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AGED 15-24 YEARS AT NAKURU COUNTY REFERRAL HOSPITAL IN
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Dr. Chirchir Matthew Kimeli¹⁺, Eddah Cheruiyot¹, Dr. James Waweru*
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Marcia Kimarua*, Monicah Kiratu*
David Bett*

¹Kenya School of Government

⁺Mathew.chirchir@ksg.ac.ke

*Nakuru County Referral Hospital

ABSTRACT

Purpose: Adolescents and youth living with HIV/AIDS experience numerous challenges and support needs, some of which occur in school and affect their quality of life. Several reasons have been advanced to explain this trend includes; stigma, peer pressure and discrimination. However, little focus has been made on socio-cultural, socioeconomic and clinical challenges facing Adolescents and Youth Living with HIV/AIDS (AYLHIV). The objective of this study was to assess the challenges influencing access to comprehensive HIV care among adolescents and youth aged 15-24 years at Nakuru county referral hospital in Kenya.

Methodology: Adopting social cognitive theory, a descriptive survey research design was used. Purposive and proportionate random sampling techniques were used to obtain a sample size of 47 AYLHIV. Questionnaires and focused group discussions were used to collect data from AYLHIV; while Interview schedules were to collect data from counsellors in November 2019. Data were analyzed by the use of descriptive statistics in January 2020.

Findings: The study concludes that the main socio-cultural challenges faced by AYLWA at County Referral Hospitals are stigma and frequent change of caregivers resulting in poor adherence to ARV medications. Moreover, no major socio-economic challenges were affecting AYLWA at the health facilities. Further, the main clinical challenges facing AYLWA were poor adherence and low viral suppression.

Unique Contribution to Theory, Practice and Policy: The study recommends the need to offer and strengthen psychosocial support to AYLWA to enable them to cope with their status and educate the caregivers on the importance of the AYLWA having a consistent caregiver for continuity. The hospital management should avail more trained adherence counsellors for this role. Moreover, the hospital management needs to strengthen the Youth Friendly HIV services to improve responsiveness to the youth needs. This will enhance peer support.

Keywords: *Comprehensive HIV Care, Adolescents, Youth*

I. INTRODUCTION

1.1 Background Information

Comprehensive HIV Care is an arrangement envisaged under the Comprehensive National Health Policy Framework that seeks to support persons living with HIV/AIDS through the Comprehensive Care Centre or Comprehensive Care Clinics with the support of the Comprehensive Care Centre management team and staff who provides comprehensive HIV services. Approximately 35 million people are currently living with HIV/AIDS globally and 52% of HIV infections were reported among adolescents and youth in sub-Saharan Africa (UNAIDS, 2014). Among 3.9 million adolescents aged between 15 and 24 years are living with HIV and 620,000 became newly infected with the virus (UNAIDS, 2018). This number has risen by 38% between 2005 and 2017 (UNICEF, 2018). Despite the Government of Kenya setting up policies to mitigate HIV/AIDS, it is ranked second among African countries with the highest national HIV prevalence in sub-Saharan Countries (NACC & NASCOP, 2015).

At the International AIDS Conference in Durban, South Africa in 2016, the WHO highlighted four key challenges regarding the HIV epidemic. These included stalled preventive impact, the poor reach of treatment, antiretroviral drug resistance and inadequate sustainable funding of HIV programs. According to World Health Organization (WHO), nations that invest in strategies with big impact for example pre-exposure prophylaxis (PrEP); an approach in which ARVs are utilized in protecting high risk populations have better chances of managing this pandemic. Countries were encouraged to revitalize long-established prevention methods such as the use of condoms and male circumcision. Expanding HIV treatment saves lives, improves the quality of life and reduces HIV transmission. HIV treatment needs to be linked with increased testing to maximize treatment coverage. Factors that contribute to HIV-related drug resistance were found to include adherence to treatment and retention in the services, interruptions in the supply of antiretroviral drugs through stock-outs, and poor quality of treatment services. As global financing dynamics change, and particularly for middle-income countries, it will be important to ensure full replenishment of the Global Fund to fight AIDS, TB and Malaria. This may require the integration of HIV services into universal health coverage while ensuring that the cost of medicines and commodities is contained.

Adolescents and youth living with HIV/AIDS experience numerous challenges and support needs, some of which occur in school and affect their quality of life. The effect these challenges are poor health, death and HIV infection to the other youths. Thus high preference rate among this age group (UNAIDS, 2014) HIV/AIDS kills more people worldwide than any other infectious disease. Most of these deaths occur in adolescents and youths who not only make up the economic backbone of their countries but also whom the countries' development depends on. Policies and strategies have been set up to mitigate HIV infection, yet more adolescents, some of whom may have been born HIV positive continue to die every year of HIV/AIDS.

According to the Kenya Population-Based HIV Impact Assessment (KenPHIA) report, in 2018 there were 1.3 million Kenyan adults above 15 years of age living with HIV, while children under 15 years were 139,000. This translated to HIV prevalence of 4.9% and 0.7% respectively among

adults and children. The national HIV prevalence rates in Kenya vary widely among regions, with the highest prevalence in Homa Bay County (19.6%), and the lowest in Garissa County at 0.1%. The HIV prevalence rate in Nakuru County stood at 3.0 % in 2018.

In Kenya young adults between ages, 15 to 35 comprise 38% of the national population and are believed to make up more than 60.5% of those living with HIV infections (NACC & NASCOP, 2012). This is of great concern since it has been pointed out that adolescents and youth aged between 15 and 24 years contributed 58% of new infections in the year 2015, a figure that had risen from 31% recorded in 2013(NACC, 2015). This could be those born HIV positive and those acquiring a new infection. This rate can be reduced if measures to address challenges of prevention are put up as well as proper management of those born HIV positive since the HIV is mainly transmitted through heterosexual intercourse that accounts for 77% of all new infections (NACC, 2009; NACC & NASCOP, 2012). This should be of concern because it is estimated that the number of PLHIV in Kenya may continue to increase (NACC & NASCOP, 2017).

Youth and adolescents are a risky group since they experience increased freedom from parental and school control thus being exposed to environmental influences such as availability of alcohol, drugs of addiction, risky sexual behaviour and urban lifestyle of discos and fashion (NACC and NASCOP, 2017). Approximately 68% of the adolescents aged 15 to 24 years old are sexually active (Othero, Aduma & Opil, 2010), and are also vulnerable to HIV infection because of their inconsistent condom use especially during the first sexual episode (Museve, George & Labongo, 2013).

The Centre for Disease Control and Prevention (CDC) revised its HIV guidelines and recommended HIV care to include individuals traditionally considered lower risk, such as adolescents under age 20, thus enabling them to access treatment at an earlier stage and avoid transmitting the virus to others (UNAIDS, 2017). Despite these efforts, the CDC estimated that 66% of United States of America adolescents and youth aged 15 to 24 were not aware of their HIV status, meaning that they could be HIV positive and not attending Comprehensive Care Centres for medication and care (McElrath, Stana, Taylor & Arnold, 2017).

Globally, it is estimated that one-fourth of all People Living with HIV (PLHIV) in the USA do not know they're infected (Fleming, Byers & Sweeney, 2015). A survey of young men who have sex with men (MSM), found that 34% of young Black MSMs were HIV positive and were not on ARVs (Delva, Guillaume, Vansteelandt, Claeys, Verstraelen & Broeck, 2014). Approximately 35.9% of HIV positive students in Bosnia and Herzegovina; former Yugoslav Republic of Macedonia, Serbia and Montenegro were not adhering to Anti-Retroviral drugs (ARV) as a result of stigma and cultural factors (Delva *et al.*, 2014). In the United States, 12.9% of students were found to be HIV positive and not taking their ARV drugs consistently (Kann, Kinchen & Shanklin, 2013). Among youth aged 15 to 24 years, in Eastern and Southern Africa, 39% of girls and 30% of boys were HIV positive and not adhering to ARV drugs due to socio-cultural and economic factors (UNAIDS 2015). In Kenya there have been only a 20% reduction in risky sexual behaviour among the HIV positive adolescent and youth. There has been a lot of non-compliance to ARV drug therapy; contradicting previous studies that indicated the utilization of ARVs was higher

among youth and adolescents with at least secondary education since they understood the importance of drug compliance (KNBS, 2015). This calls for initiatives to identify challenges affecting the AYLWHA, as it could be the cause of the high prevalence rate of HIV/AIDS, (Daystar, 2015)

The World Health Organization estimates that 10.3 million youth aged 15–24 years live with HIV/AIDS (most without knowing that they're infected) and a half all new infections occur among young people on a global basis. According to the Indian Journal of Sexually Transmitted Diseases and AIDS (2010), the disclosure and declaration of HIV status to self and family is challenging. The National AIDS Control Council (2015), states that young people in Kenya face various health challenges and risks including HIV, gender-based violence and alcohol and drug abuse. Clinical factors have been identified as possible challenges to the adolescents and youth LHIV (Georgia National AIDS Centre data, 2016). The perceived repercussions of being seen accessing services are key personal and interpersonal challenges (Beattie et.al, 2012). HIV infections can be reduced by identifying and controlling challenges that play critical roles in this association. A study by Mwangi, Ngure, Thiga & Ngure (2012), on challenges faced by AYLHIV, focused on factors such as stigma, attitudes and beliefs of this group, but did not focus on the cultural and socioeconomic challenges that they face. In their study on challenges affecting different professional and community groups, LWHA Admassu and Fitaw (2010) did not focus on clinical challenges. This shows that limited attention has been paid to sociocultural, socioeconomic and clinical challenges faced by AYLWHA. This study, therefore, seeks to address the gaps, by identifying the challenges faced by adolescents and youth aged 15-24 years LWHA on follow-up at the Nakuru County Referral hospital.

