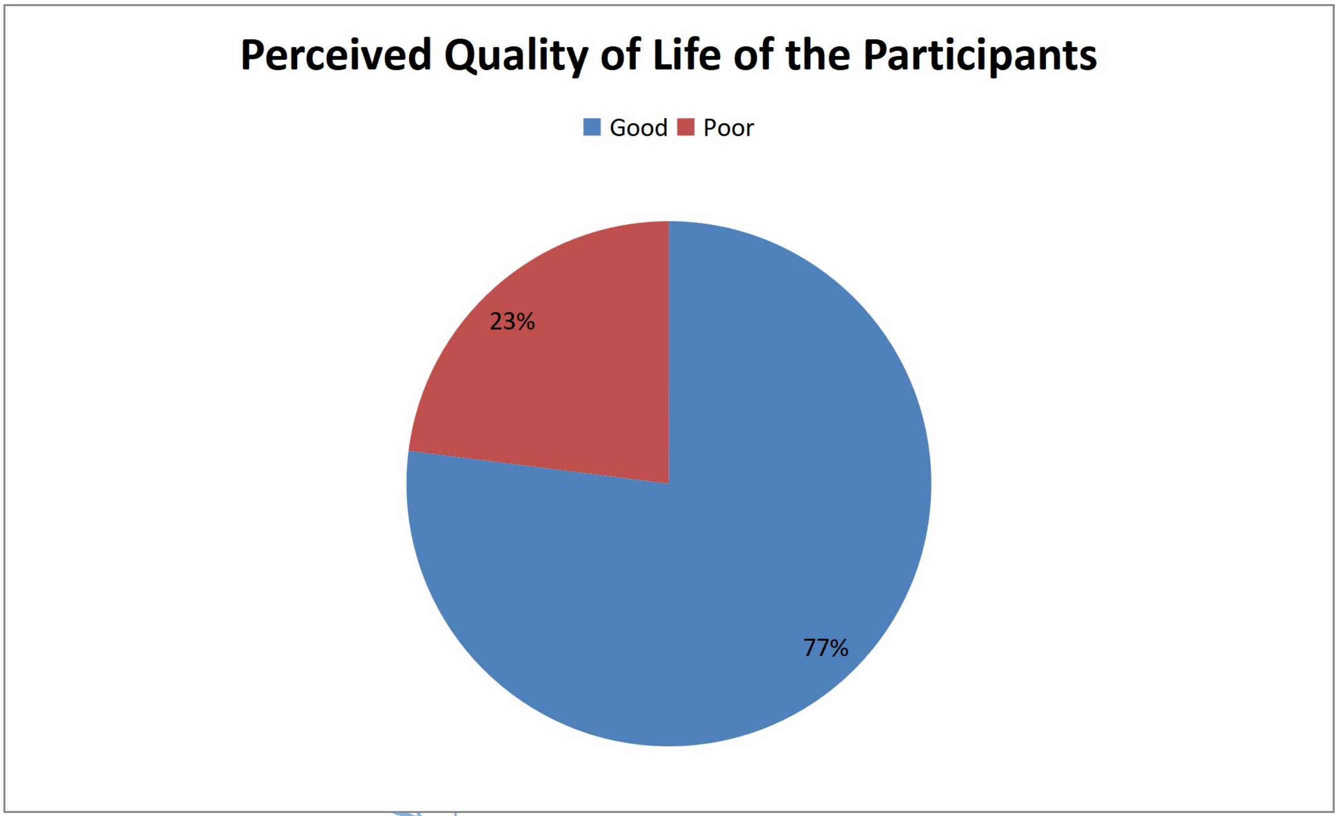

Figure 4.2.1: Perceived general quality of life of the participants

Source: Field survey 2022

Table 4.2.1.3: Mean QoL domain scores and HIV status disclosure of participants

Table 4.2.1.3 shows that out of the six domains of QoL measured with the WHOQOL-HIV BREF tool, none of the domains showed a significant association with HIV status disclosure.