1.2 Problem Statement

HIV/AIDS is the leading cause of death and morbidity in Kenya and more specifically among adolescents and youth living with HIV/AIDS. In 2014, a total of 9,720 adolescents and youth died of AIDS and 75% of these deaths were from those living with HIV/AIDS (MoT/ Kenya HIV Estimates; UNAIDS/NASCOP, 2015). Many reasons have been advanced to explain these trends which indicate that adolescents and youth experience numerous challenges and support needs, some of which occur in schools and affect their quality of life (UNAIDS, 2016). This has led to poor health and educational outcomes of school dropouts, as well as death (Kimera, Vindevogel, & De-Maeyer, 2019). HIV/AIDS has a strong negative impact on AYLHIV's social integration and often evokes a lot of stigmatization and discrimination in their community. Peer pressure has also been seen to enhance "risk-seeking behaviour" such as unsafe sex, drug abuse and poor adherence to ARVs among AYLHIV (UNAIDS 2015). It is of great concern to the health care providers in Nakuru County that youth and adolescents living with HIV/AIDS have challenges related to their seropositive status. These often affect their healthy positive living behaviour like adherence to ARVs, good nutrition practices leading to increased morbidity and mortality rate. It could also be the cause of the high HIV prevalence rate among adolescents and youth. However, little focus has been made on challenges facing adolescents and youth living with HIV/AIDS, which is compounded by inadequate, skewed and or ambivalent literature on this concern particularly in local/remote regions in Kenya. Thus, this study sought to bridge this gap by focusing

on socio-cultural, socioeconomic and clinical challenges faced by adolescents and youth living with HIV/AIDS. Focusing on these challenges was deemed to be useful in reducing AYLHIV's morbidity and mortality rate. It may also be an important step towards reducing the prevalence of HIV/AIDS among the youths, as well as help the health care providers identify possible solutions, to improve their quality of life.

Study Objectives

The study's broad objective was to assess the challenges influencing access to comprehensive HIV care among adolescents and youth aged 15-24 years at Nakuru County Referral Hospital. Specifically, it sought to describe socio-cultural, socio-economic and clinical challenges influencing the youth and adolescents' access to comprehensive HIV services.

2. LITERATURE REVIEW

2.1 Socio-Cultural Factors

The Comprehensive National Health Policy Framework indicates that unsafe sex is the highest risk factor to mortality in Kenya at 29.7% and Disability Adjusted Life Years at 24.2% and as such, there are efforts to address sexual awareness amongst the youth, with a strategy to roll out youth-friendly services in health facilities. The National Institute on Drug Abuse (2010) has established that nearly one-quarter of AIDS cases stem from intravenous drug use, and one in four PLHIV from 2005 to 2009 reported the use of alcohol and drugs to an extent that they required treatment.

According to Kimera *et al.* (2019), YLWHA experience innumerable challenges within schools and the larger community, some of which affect their Quality of Life (QoL), and these include, but not limited to stigma, poor health and educational outcomes including school drop-out. In the 2018 conference on HIV/AIDS titled 'Turning the tide: Preventing new HIV Infection and Optimizing treatment Outcomes', several issues emerged as hindrances to the progression of HIV among youths, selected youths from different backgrounds and organizations shared their issues in regards to HIV/AIDS. Amongst the issues raised was stigma and discrimination and fear of the same in case of disclosure especially in boarding school, and one minor shared that he would have to wait till everyone was asleep and then wake up to take his medication. Being an orphan affects adherence negatively mainly due to being under the care of different guardians who may have different perceptions of HIV/AIDS. Some orphans LWHA have nobody to help them financially leading to poor feeding and inadequate psychosocial support. (McCarthy, *et al.*, 2018).

2.2 Socio-Economic Factors

HIV rates among the urban poor are usually higher than in the general population. For instance, a study in the USA found the HIV rates among the urban poor to be 20 times higher than other groups irrespective of race (Denning & DiNenno, 2019). Youth's engagement in sexually risky behaviour was also motivated by scarcity phenomena explained by behavioural economics, like

compensating for sex lost during scarce periods, valuing economic gains over HIV risks and transacting sex as an investment strategy. When scarcity was relieved, young women additionally described reducing the number of sex partners as a reason for non-economic preferences (Larissa *et al.*, 2017).

Financial stress affects many youths living with HIV/AIDS (Abubakar *et al.*, 2016). Perinatally infected youth are more prone as they may have lost one or both parents; some have parents too sick or weak to provide for them. Caretakers may not address all the financial needs of the youths due to the added burden to their families. Financial stress may lead to a missed clinic due to lack of transport, resulting in non-adherence to treatment (Nabukeera *et al.*, 2015). Such youths may miss proper meals. Some YLWHA may engage in unprotected sex for pay due to financial stresses (Bakeera *et al.*, 2008).

Youth unemployment is common in sub-Saharan Africa. The YLWHA, particularly the orphans, or youths whose parents are too sick to work, oftentimes have a challenge finding capital to start their businesses even after dropping out of school. Thus, their state of poverty gets compounded (McCarthy *et al.*, 2018). Adolescents are at a stage where their desire for sex is increased. Youths with HIV/AIDS are no exception. The YLWHA who are orphaned may be without shelter in some instances. This environmental exposure compounded a lack of guidance and the need for money lead some youth into the risky sex trade. The engagement may be of heterosexual or homosexual nature (Naswa & Marfatia, 2010).

Another youth at the 'Turning the tide: Preventing new HIV Infection and Optimizing treatment Outcomes' conference (2018), shared that she was forced to become a sex worker after her father died and she had no other alternative means to pay for her school fees since they could not access his pension money. Unfortunately, at the time, she did not know safe sex practices and she ended up contracting HIV. She further stated that this scenario is not unique to female youths since the males also render sexual services to older women to get money. Another youth at the conference said that coming from Turkana, and with pastoralism being their main economic activity, it's difficult to get more than one meal a day, making it a challenge adhering to medication.

2.3 Clinical Factors

According to the article by Science Africa (2018), it is difficult for youths to approach health workers on issues to do with safe sex practices such as contraceptives and other sexual issues, and this hinders them from getting information about HIV as well. Caterina *et al.* (2017) conducted a study amongst HCWs operating in a large university hospital in southern Italy, to assess the professional attitude of HCWs towards serving HIV/AIDS patients and/or drug users. It was established that discrimination and fear figures significantly reduced among HCWs by age, inferring poorer professional attitudes in these domains, whereas the acceptance of HIV/AIDS and/or drug users reduced when the sample age increased. From the data of their study, they observed that being older than 40 seemed to be a significant risk factor in terms of discriminatory attitudes, low tolerance towards drug users and the generation of fear. They also found that from 50 years of age, employees manifest poor tolerance (acceptance) of HIV/AIDS patients.

One of the adolescent mothers at the 2018 'Turning the tide: Preventing new HIV Infection and Optimizing treatment Outcomes' conference shared that when adolescents go to seek Reproductive Health services such as condoms and other family planning measures especially in Public hospitals, there is hostile treatment and a lot of negative non-verbal behaviour from the Health Care Workers. According to a study by Giles *et al.* (2018), there are recurrent stock-outs of HIV Supplies amongst the public hospitals understudy with stock-outs a problem lasting several days to weeks and disturbing facilities serving changing patient figures. This is a problem because it puts more people at risk of HIV transmission and viral resistance and thus an increase in morbidity and mortality particularly in patients with low immunity.

A study conducted by Zakumumpa *et al.* (2019) in Uganda showed that the stock-out of antiretroviral and concomitant drugs is an increasingly chronic bottleneck in HIV service delivery in Uganda and the broader Sub-Saharan Africa region. They found that the 'borrowing' of ARVs from peer-providers was a common strategy adopted during stock-out events in Uganda. They further posit that a USAID study established that 73% of for-profit providers in Uganda identified an 'inadequate supply of ARVs' as the most important constraint in ART service delivery.

Youth living with HIV/AIDS need to be on a lifelong treatment with antiretroviral drugs. Stresses related to medication are common among the youths on ART. Poor adherence to treatment is an issue of major concern about YLWHA. Some studies have attributed this problem to poverty. Youths may miss taking medication due to missed meals. On other occasions the youths are unable to honour clinic appointments due to lack of fare to attend clinics (Kimera, *et al.*, 2019)). Poor growth and altered body image among adolescents tend to have a significant effect on the psychosocial wellbeing and quality of life of adolescents living with HIV/AIDS. This particularly concerns growth retardation and ART-related lipodystrophy (selective loss of body fat) (McCarthy, *et al.*, 2018).

Kenyan data indicates that initiating and remaining on treatment is particularly problematic for adolescents and young people. From a total of 141,000 adolescents, only 34,800 aged 10-19 with identified HIV positive status were on ART in 2014, however, 22,600 of those were virally suppressed. (NAAC, 2015). Being in school has also been noted to impede adherence to ART due to limited privacy. Someday scholars may avoid carrying medication to school, leading some missed doses. Those in boarding school may have a bigger challenge in taking medication away from other students; sometime they may have to miss medication altogether. If they are discovered by other students to be HIV positive, they risk being isolated (McCarthy, *et al.*, 2018).

Traveling over a long distance to the clinic has been found to contribute to a lack of good adherence to ART. Some studies have attributed up to 60% of poor adherence to this factor (Maskew, *et al.*, 2016). Some youths have been reported to skip medication due to a high number of pills to be taken daily. Others have been noted to give themselves some rest from the medication due to the long-term nature of treatment (Ammon *et al.*, 2018).

Youths living with HIV/AIDS are social just like all youths. The youths have been reported in some studies to avoid taking medication when with their friends due to the obvious lack of

confidentiality. Other youths have been reported to miss medication due to alcohol and drug use (Kim, *et al.*, 2017).

Thapa *et al.* (2015) established HIV affects nutritional status through enhancing energy requirements, therefore, reducing food consumption and negatively affecting nutrient absorption and breakdown. This leads to poor nutrition which further weakens the immune system thus increasing susceptibility to opportunistic infections; this further increases nutritional needs (known as the vicious cycle of malnutrition and infection. (UNICEF, 2012). Adolescence is a period of rapid physical growth. Up to 45% of skeletal growth takes place at this stage and 15-25% of adult height is achieved during adolescence. Up to 37% of total bone mass may be accumulated at this stage. At this stage, they have high nutritional needs. It is also the period where childhood under-nutrition may be corrected with an adequate diet.