	STATUS	**DISCLOSURE**		
	YES	**NO**		
QoL Domain	**Mean ± S. D**	**Mean ± S. D**	**t-statistic**	**P value**
Physical	5.61 ± 1.95	5.8 ± 1.85	-0.635	0.526
Psychological	7.44 ± 2.85	7.80 ± 2.11	-0.852	0.395
Independence	6.15 ± 1.94	6.28 ± 1.77	-0.418	0.676
Social	4.61 ± 2.01	4.52 ± 1.68	0.306	0.759
Environment	8.18 ± 2.47	8.54 ± 1.58	-0.988	0.324
Spiritual	5.52 ± 2.13	6.06 ± 1.91	-1.652	0.100

Source: Field survey 2022

Table 4.2.1.4: Mean QoL domain score and perceived quality of life of respondents

Table 4.2.1.4 shows that all six domains showed a significant association with perceived quality of life. Respondents showed significantly higher mean scores when they reported good perceived quality of life compared to those with poor perceived quality of life in the physical domain (5.82 ± 1.91 Vs 5.05 ± 1.98, p=0.005), Independence domain (6.42 ± 1.77 vs 5.38 ± 2.14, p=0.000), Psychological domain (8.01 ± 2.57 vs 5.79 ± 2.58,p=0.000)environmental domain (8.624 ± 2.16 Vs 6.98 ± 2.46, p=0.000), Social domain (4.99 ± 1.91 Vs 3.28 ± 1.47,p=0.000) and Spiritual domain (5.91 ± 1.96 vs 4.64 ± 2.29, p=0.000)

	PERCEIVED OF QUALITY LIFE			
	GOOD	**POOR**		
QoL Domain	**Mean ± S. D**	**Mean ± S. D**	**t-statistic**	**P value**
Physical	5.82 ± 1.91	5.05 ± 1.98	2.857	0.005
Psychological	8.01 ± 2.57	5.79 ± 2.58	6.204	0.000
Independence	6.42 ± 1.77	5.38 ± 2.14	3.952	0.000
Social	4.99 ± 1.91	3.28 ± 1.47	6.74	0.000
Environment	8.624 ± 2.16	6.98 ± 2.46	5.25	0.000
Spiritual	5.91 ± 1.96	4.64 ± 2.29	4.46	0.000

Source: Field survey 2022

Table 4.2.1.5: Association between whom the status was first disclosed to and WHOQOL domain scores

Table 4.2.1.5 revealed that the Physical domain and Spiritual domain showed significant association with whom their status was first to disclosed. Respondents who disclosed to nuclear family recorded higher mean scores within the physical and spiritual domains compared to those who disclosed to extended and non-family relations.

	NUCLEAR	**EXTENDED**	**NON-FAMILY**		
QoL Domain	**Mean ± S. D**	**Mean ± S. D**	**Mean ± S. D**	**F-statistic**	**P value**
Physical	5.86 ± 1.91	5.06 ± 1.81	5.48 ± 2.25	3.798	0.024
Psychological	7.73 ± 3.02	6.90 ± 2.59	7.03 ± 2.23	2.171	0.116
Independence	6.28 ± 1.88	6.04 ± 1.99	5.78 ± 2.14	0.855	0.427
Social	4.69 ± 2.11	4.54 ± 1.77	4.33 ± 2.05	0.403	0.669
Environment	8.255 ± 2.26	8.06 ± 2.95	8.04 ± 2.37	0.181	0.834
Spiritual	5.75 ± 2.14	5.40 ± 2.03	4.55 ± 2.13	3.764	0.025

SD: standard deviation. F-statistic from the One-way ANOVA. n (%): Frequency (percentage). #: Pearson's chi-square test

Source: Field survey 2022

Table 4.2.1.6: Association between receiving any support and WHOQOL domain scores

Table 4.2.1.6 shows that respondents that disclosed their status and received any support showed significant association in the psychological domains. Respondents who do not receive any support as a result of disclosing their HIV status recorded significantly higher mean scores compared with those who receive any support after disclosing their HIV status in the six WHOQOL domains.

	RECEIVING ANY	**SUPPORT**		
	YES	**NO**		
QoL Domain	**Mean ± S. D**	**Mean ± S. D**	**t-statistic**	**P value**
Physical	5.57 ± 1.96	5.81 ± 1.85	-0.990	0.323
Psychological	7.08 ± 2.78	8.54 ± 2.31	-4.291	0.000
Independence	6.14 ± 2.02	6.28 ± 1.63	-0.564	0.573
Social	4.51 ± 2.03	4.81 ± 1.74	-1.159	0.247
Environment	8.13 ± 2.47	8.53 ± 1.95	-1.328	0.185
Spiritual	5.55 ± 2.13	5.76 ± 2.03	-0.741	0.459

Source: Field survey 2022

Table 4.2 : Bivariate Analysis between Socio-Demographic Characteristics of Respondents and HIV disclosure status