Adolescents have a heightened risk for nutritional deficiencies; thus, they need large quantities of nutrients to support the rapid increase in skeletal mass, body size and body density. They, therefore, need extra iron, calcium, iodine and zinc to support this growth. Iron requirements in adolescence are greater if there is an infectious disease such as HIV and because of the low bioavailability of iron from diets.

Girls in particular, are increasingly conscious of their bodies. Teenage girls may excessively restrict their energy intake out of a desire to be thin, which is an additional factor of health risk. Protein requirements of an adolescent living in an economically poor environment will be met for as long as they take adequate energy food. However, if the energy intake is low, the protein they consume is used to meet energy needs. The adolescent will then risk having a slow growth rate and muscle mass even if they take adequate protein in their food. HIV causes oxidative damage and stress to cells and as such, diets should include sources of antioxidants such as Vitamin C and E. However, this remains a challenge to PLHIV due to socioeconomic factors that affect dietary diversity.

Prats *et al.* (2010) established that the use of ARVs without nutritional support often results in poor treatment responses and outcomes. Further, the side effects of HIV medicine have been reported in PLHIV. Economic issues leading to inadequate nutrient intake are a frequent contributor to malnutrition in many settings. These include limited food supply, loss of household income or livelihood (such as farming) due to illness, and limited cooking and storage facilities. Besides, depression can lead to decreased appetite and poor nutrient intake. (Prats *et al.* 2010) The Food and Nutrition Technical Assistance on ALHIV (2012) recommends that adolescent clients and their family members need education on good nutrition. This includes: Eating a well-balanced diet that includes a variety of fresh foods and that is based on what is locally available and affordable. Energy giving foods should be the biggest part of every meal; bodybuilding foods should also be included in every meal; some meat, fish, or other foods from animals. When properly combined, plant proteins also provide good quality protein. Similarly, eat all types of vegetables daily as protective foods. The moderate use of fats and oils while avoiding processed junk food. Adolescents need to Increase caloric intake, asymptomatic ALHIV needs 10–15% more energy intake than those without HIV. Symptomatic ALHIV needs between 20–30% more energy

intake translating to an additional full meal each day or 2–3 additional snacks. Have their weight routinely monitored and recorded. If there are changes or other indications of nutritional problems, the health worker should conduct a nutritional assessment. Receive nutritional education and counselling (along with their caregivers) as a part of all HIV care appointments. A daily multivitamin supplement should also be a routine part of care to prevent micronutrient deficiencies.

2.4 Research Gap

- i. There are hardly any HIV/AIDS-related studies addressing challenges faced by youths and adolescents living with HIV/AIDS in the Central Rift Valley region in Kenya. This is compounded by inadequate, skewed and or ambivalent literature on this concern particularly in local/remote regions in Kenya
- ii. There is a gap in the studies already undertaken on the modes of transmission of HIV among AYLHIV

2.5 Analysis of Literature Review

Globally, about 2100 youths get infected with the virus daily. The majority of the youths affected are from low-and middle-income countries, with 85% in sub-Saharan Africa. Approximately 70% of youths living with HIV/AIDS acquire infection from their mothers. The increased availability of antiretroviral drugs (ART) has significantly reduced deaths and morbidities in infected youths and transformed HIV/AIDS from a death sentence to a chronic condition (Van-Dijk *et al.*, 2011). Hence youths born with HIV infection are surviving to the teenage years.

Socio-cultural issues that affect the young, particularly those living with HIV/AIDS include stigma, drug and substance abuse, unsafe sexual practices and frequent change of caregivers. Some of the AYLWHA were orphans and were, therefore, faced with financial and economic challenges, including being in child-headed households. Some of them were forced into sex trade to make a living. Some AYLWHA, especially the urban poor, have challenges accessing adequate foods.

Health care workers are not always free from stigma; some discriminate against youths with HIV. Health workers are judgmental concerning youths who seek family planning services. Poor adherence to antiretroviral therapy is the final common pathway resulting from all the challenges that AYLWHA face in their day-to-day struggle. This may be compounded by poor nutrition. This may eventually lead to poor viral suppression resulting in major complications of HIV/AIDS, and eventually an early death.

3.0 RESEARCH METHODOLOGY

3.1 Research Design

The study adopted descriptive exploratory design.

3.2 Target population

The study population included HIV positive AYLHIV being followed up at Nakuru County Referral Hospital after making a formal request to the hospital and participants signing informed consent forms. The population included both male and female youths and adolescents confirmed to be living with HIV/AIDS, who were aged 15-24 years. The sampling frame consisted of serialized numbers of people booked to attend Comprehensive HIV care on the first day.

3.3 Sampling Technique and Sample Size

Using random numbers in the frame, the first patient in the series was identified. From then every client who fitted the description was interviewed since approximately 40 clients were expected during the week of study and the time was limited. By the last day of the interview, the researchers had succeeded to interview 47 clients, one client short of the desired sample size. Krejcie and Morgan formula ($S = X^2NP(1-P) \div d^2(N-1) + X^2P(1-P)$) was used to calculate the desired sample size for the study from the study population of 480. Five research assistants were selected and trained on the filling of the questionnaires. Amongst these, one was staff from the CCC to ensure that the clients who were only willing to disclose information to the staff attending to them got an opportunity to do so. The other four were final year medical training college students.

3.4 Data Collection Method/Tool Used

During the collection of the data, the Research Assistants filled the questionnaires according to the responses of the interviewees and they practiced the virtues of patience, friendliness and honesty, to enable the researchers to achieve quality results. They were guided on appropriate dress code and advised to be in uniform during the interviews to enhance confidence in the respondents. Research Tools consisted of structured interviewer administered questionnaires developed according to the objectives whereas qualitative data were collected using a Focus Group Discussion Guide and Key Informant Interview Guide.

3.5 Data Analysis

Data collected was cleaned, coded and entered into the SPSS computer software version 20. Data were analyzed by the use of Descriptive statistics including means and frequencies were computed for the study objectives. For qualitative analysis, FGD and Key Informant (KI) notes were coded into common themes per objective and used in the interpretation of the findings.

4.0. RESEARCH FINDINGS AND DISCUSSION

4.1 Response rate

The study target population was adolescents and youths aged 15-24 years on ART in the primary catchment area of Nakuru Level V hospital. Forty seven respondents completed the survey questionnaires amounting to a 100% response rate which indicates that the sample was adequate

for analysis and reporting. According to Mugenda and Mugenda (2003), a response rate of 50 % is good while that of 70% and above is very good and representative enough of the study sample.

4.2. Demographic Analysis of Data

The majority of them were aged 15-19 years (85.1%) as compared to 14.9% of them who were 20-24 years. This shows that most of the respondents are teenagers who were young and still in their adolescent age where they were actively involved in unprotected sex.

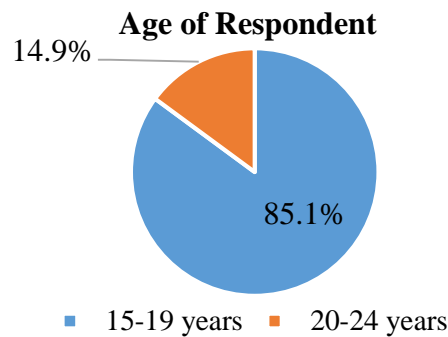


Figure 4.1: Demographic characteristics of respondents

More than half of the respondents (57.4%) were female against their male counterparts who were 42.6%.

Sex of Respondents

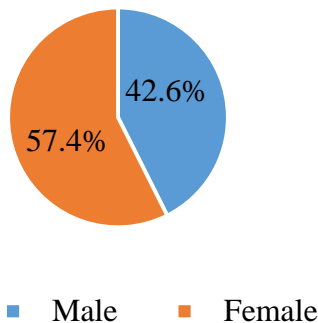


Figure 4.2: Sex of Respondents

From the study findings, it was revealed that 95.7% of the respondents were single as compared to the 4.3% who were married (monogamous). The questionnaire had provision for the married polygamous, widow/widower, separated and divorced but all registered a nil response.

Respondent's Marital Status

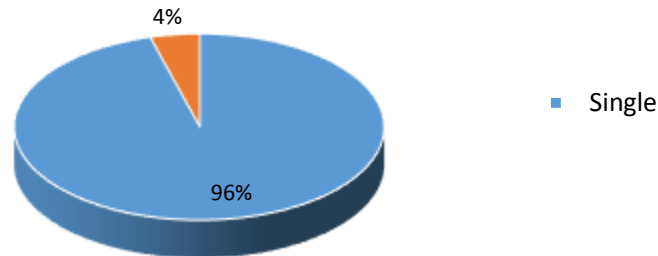


Figure 4.3: Respondents' Marital Status

The study sought to find out the level of education of the respondents. According to the findings, the majority of the respondents were going on with their secondary school studies (66%), 10.6% of them had completed their secondary studies, another 10.6% were ongoing with their tertiary studies while only 2.1% had completed their tertiary studies. To note is that 2.1% of the respondents had dropped out of school while at their tertiary level citing peer pressure as the reason. Findings from the FGD indicated that youth/adolescents lost hope in life hence dropped out of school or even ended up in the streets. On the other hand, the KI cited that there were few cases of school dropouts due to lack of fees.

Level of education (%)

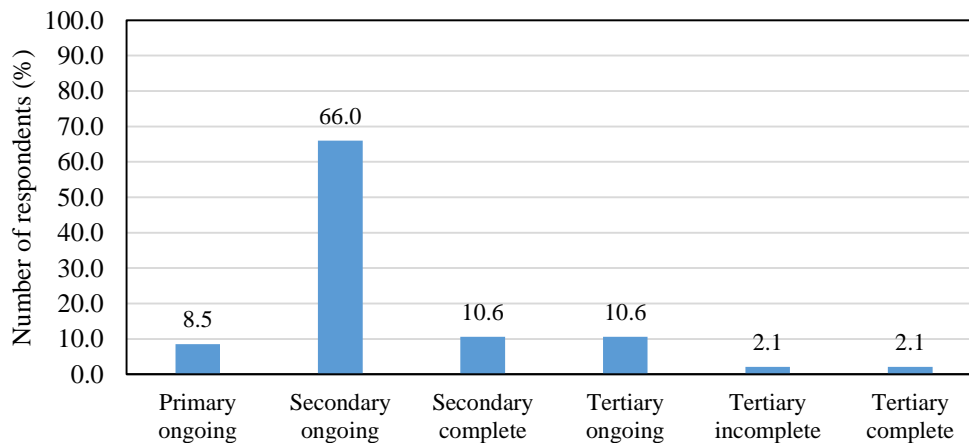


Figure 4.4: Level of Education of Response

4.3 Socio-Cultural, Socio-Economic and Clinical Factors

4.3.1 Social-Cultural Factors

Nearly all (94%) of the students stated that their religion did not have any teachings that could affect their access to HIV related services. Contrary to this, 6% of them stated that their religion

may affect their access to HIV related services. This is because it is believed to be a curse. Similarly, findings from the KII agreed with the above results. It was stated that other caregivers and religious leaders believe that HIV/AIDS is a curse. The KI explained that a pastor once stopped 3 children from taking the ARV drugs. They were restarted but defaulted again.

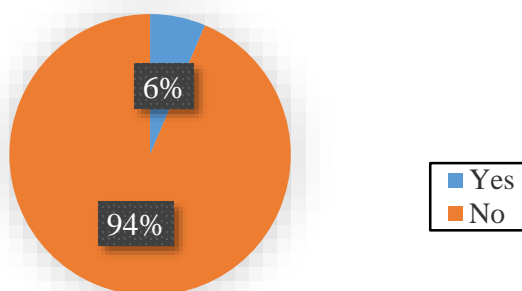


Figure 4.5: Religious influence on the access to HIV services

Common definitions of HIV/AIDS

Findings from the study revealed that 42.6% of the community felt that HIV/AIDS was a chronic disease, 14.9% a death sentence, 6.4% a non- curable disease and 4.3% a curse. On the other hand, 17% of the community felt that it was a normal disease and another 12.8% of them stated that it was a curable disease. To note is that the disease was unknown to 2.1% of the community.

Table 4.1: Common Definitions of HIV/AIDS

Common definitions of HIV/AIDS	Frequency	Percent %
Chronic Disease	20	42.6
A Death Sentence	7	14.9
A curse	2	4.3
A curable disease	6	12.8
Normal disease	8	17.0
A non- curable disease	3	6.4
Unknown	1	2.1
Total	47	100.0

Most (76.6%) of the respondents had disclosed their HIV/AIDS status while 23.4% of them had not. FGD and KI findings concurred that there were still some youth and adolescents that had not disclosed their HIV/AIDS to anyone. The KI stated, "A good number of the youths and adolescents have not disclosed to their girlfriends/boyfriends and most of them are sexually active". The KI further revealed that some of them stored their drugs in Kiosks so that no one would know about their status.

Have you disclosed your status to anyone

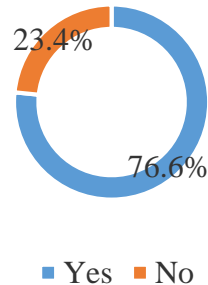


Figure 4. 6: Respondents' status disclosure

The study established the reasons why some respondents had not disclosed their HIV/AIDS status to anyone. Results indicated that 81.8% of them feared stigma and discrimination from others while 18.2% of them lacked trust in other people thus decided not to disclose their status. Similarly, in the FGD stigma and discrimination from peers and community were cited as reasons for not disclosing HIV/AIDS. It was also stated; "stigma is high especially if one has a single parent (mother)" and "we are seen as people who will die soon and some even opt to drop out of school". The FGD respondents went ahead and stated that their parents are blamed for their infection.

Why have you not been able to disclose your status to anyone?

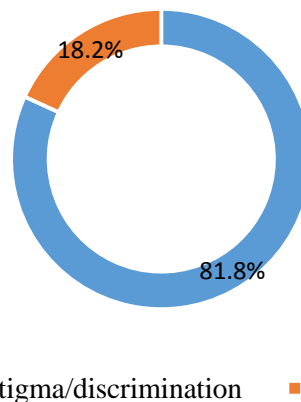


Figure 4.7: Reasons for not disclosing HIV/AIDS status

The study established the persons whom the respondents had revealed their HIV/AIDS status. 44.7% of the respondents had revealed their HIV/AIDS status to their parents, 8.5% siblings, 8.5% spouse/partner, 4.3% friends, 4.3% other relatives (grandmother, aunt), 2.1% their teachers and 2.1% their guardians. Another 2.1% of them had disclosed to their orphanage homes where they were staying.

Whom have you disclosed your status to?

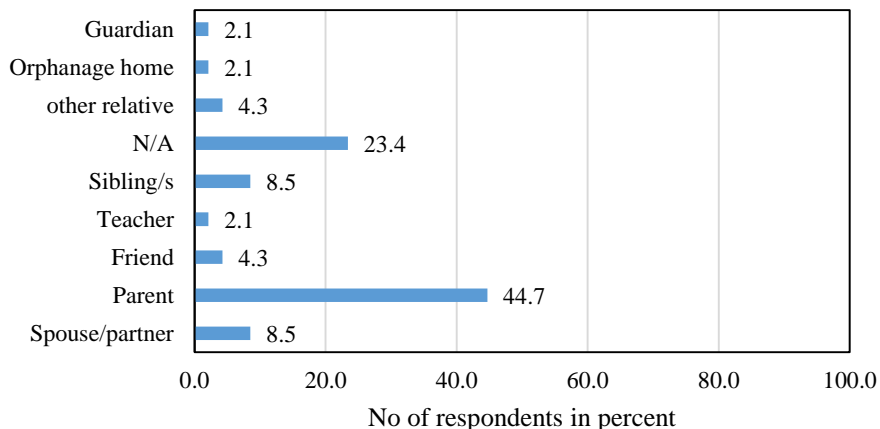


Figure 4. 8: HIV/AIDS status disclosure to other people

The respondents stated that 66% of those who had been disclosed to their HIV/AIDS status was supportive or understanding. On the contrary, 4% of them were sad/ disappointed, 4% were angry and 2% were confused.

What was their reaction?

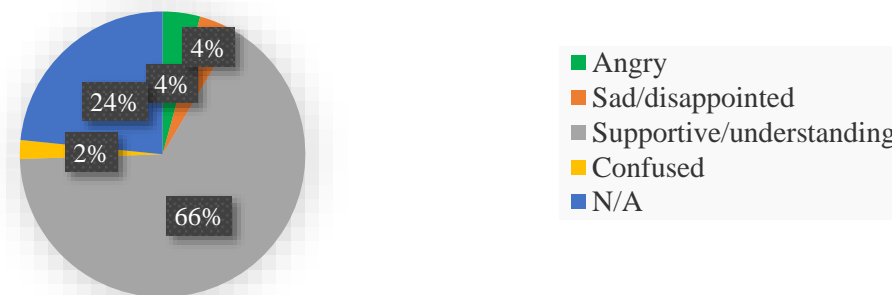


Figure 4. 9: Other People’s Reaction after HIV/AIDS Status Disclosure

The respondents had various caregivers with parents (59.6%) being the major caregivers. 19.1% of the respondents were taken care of by guardians (grandmother, aunt), while 10.6% were cared for in the children's homes. Another 2.1% of the respondents depended on their siblings for care but 8.5% of them took care of themselves. Findings from the KII concurred with these findings. The KI stated that some of the youth and adolescents are orphans and are under the care of other relatives. They feel uncomfortable being in those families and some opt to go and live in the streets "there are at least three cases noted in the CCC clinic who are street children on ARVS". The KI also confirmed that some of the youth and adolescents were cared for by their siblings especially where other guardians and relatives were uncomfortable with PLWHIV/AIDS. Similarly, in the

FGD it was stated that when orphans are under the care of relatives some are tossed from one relative to another as they are seen as a burden. In such cases where relatives are uncooperative older siblings opt to take care of their younger siblings, therefore, drop out of school and start doing odd jobs.

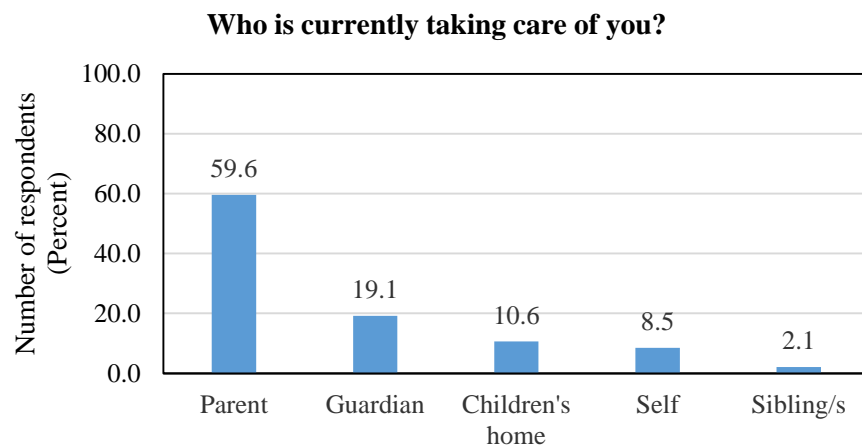


Figure 4. 10: Respondent's Caretaker

The study determined the duration that the respondents had stayed with their current caregivers. More than half (57.4%) of the respondents had stayed with their caregivers since birth, 8.5% for 6-12 months while 17% had stayed with their caregivers for more than a year.