At the bivariate level, HIV disclosure status among the respondents showed a signification association with employment status only(p>0.005)

Variables	**Total (%)**	**Yes (%)**	**No (%)**	**X^2**	**P value**
Age	288 34.54 ± 9.531	33.82±8.846	37.96±11.796		
Sex				0.423	0.515
Male	132(45.8)	107(44.9)	25(50)		
Female	156(54.2)	131(55.1)	25(50)		
Educational Level				3.870	0.276
Primary	12(4.1)	9(3.7)	3(6)		
Secondary	151(52.4)	131(55)	20(40)		
Tertiary	121(42)	95(39.9)	26(52)		
None	4(1.5)	3(1.4)	1(2)		
Marital Status				5.132	0.162
Single	120(41.7)	101(42.4)	19(38)		
Married	131(45.5)	108(45.4)	23(17.6)		
Divorced	27(9.4)	19(8)	8(16)		
Widowed	10(3.5)	10(4.2)	0(0)		
Employment Status	179(62.2)	158(66.4)	21(42)	10.446	0.001*
Employed	109(37.8)	80(33.6)	29(58)		
Unemployed					
Number of years of diagnosis				1.641	0.440
< 1 year	107(37.2)	92(38.7)	15(30)		
1-5 years	144(50)	115(48.3)	29(58)		
>5 years	37(12.8)	31(13)	6(12)		

Research Question Three: The factors influencing self-disclosure among HIV-infected individuals in Mosan Okunola LCDA, Alimosho of Lagos State

Table 4.2.2 shows that out of the odds ratio for sex is 1.186 with a 95% CI of 0.621 to 2.266 and a p-value of 0.606. This suggests that there is no significant association between sex and self-disclosure among HIV-infected individuals.

For the Employment status variable, the table shows that employed individuals are more likely to disclose their HIV status (OR=0.301, p-value=0.001) compared to unemployed individuals. This indicates that employment status is a significant factor influencing self-disclosure among HIV-infected individuals.

The odds ratio for educational level is highest for those with a tertiary education level (OR=1.653, 95% CI=0.147-18.598), followed by those with a primary education level (OR=1.483, 95% CI=0.095-23.269) and those with a secondary education level (OR=0.836, 95% CI=0.074-9.442) compared to those with no formal education (the reference group). However, none of these odds ratios are statistically significant, as their p-values are all above 0.05 (0.779, 0.885, and 0.684, respectively). This suggests that there is no significant association between educational level and self-disclosure among HIV-infected individuals.

The odds ratio for number of years of diagnosis is highest for those who had been diagnosed for between 1 and 5 years (OR=1.32, 95% CI=0.463-3.764), followed by those who had been diagnosed for less than a year (OR=0.819, 95% CI=0.285-2.525) compared to those who had been diagnosed for more than 5 years (the reference group). However, none of these odds ratios are statistically significant, as their p-values are above 0.05 (0.604 and 0.727, respectively). This suggests that there is no significant association between the number of years of diagnosis and self-disclosure among HIV-infected individuals.

Table 4.2.2:Factors influencing self-disclosure among HIV-infected individuals

Variables	**Status Disclosure** **Yes (238)**	 **NO (50)**	**cOR (95%CI)**	**P-Value**
Sex				
Male	107	25	1.186 (0.621,2.266)	0.606
Female	131	25	Ref	
Educational Level				
Primary	9	3	1.483(0.095,23.269)	0.779
Secondary	131	20	0.836(0.074,9.442)	0.885
Tertiary	95	26	1.653(0.147,18.598)	0.684
None	3	1	Ref	
Employment status				
Employed	158	21	0.301(0.148,0.614)	0.001*
Unemployed	80	29	Ref	
Number of years of diagnosis				

< 1 year	92	15	0.819(0.285,2.525)	0.727
years	115	29	1.320(0.463,3.764)	0.604
>5 years	31	6	Ref	

Source: Field survey 2022

4.3 Discussion of Findings

From the present study, Quality of Life scores was highest within the environmental domain score of 8.24 ± 2.34 whilst the social domain indicated the lowest quality of life with the mean score for quality of life at 4.597 ± 1.96. A study in Ahmadu Bello University Teaching Hospital (ABUTH) Zaria shows a high score in the environmental domain with a low Quality of life in the spiritual domain[1]. However, a study reported better Quality of life scores in the social domain and the lowest score in the Spiritual domain [2]. In addition, a cross-sectional study indicated a high score for low QoL in two domains: physical domain and environmental domain[3].