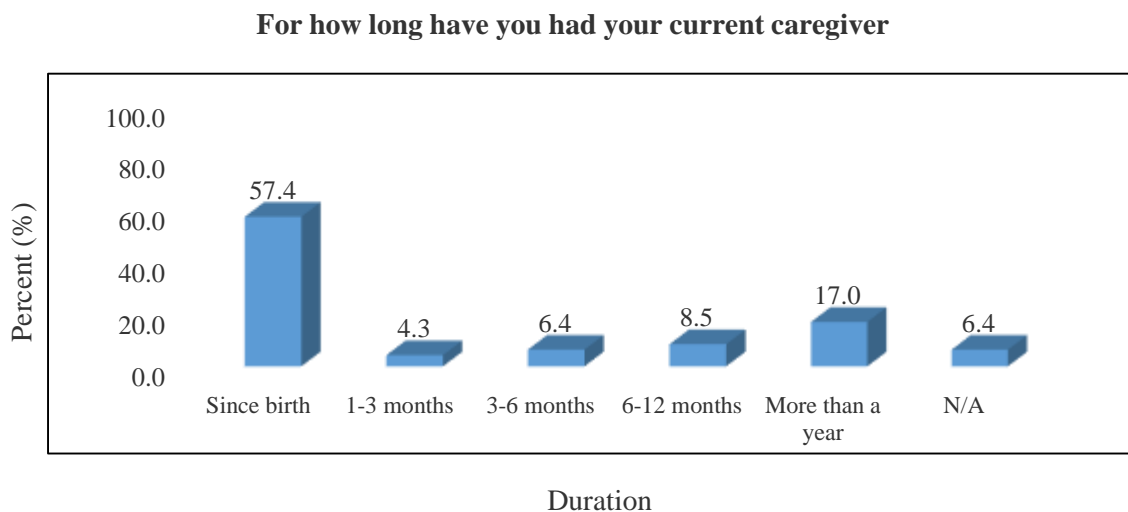


Figure 4. 11: Duration Respondent has had Current Caregiver

Close to half of the respondents (48.9%) had one caregiver within the last one year, another 42.6% of the respondents had started having two to three caregivers and 2.1% had more than 3 caregivers in the last one year. To note is that 6.4% of the respondents didn't have any caregivers and were

taking care of themselves. Further, it was established in the KII that youth and adolescents have many caregivers. "In a year one can have up to 4 caregivers most of whom have not gone through adherence counselling". The KI also explained that one of the adolescents had issues with the caregiver yet continued to pick ARVs. Adherence of the first line of ARVs for him was poor, he was switched to the 2nd line but never took the drugs. He eventually succumbed to TB and died. His sister dropped out of school too.

Number of caregivers in past year

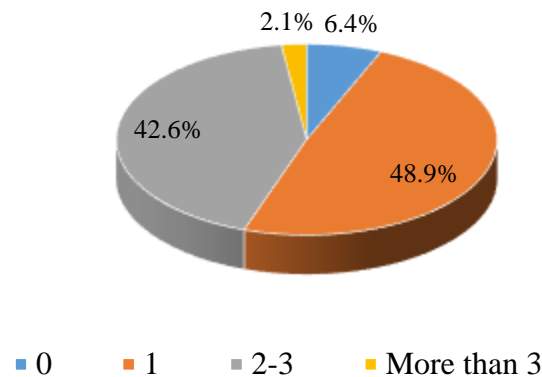


Figure 4. 12: Number of caregivers' respondent has had in the past year

The study established how often the respondents used protection whenever they had sex. Findings indicated that 14.9% of them always used protection, 10.6% sometimes used protection while 2.1% never used protection while having sex. Most (72.3%) of the respondents stated that they weren't having sex.

Protection during sex

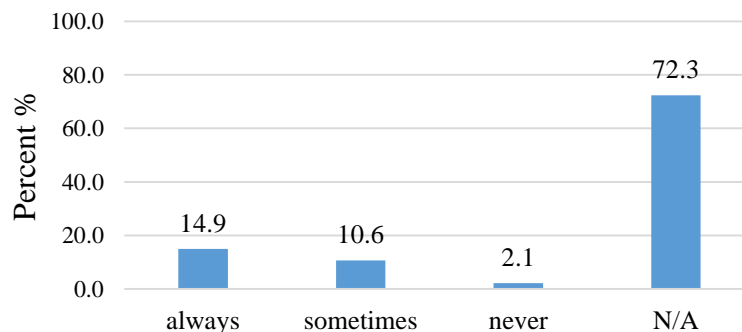


Figure 4. 13: Protection during sex

The number of sexual partners that the respondents had in the past year was 1(19.1%), 2-3 (6.4%) and more than 3 sexual partners (2.1%). 72.3% of the respondents stated not having any partners which were consistent with the proportion of respondents who were currently not engaging in sex.

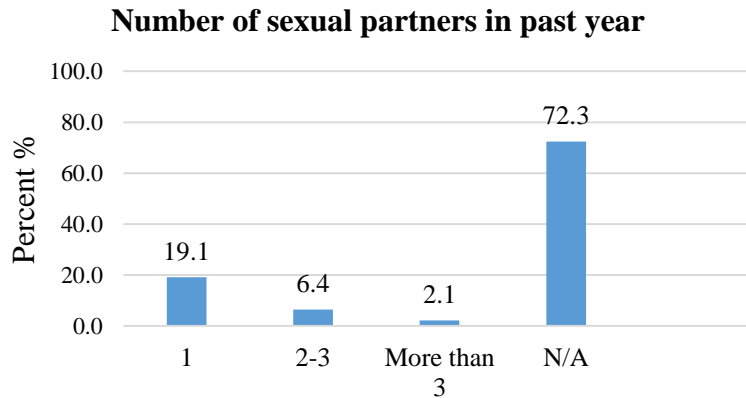


Figure 4. 14: Number of sexual partners in the past year

The study determined whether the respondents were currently using any substances. Out of all respondents, only 4.3% of them were using alcohol.

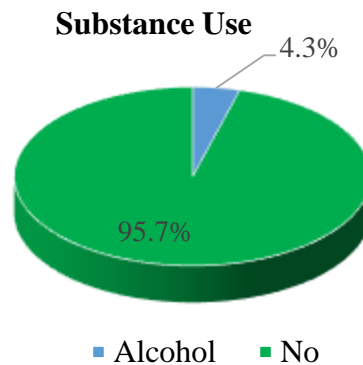


Figure 4.15: Substance Use

Further, the study sought to find out whether the respondents were going through any forms of sexual and gender-based violence. Most (95.7%) of them stated not having any form of SGBV, however, 2.1% of them had experienced verbal abuse and another 2.1% sexual exploitation while in her forced early marriage.

Forms of sexual and gender based violence

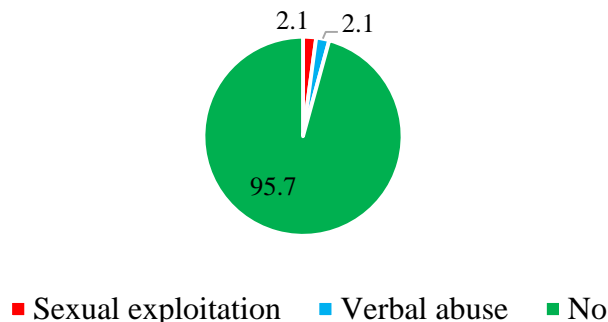


Figure 4.16: Forms of Sexual and Gender-Based Violence

4.3.2 Socio-Economic Factors

Economic status was determined in this study as it influences many aspects that directly or indirectly affect PLWHA. Findings from this study revealed that 38.3% and 34% of the respondents indicated that business and salaried employment were their main sources of income. Besides, 10.6% relied on farming, 6.4% on casual work while another 8.5% are hosted in children's homes. Further, the study findings established that most of the respondents were students (78.7%), 8.5% had salaried employment, 4.3% were self-employed or had casual employment while another 4.3% had no occupation at all. It was noted that most (70.2%), of the respondents, used less than KShs.0-100 as their expenses while they attended the CCC. Another 17% of the respondents spent KShs.101-300, 4.3% spent KShs.301-500, while 8.5% spent over KShs.500 on CCC expenses.

Table 4.2: Economic Information

Characteristic	N= 47	Percent %
Income		
Farming	5	10.6
Business	18	38.3
Employment	16	34.0
Casual work	3	6.4
Donor Funding	4	8.5
Researcher	1	2.1
Occupation		
Salaried employment	4	8.5
Self-employment	2	4.3
Casual employment	2	4.3
Student	37	78.7
None	2	4.3
CCC expenses		
KShs.0-100	33	70.2
KShs.101-300	8	17.0
KShs.301-500	2	4.3
Over KShs.500	4	8.5

Further, most (72.3%) of the respondents stated that they had never lacked money required for CCC clinic visits. However, 23.4%, 2.1% and 2.1% of the respondents noted that they rarely often and always lacked money respectively. Contrary to this, FGD findings revealed that most of them lacked bus fare to attend the CCC clinics especially when one is an orphan and the caregivers are uncooperative, hence they are forced to walk for long distances to get to the clinic. Similarly, the KII revealed the same where some respondents came late to clinics since they had to walk long distances (i.e. as far as Mbaruk, Pipeline, KITI), which all range between 10-15 km. FGD findings also revealed that some lab investigations were not done on time because of a lack of finances. Similarly, the KI stated that services offered at the CCC were free except for the baseline investigations at the start. The researcher further said that those who didn't afford were directed to the waiver system which sometimes takes longer.

Kshs

Missed CCC expense money

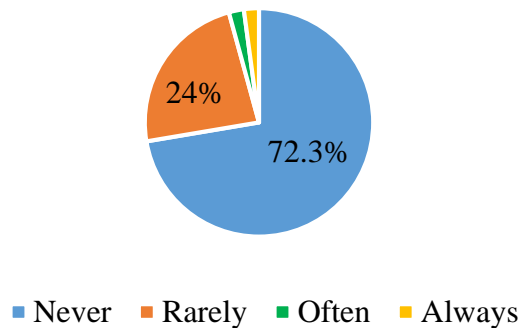


Figure 4.17: Lack of money for CCC expenses

The study determined the number of meals that the respondents had consumed in the last 24 hours. Majority of the respondents (42.6%) had consumed 3 meals followed by 27.7% who had consumed more than three meals. However, despite their health status that predisposes them to infections, diseases and high nutritional needs, 23.4% had taken only two meals while 6.4% only had one meal in the last 24 hours. Findings from the qualitative data agreed with these results. Both in the FGD and KII, it was noted that some respondents lacked food hence it was difficult for them to take drugs.

No. of Meals Consumed in the last 24 hours

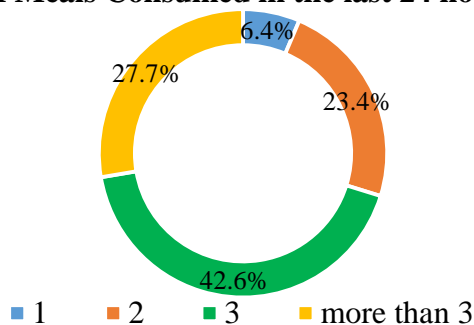


Figure 4.18: Number of Meals consumed by respondents in the last 24 hours

The meal composition of the respondents comprised of carbohydrates (100%), proteins (93.6%), vegetables (85.1%), fruits (80.9%) and water (93.6%). This means, therefore, that 6.4%, 14.9%, 6.4% and 19.1% of the respondents had not consumed proteins, vegetables, water, or fruits respectively.

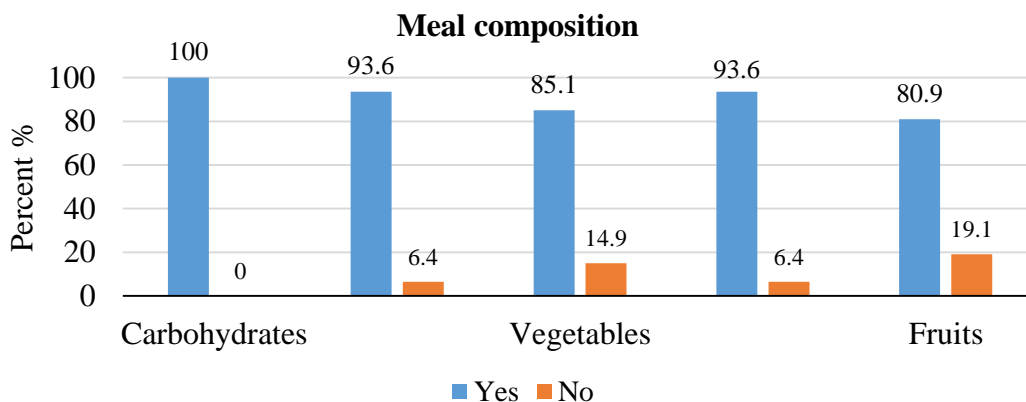


Figure 4.19: Respondent’s Meal Composition

4.3.3 Clinical Factors

Medical information was collected to enable the researchers to understand how the respondents learned of their HIV status, whom they disclosed their status to, their reactions, their use of ARVs, compliance, services they received from the health facilities and challenges they faced with ARVs use or ART site.

The study findings showed that nearly all (93.6%) got to learn of their HIV status when it was disclosed to them in the presence of their parent and health care provider. This was confirmed by the KII who stated that most of the adolescents in the clinic are born with HIV/AIDs (vertical

transmission) as high as 90%. The rest respondents learned of their status when they were tested at HTS (4.3%) and PMTCT (2.1%).

How did you get to know of your HIV status?

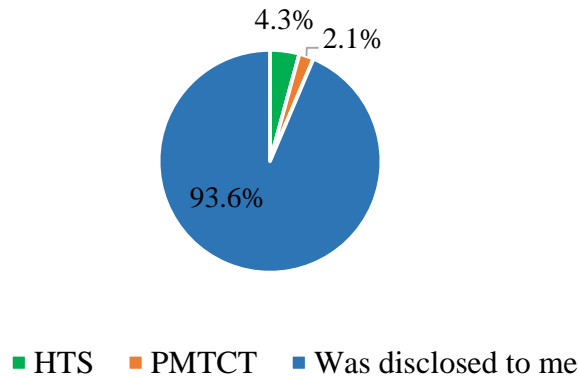


Figure 4.20: How respondents learned their HIV/AIDS status

All of the respondents who had been tested from HTS (66.7%) and PMTCT (33.3%) had received their results immediately.

Immediately n=3

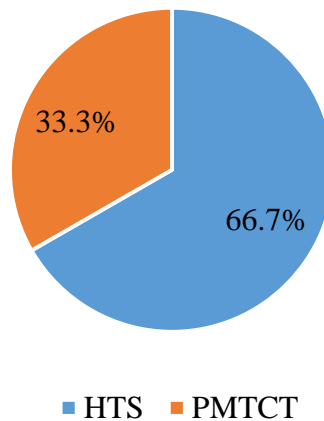


Figure 4.21: Time results were known

Disclosure of the HIV status was mostly done by the parents (74.5%) then healthcare providers (31.9%). The researcher also noted that 2.1% of them were informed of their status by other relatives. Similarly, in the FGD it was noted that disclosure was an issue and some of them had been cheated to consume the ARV drugs to prevent chest infections. Besides, findings from the KII revealed that disclosure was still a big problem and caregivers reported that they were unable to disclose to the youth and adolescents of their HIV/AIDS status. Further, it was noted that there

was a case in point where a children's home had 9 children with HIV/AIDS but were unable to disclose to the children.

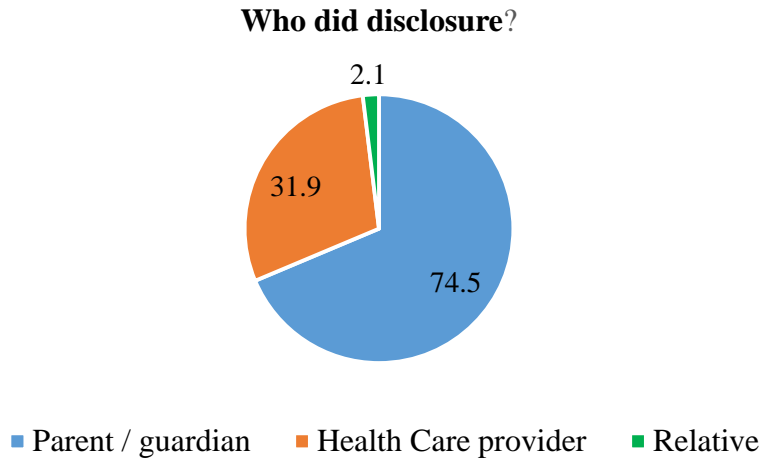


Figure 4.22: Person Responsible for Status Disclosure to Respondent

More than half (53.2%) of the respondents said that they were in denial/ shock and anger (4.3%) and even contemplated committing suicide. Contrary to this 42.6% of the respondents said that they had acceptance upon learning of their HIV/AIDS status.

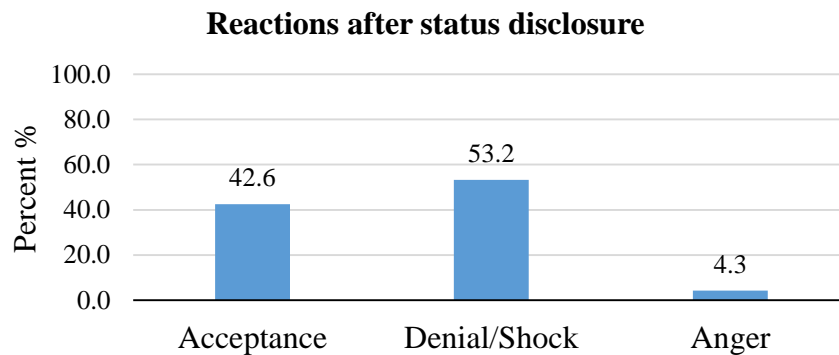


Figure 4.23: Reaction after Status Disclosure

The respondents stated that the ARVs were used for reducing opportunistic infections (70.2), reducing HIV progression (56.9%) and minimizing pain (2.1%). To note is that is 2.1% of the respondents said that they didn't know the use of ARVs.

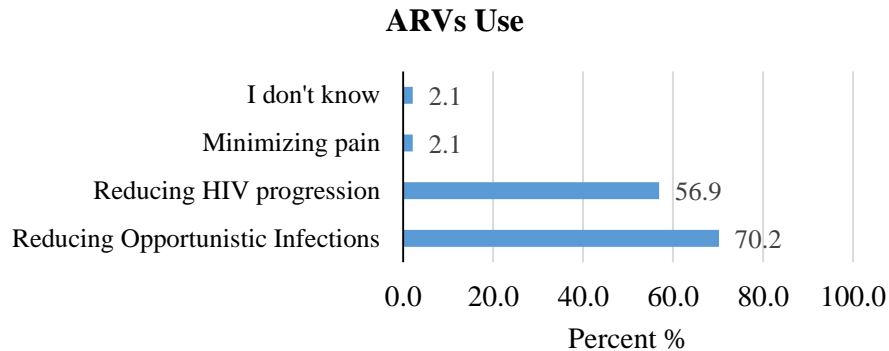


Figure 4.24: The Use of ARVs

Most (80.9%) of the respondents said that they were comfortable being seen at the ART site. However, 19.1% of the respondents said that they were not comfortable being seen in the ART site in Nakuru Level V hospital. Additionally, respondents in the FGD groups stated that they liked the ART site because the staff was very cooperative, there were no queues except for Wednesdays and they got a lot of support during the holidays.

This was further supported by the KI who said *“there are youth support group meetings weekly and during the school holidays the support groups are bigger. There are 3 youth champions who are engaged in the support groups and tea & snacks are also provided by the partners”*. Similarly, to the FGD findings, the KI also indicated that the staff was very supportive. There was a suggestion box in CCC and some issues raised by respondents had been handled due to the suggestion box.