This study's findings of a non-significant association between status disclosure and other sociodemographic factors except for employment status is contrary to evidence from a study in Ghana that showed a significant association between status disclosure and Education level. This could be a result of the negative attitudes and judgments towards people living with HIV/AIDS which might have led to a significant number of the respondents with tertiary education not disclosing their seropositive status[4]. Also, a study in North-Central Nigeria also contradicts this study Self-disclosure of HIV serostatus had a statistically significant association with age [5]. In addition, a study has demonstrated that the respondents who anticipated negative consequences from their intimate partners and social support networks were not likely to disclose their HIV seropositive status to significant others[6].

Lastly, respondents who disclosed their HIV status had higher quality of life scores in all six domains compared to those who do not disclose their status, however, there was no significant association between status disclosure and the individual domains and all domains jointly. Similar to a study in Yogyakarta which shows respondents who disclosed their status to their family, they stated that most of them were satisfied with their decision because they got the support of their family, which increased from 90.4% at baseline, 91.8% at six months, 95.5% in a year, and 94.3% at 24 months[3]. Also, this study contradicts a study that shows, the relationship between HIV status disclosure and quality of life in this research is not only seen from general QoL but also seen through 4 other domains: physical, psychological, social, and environmental domain. However, in this study, the physical domain's quality of life was mostly in the low category PLWHA in this research could have difficulty performing some daily physical activities while managing their illness[7].

Lastly, this study also found a significant association between the psychological domain and whom status was disclosed to with the highest mean score recorded among those who disclosed to non-family members.

Quality of life was highest within the environmental domains with mean score 8.24 ± 2.34 whilst the social domain indicated the lowest quality of life with the mean score for quality of life at 4.597 ± 1.96.

Endnotes

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Chapter Five

Conclusion

5.1 Summary

The primary purpose of this study is to examine the effects of HIV status disclosure on the quality of life of PLWHIV in Mosan Okunola LCDA, Alimosho of Lagos State. The study adopted a facility-based cross-sectional survey which recruited 318 HIV infected individuals in Mosan Okunola LCDA, Alimosho of Lagos State. For data collection, a quatitative method was adopted, a structured questionnaire was adapted to obtain relevant data from the participants an adopted WHOQOL-HIV BREF instrument which was to be used to examine the respondent's overall perception of quality of life as well as the respondent's overall perception of his or her health. The WHOQOL-HIV BREF instrument was used to evaluate respondents' quality of life from six domains and 29 facets.

Results revealed that the majority (82.6%) of the participants in this study had disclosed their HIV status with a significantly highest proportion of the participants who received a diagnosis in between one to five years disclosing their status. Generally, status disclosure was not significantly associated with QOL. However, the data suggest that support in the area of being employed and having a good relationship has a possible benefit to QOL.

Conclusion

The study made a concerted effort to bring about a comprehensive understanding of Self-Disclosure and Health-Related Quality of Life of HIV Infected Individuals in Mosan Okunola LCDA, Alimosho of Lagos State. The study showed that the majority (82.6%) of the participants in this study had disclosed their HIV status with a significantly highest proportion of the participants who received a diagnosis in between one to five years disclosing their status. Generally, status disclosure was not significantly associated with QOL. However, the data suggest that support in the area of being employed and having a good relationship has a possible benefit to QOL.

5.2 Recommendation

Based on the findings of this study, the following recommendations were made:

1. Strengthening HIV support groups for infected persons will also provide another avenue for ongoing support that may help PLWHA to work through their disclosure processes for the needed social support.
2. Recognizing that some of the barriers to HIV status disclosure are rooted in social attitudes about HIV/AIDS such as stigmatization and neglect, there will be the need to improve upon initiatives such as community-based programs to reduce stigma and neglect associated with HIV/AIDS
3. Disclosure should be part of the pre-test information provided at HIV Testing Services, in order to enhance early disclosure of One's seropositive status to One's relevant social relations.
4. Policy guidelines that sought to improve the mental health and quality of life of PLWHA should be enforced.
5. Routine family counseling and strengthening the HIV social-support network should be incorporated into the routine patients' care in HIV treatment centers

5.3 Contribution to Knowledge

1. Increasing awareness of HIV status disclosure among HIV-infected individuals
2. Acquisition of proper knowledge of HIV status disclosure and the Quality of life of HIV-infected individuals
3. HIV status disclosure may promote healthy sexual behavior among People living with HIV

5.5 Suggestions for Further Research

This study focused on HIV Infected Individuals in Mosan Okunola LCDA, Alimosho of Lagos State; it is suggested that further studies in the field can be done:

1. Using other study areas
2. Other aspects of support that may be beneficial to the population of HIV infected individuals in this setting.