Comfortable being seen at ART site

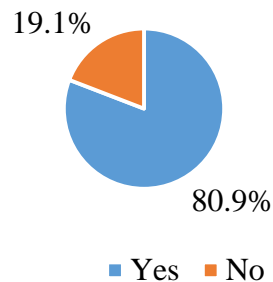


Figure 4.25: Respondents' Comfort ability being seen at ART site

Despite most of the respondents being comfortable with the ART site, some were uncomfortable (Figure 25). The respondents stated the following reasons that made them uncomfortable with the ART site; lack of privacy (12.8%), unfriendly staff (4.3%), long time to get served (4.3%) and stigma (2.1%). Most respondents in the FGD agreed that they took too much time in the CCC since many clients were visiting the site. Wednesdays especially were stated as a day that had long queues since there were support groups and adults were also attending the clinic on Wednesdays.

The respondents in the FGD also cited that sometimes the pharmacy opened late and frequent viral load tests were among the reasons why they disliked the ARV site. The KI confirmed that there was a shortage of staff at the CCC making the process slow for the patients. He also stated that there were only 2 pharmacists at the CCC while one was away on leave and consequently the pharmacy opened late.

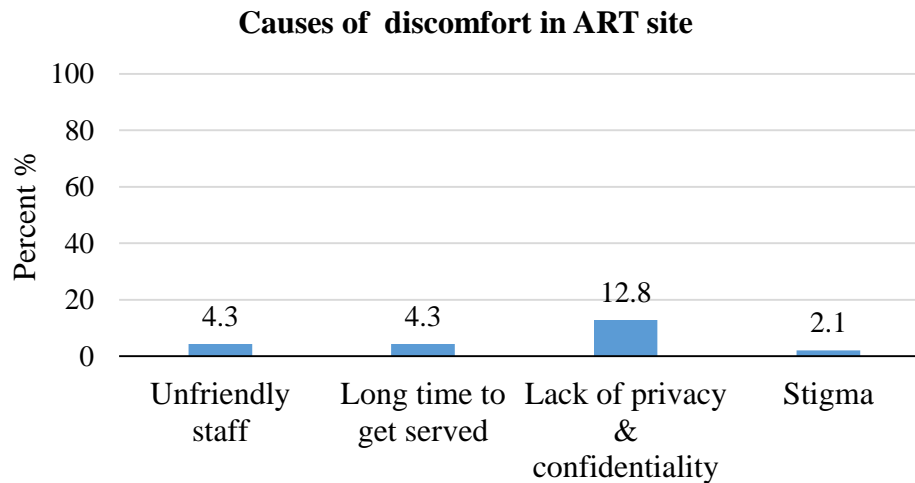


Figure 4.26: Causes of Discomfort with ART Site

The extra support that the respondents got from the health facility was; on-going counselling (78.7%), psychosocial support (59.6%), nutritional support (38.3%), home visits (19.1%), family planning (8.5%), home-based care products (8.5%), the supply of condoms (4.3%) and financial support (2.1%). On the other hand, 19.1% of the respondents said that they didn't get any extra support from the health facility. These results concurred with findings from the FGD and KII. Besides these services; health talks, triage at hospital, consultation with health providers, pharmacy services were also mentioned in the FGD as extra support provided within the health facility. Besides, the KII also pointed out that Reproductive Health services, cancer screening and ANC services were offered in the CCC. KII findings also revealed that CCC clinics were open till weekends both on Saturday and Sunday. House girls especially those who cannot get time during the week come for their services on weekends. "Weekend services are becoming popular". As for the adolescents in boarding schools they are given ARVs for 3 months or 2 months. The KII also pointed out that CCC Clinic attendance was high during the holidays.

All (100%) of the respondents stated that they were currently on ARV drugs. Most (93.6%) of the respondents had been on the ARV drugs for over a year. Very few (2.1%) of the respondents had been on the ARV drugs for less than a month, 1-2 months, or 7-12 months. Other drugs that the respondents used besides the ARVs were: antibiotics (4.3%), anti-TB drugs (2.1%) and anti-malarial (2.1%). Quite a large proportion (91.5%) of respondents stated that they were not using any other drug besides ARVs. When asked what the benefits of ARVs were the respondents said that; there were no more opportunistic infections (63.8%), they had gained more weight/ became

stronger (29.8%) and they had better health (4.3%). On the other hand, 2.1% of the respondents stated that they had not seen any benefits of ARVs drugs.

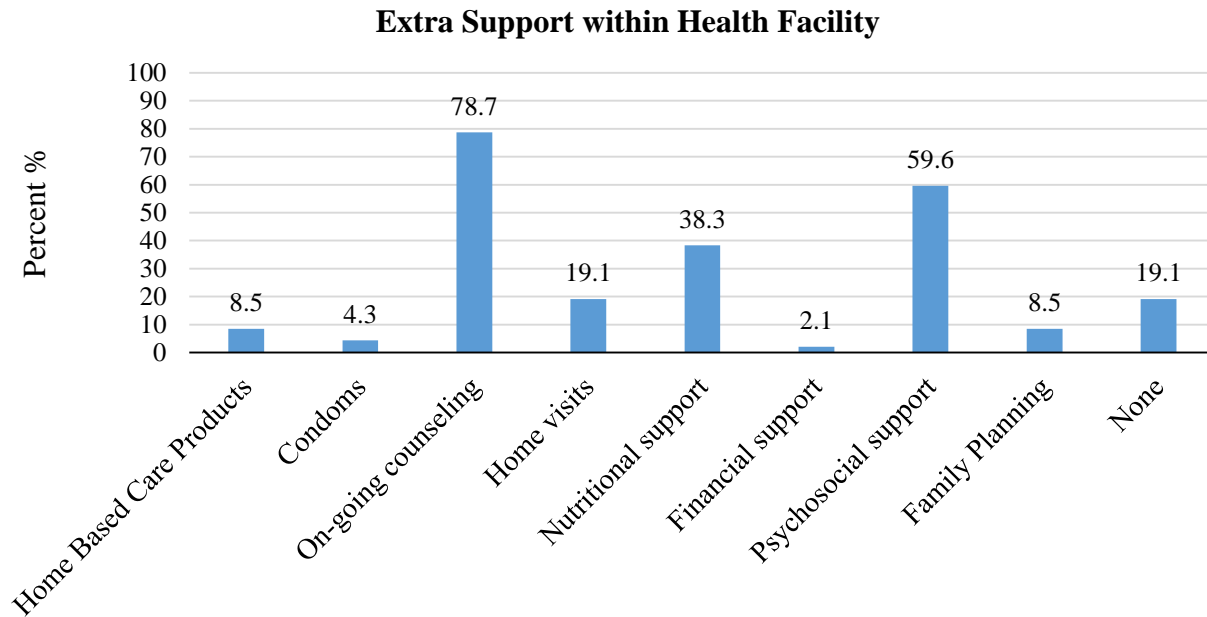


Figure 4.27: Extra support from the Health Facility

Table 4 3: ARVS use

Characteristics	N=47	Percent (%)
ARV consumption	47	100
Consumption Duration		
Less than 1 month	1	2.1
1-2 months	1	2.1
7-12 months	1	2.1
Over a year	44	93.6
Other drugs consumed		
Anti-TB drugs	1	2.1
Antibiotics	2	4.3
Anti-malarial	1	2.1
None	43	91.5
ARVs Benefits		
No more Opportunistic Infections	30	63.8
Gained more weight/became stronger	14	29.8
Better health	2	4.3
None	1	2.1

The respondent’s Viral Load (VLD) results indicated that 63.8% had an undetectable VL (LDL), 23.4% had a high VL (HVLD) and 12.8% had no VLD results since two were not yet eligible to have a VLD test done (should be done after six months of ARV treatment), and one of them was still awaiting his VLD results at the time of the study.

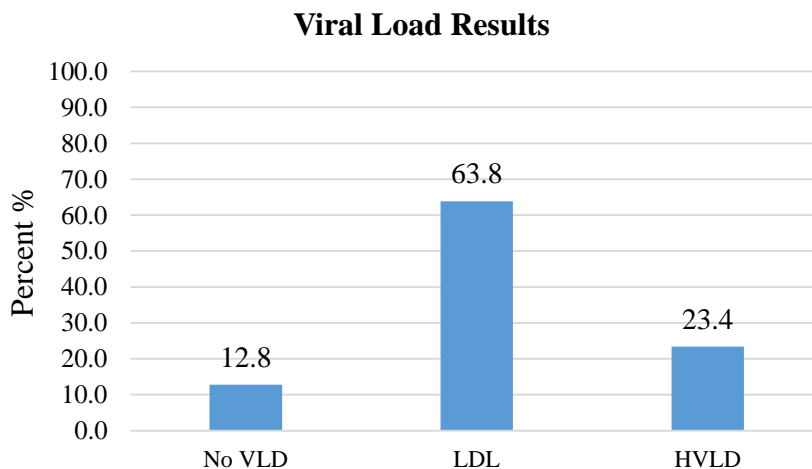


Figure 4.28: Viral Load Results

Half (51.1%) of the respondents said that they had never missed their ARV dose within the last two weeks. However, 19% of the respondents stated that they had missed at least two doses of

ARVs within the last two weeks, another 12.8% had missed one dose or more than 3 doses and 4.3% of them had missed three doses.