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Informed Consent

Title of Study: Questionnaire on Self-Disclosure and Health Related Quality of Life of HIV Infected Individuals in Mosan Okunola LCDA, Alimosho of Lagos State

Principal Investigator: OLAYIWOLA BOLANLE OLUWASEUN

Purpose of Study

My name is OLAYIWOLA BOLANLE OLUWASEUN, a master of public health student at the faculty of public health, LeadCity University, Ibadan. I am conducting a study on the assessment Self-Disclosure and Health Related Quality of Life of HIV Infected Individuals in Mosan Okunola LCDA, Alimosho of Lagos State.

I am interested in evaluating the health-related Quality of Life, factors influencing self-disclosure and the composite effect of self-disclosure and health related quality of life among HIV infected individuals in Mosan Okunola LCDA, Alimosho of Lagos State.

I will greatly appreciate your participation in my study. Your insight will assist in the evaluating self-disclosure and health related Quality of life among HIV infected individuals.

Research Procedure

If you agree to be in this study, you will be asked to answer questions about yourself, your knowledge of healthy lifestyle, attitudes of people towards healthy lifestyle, and as well as questions about the factors that influence healthy lifestyle will be asked using a structured questionnaire. Answering the questionnaire will take about 20 minutes of your time.

Risks and Benefits

There are minimal or no risks if you take part in this study. There are also no incentives but the information you provide will help you improve your health and that of your loved ones.

Compensation

There is no monetary compensation or incentive for this study. Participation is voluntary.

Confidentiality

Like it is stated above, your comments will not be anonymous. Every effort will be made by the researcher to preserve your confidentiality. Only the research team will have access to the answered questionnaires. Confidentiality and privacy will be maintained by keeping all materials under lock and key. Your name will not be recorded.

Contact Information

If you have questions at any time about this study, as the result of participating in this study, you may contact

Olayiwola Bolanle Oluwaseun,

Department of Public Health,

Lead City University, Ibadan

+2348038108090

olayiwolabola04@gmail.com

OR

Chairman LCU Institutional Review Board. Lead City University Ibadan Oyo State through lcu.hrec@lcu.edu.ng

Voluntary Participation

Your participation in this study is voluntary. It is up to you to decide whether or not to take part in this study. If you decide to take part in this study, you will be asked to sign a consent form. After you sign the consent form, you are still free to withdraw at any time and without giving a reason. Withdrawing from this study will not affect the relationship you have, if any, with the researcher. If you withdraw from the study before data collection is completed, your data will be returned to you or destroyed.

Consent

I have read and understand the provided information and have had the opportunity to ask questions. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving a reason and without cost. I understand that I will be given a copy of this consent form. I voluntarily agree to take part in this study.

Participant's signature/thumb print _______________________________ Date __________

Participants Name: ____

Investigator's signature ______________________________ Date __________

Investigator’s Name: ____

Witness Name: (If necessary) ____

Signature or thumb print: ____

Questionnaire

LEAD CITY UNIVERSITY

IBADAN, OYO STATE

Self-Disclosure and Health Related Quality of Life of HIV Infected Individuals in Mosan Okunola LCDA, Aimosho of Lagos State

Dear Respondent,

This research is on Self-Disclosure and Health Related Quality of Life of HIV Infected Individuals in Mosan Okunola LCDA, Aimosho of Lagos State.

The information provided will be strictly confidential and participation is voluntary.

Yours Sincerely

Olayiwola, Bolanle. O.

Section A: Demographic Data

Kindly tick (√) or fill in the space provided in the statements below;

1. Age at last birthday:
2. Sex: Male ( ) Female ( )
3. Educational Level: Primary ( ) Secondary ( ) Tertiary ( ) None ( )
4. Marital Status: Single ( ) Married ( ) Divorced ( ) Widowed ( )
5. Employment Status: Employed ( ) Unemployed ( )
6. Number of years of diagnosis: <1yr ( ) 1-5 yrs ( ) >5yrs ( )

Section B: Disclosure And Social Support

Tick (√) or mark the option that best represents your opinion in the statements provided;

7. When you became aware that you were HIV positive, did you disclose your status to anyone? Yes ( ) No ( )
8. Which of your relations did you first disclose your status to when you found out that you were HIV positive? Nuclear Family ( ) Extended Family ( ) Non Family Relations ( )
9. Have you received any support from the person(s) you disclosed your HIV status, to? Yes ( ) No ( )
10. If yes, what form of material support(s) did you receive from the person(s) you disclosed your status to in the past 3 months (a) Medical Expenses (b) Cash for Upkeep (c) Shelter (d) Food (e) Clothing (d) None

Section C: Health-Related Quality of Life Assessment Tool

Kindly indicate your level of response

Key: Not at all, ALittle, Moderate Amount, Extreme Amount

Physical Domain

SN	Statement	Not At all	ALittle	Moderate Amount	Extreme Amount
11.	How have you felt that physical pain prevents you from doing what you need to do?				
12.	Do you have energy for everyday life?				
13	How satisfied are you with your sleep?				
14.	How much are you bothered by any physical problems related to your HIV infection?				

Psychological Domain

SN	Statement	Not At all	ALittle	Moderate Amount	Extreme Amount
15.	How much do you enjoy life?				
16.	How well are you able to concentrate?				
17.	How satisfied are you with yourself?				
18.	Are you able to accept your bodily appearance?				
19.	How often do you have negative feelings such as blue mood, despair, anxiety and depression?				

Level of Independence Domain

SN	Statement	Not At All	ALittle	Moderate Amount	Extreme Amount
20.	How well are you able to get around?				
21.	How satisfied are you with your ability to perform your daily living activities?				
22	How satisfied are you with your capacity for work?				
23.	How much do you need any medical treatment to function in your daily life?				

Social Relationship Domain

SN	Statement	Not At all	ALittle	Moderate Amount	Extreme Amount
24.	How satisfied are you with your personal relationships?				
25.	How satisfied are you with the support you get from your friends?				
26.	How satisfied are you with your sex life?				
27.	How satisfied are you with your sex life?				

Spiritual, Religion And Personal Beliefs

SN	Statement	Not At all	ALittle	Moderate Amount	Extreme Amount
28.	How safe do you feel in your daily life?				
29.	How satisfied are you with the conditions of your living place?				
30.	How satisfied are you with your access to health services?				
31.	To what extent do you have the opportunity for leisure activities?				
32.	How healthy is your physical environment?				

Spiritual, Religion And Personal Beliefs

SN	Statement	Not At all	ALittle	Moderate Amount	Extreme Amount
33.	To what extent do you feel your life to be meaningful?				
34.	To what extent are you bothered by people blaming you for your HIV status?				
35.	How much do you fear the future?				
36.	To what extent do you have the opportunity for leisure activities?				

General Quality of Life

SN	Statement	Not At all	ALittle	Moderate Amount	Extreme Amount
37.	How would you rate your quality of life?				
38.	How satisfied are you with your health?				

Bio-data

A. Personal Data

Name:	Bolanle Oluwaseun OLAYIWOLA
Sex	Female
Date of Birth	14th October 1977
Marital Status	Married
State of Origin	Lagos State
Local Govt. Area	
Nationality	Nigerian
Religion:	Christianity
Discipline:	Community Health
Address:	62, Christ Redeemer Street, Ajasa Lagos
Telephone:	08038108090
Email:	olayiwolabo04@gmail.com

B. Educational Institutions Attended with Dates

Lead City University (BSc)	2018-2022
School of Hygiene, Eleyele(CH0)	2000-2003
School of Hygiene, Eleyele (CHEW)	1997-2000
St David Grammar School, Ogbomosho	1988-1996

C. Working Experience

Oyo State Local Government Service Commission	2001-2009
Lagos State Primary Health Care Board	2009 till date

D. Awards and Fellowships: None

E. Professional Membership: Community Health Practitioners of Nigeria

F. Publications: NILL

G. Major Conferences Attended with Dates: NILL

H. **Referee**

Supol Ayoola Oladunni
ADC to The Vice President
Federal Republic of Nigeria
08033596571.

Mrs. Raimat Akinyemi
Community Health Worker
08139349492.

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Signature Date

The University Compliance Certification

This is to certify that this thesis by Bolanle Oluwaseun OLAYIWOLA, with Matric No. LCU/PG/002174 in the Department of Public Health, Faculty of Basic Medical and Health Sciences, Lead City University, Ibadan is in full compliance with the approved University format and style.

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Signature Date