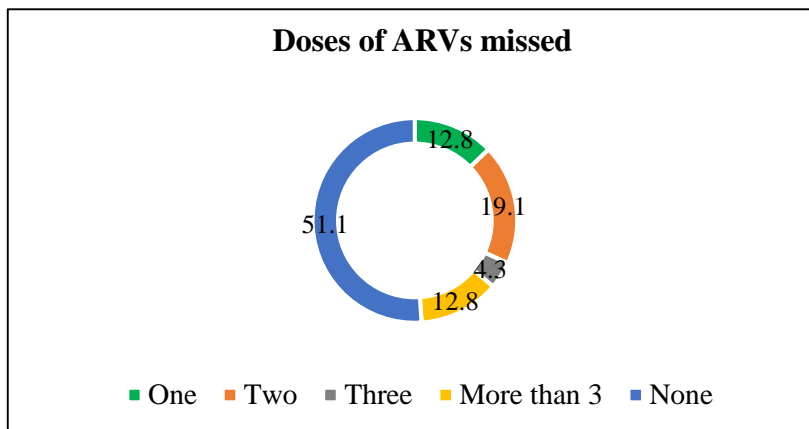


Figure 4.29: Doses of ARVs Missed in last two Weeks

The study determined the reasons that would make it hard for the respondents to remember to take their ARVs. More than half (53.2%) of the respondents stated that they either forgot to take their ARVs or were too busy to remember. Other respondents stated that they missed taking their ARV doses because their stock was completed (17%). Some (10.6%) of the respondents said that they missed taking their ARV doses when they were away at school or due to fear of stigma and discrimination. The respondents also stated that self-stigma (8.5%) and the burden of taking too many pills (8.5%) was another reason why they missed their ARV doses. 4.3% of the respondents said that they sometimes missed their doses when they had travelled, while another 2.1% stated side effects or lack of finances to attend CCC clinics for stock refill caused them to miss their ARV doses. Besides the various reasons given for missed ARV doses, 4.3% of the respondents stated that they had no reason to forget taking their ARVs doses or rather never missed their doses. In addition to these findings lack of food was stated as a reason for missed ARV intake in both the FGD "there are areas with food insecurity and it is difficult to take drugs without food"; "food may not be available thus some skip drugs" and KII "some lack food that's necessary for taking drugs". Respondents in the FGD also gave the below reasons for missed ARV doses: they sometimes forget to take ARVs; timekeeping during ARV consumption is not easy; the pills are big and have an unpleasant taste; taking ARVs without eating was a challenge; they were unable to take ARVs when they were with their friends or when they were traveling.

FGD respondents also complained that they faced a lot of stigma and their peers avoided those who were on ARV medication. They also stated that there was no privacy in schools and during school opening days bags and boxes were searched therefore one couldn't hide them. On the other hand, some teachers disclosed their status to other teachers and eventually, the whole school learned of the same making adherence in schools difficult.

Besides, the KI stated that adherence was poor especially with those in boarding schools due to stigma from fellow students and staff. Another challenge noted was that matrons stored the ARVs for the students but they lived outside school thus affecting adherence. There were also challenges during the opening of schools when an inspection was done and the ARVs brought a lot of stigma for the students. The KI further stated that plans are in place to sensitize teachers in boarding schools on ART but they were still awaiting funds.

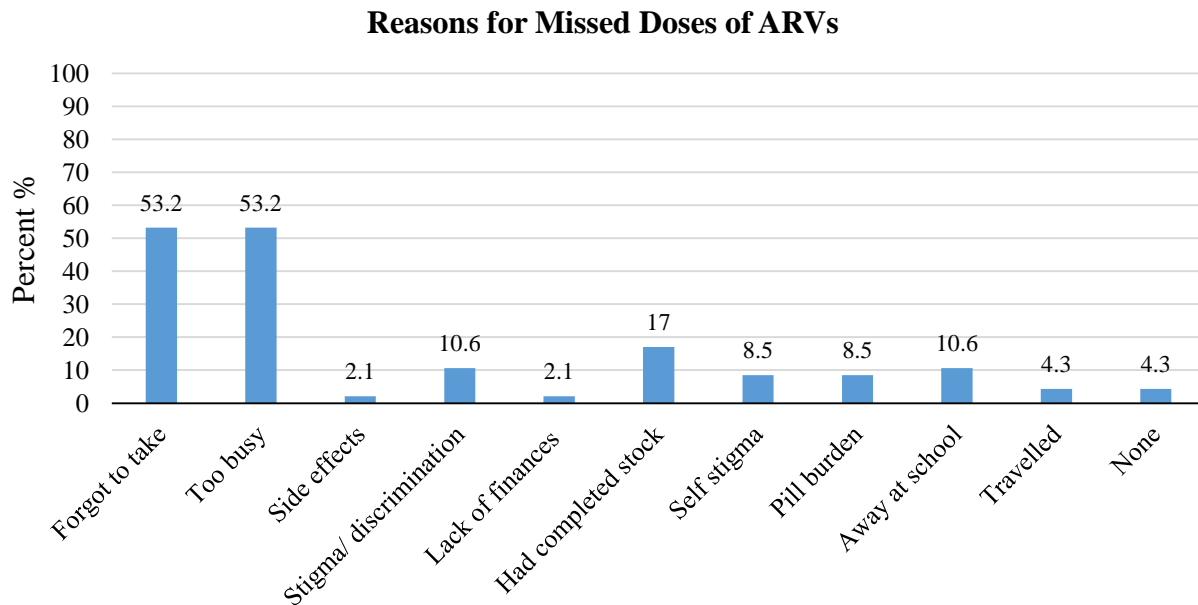


Figure 4. 30: Reasons for the Missed intake of ARVS

4.4 Discussion of the Results

4.4.1. Socio-cultural Challenges

About a quarter of the respondents had not disclosed their HIV status either to caregivers or peers. Most of these (81.8%) cited fear of stigma while another group indicated a lack of trust as a reason for not disclosing. Similar findings were reported by Mutumba *et al.* (2015) and colleagues in Uganda whereby they highlighted the fear of gossiping, ridiculing, teasing and loss of friendship. It is therefore not surprising that some adolescents in the study were sexually active but did not use condoms for protection.

The findings in this study showed that 27.7% of the adolescents were engaging in unprotected sex. Risky reproductive health choices negatively impact on their health. Studies indicate that sexual debut among adolescents could be as early as 10 years (Kyilleh *et al.*, 2018). This is confirmed by the high rate of teenage pregnancy and the fact that millions of girls are coerced into unwanted sex or marriage putting them at risk of unwanted pregnancies, unsafe abortions, STIs and dangerous childbirth (UNFPA, 2014). This agrees with a report by WHO (2019) which indicates that 11% of all births worldwide are to girls 15-19 years.

Drug and substance abuse among 15-19-year olds is an important global concern. (WHO, 2018) Only 4.3% of the respondents in our study reported alcohol abuse. A study done by NACADA, 2015 showed the high use of drugs and alcohol by school-going teenagers with alcohol being the most abused. The use of drugs negatively impacts young people by delaying psychosocial development, thus causing mental health problems and even death. (NACADA, 2015). Cheap alcohol and bhang are the most abused by two-thirds of Kenyan youth thought to be using drugs. (Simiyu, 2018). Besides, alcohol use was reported to be a contributing factor to the increasing rate of HIV infection among young people (Avert, 2015).

According to the Kenya Index Survey of 2013, HIV Stigma and discrimination was at 45%. In our study, 23.4% of the respondents reported no disclosure of their HIV status and, 81.8% feared stigma and discrimination. This agrees with a study done by Avert (2016) where he asserts that PLHIV is shunned by family, peers and wider community. Although awareness of HIV AIDS is high, stigma and discrimination prevent people from accessing HIV services. It was also cited as a barrier to access and retention in HIV care, non-adherence to medication. It also contributed to increased transmission risk through unprotected sex and non-disclosure to sexual partners. (Mc Henry *et al.*, 2016). Stigma from peers at school in the form of taunting, gossiping or bullying may lead to problems with school attendance or accessing peer support networks (Mc Henry *et al.* 2016) The findings in our study are consistent with studies done by Kimera *et al.* (2019) and McCarthy *et al.* (2018).

In Sub Saharan Africa, it is estimated that 50% of orphans with AIDS are being cared for by uninfected relatives and extended family members. (Mc Henry *et al.*, 2016). In our study, at least 19.1% of the respondents were being taken care of by guardians (aunt, grandmother,) while 10.6% were being cared for in children's homes. At least 44% of the respondents in our study had stayed with different caregivers in the past year. The frequent change in Caregivers was noted to hurt HIV treatment outcomes.

4.4.2 Socio-Economic Challenges

Findings from this study revealed that 6.4% of respondents rely on casual work and 8.5% are hosted in children's homes. Further, the study findings established that most of the respondents were students (78.7%), 8.5% casual employees while another 4.3% had no occupation at all. These are factors that could affect the QoL of these clients since they may not be able to afford adequate or quality food, as implied by one youth from Turkana at the 'Turning the Tide Conference' who said that with pastoralism being their main economic activity, it is difficult to get more than one meal a day, making it a challenge adhering to medication. This is also evidenced by findings from the study that 23.4% of respondents had taken only two meals while 6.4% of them only had one meal in the last 24 hours despite their health status that predisposes them to infections, diseases and high nutritional needs. The FGD and KII also echo this, as it was noted that some respondents lacked food, making it difficult for them to take drugs.

Since some of the youth even lack money for transport, they may also lack money for buying condoms to protect themselves from re-infection and they may be too embarrassed to ask the health

care providers for them; this could predispose them to risky sexual behaviour as supported from literature from a study by Bakeera *et al.* (2008), who indicated that some YLWHA may engage in unprotected sex for pay due to the financial stresses. This is also supported by one female youth at the 'Turning the tide: Preventing new HIV Infection and Optimizing treatment Outcomes' conference (2018), who shared that she was forced to become a sex worker after the death of her father to pay for her school fees.

4.4.3 Clinical Challenges

A majority of the respondents (53.2%) went into denial on the learning of their HIV status. Others were very angry. This reflects the findings in other studies that found that some youths even declined to take their medicine upon learning of their HIV status (Goldberg and Short, 2016). Other studies reported that some adolescents even went into isolation due to fear of imminent death (Fournier *et al.*, 2014). In this study anger was the options availed by the questionnaire, which may represent similar feelings leading to isolation.

All the respondents were already on antiretroviral therapy (ART). This is explained by the current HIV treatment guidelines in Kenya whereby all HIV positive patients are put on ART irrespective of the stage of the disease. About 95% of those interviewed had been on ART for at least 6 months. Unfortunately, almost half of the respondents (48.9%) had missed at least one dose of medication in the preceding 2 weeks. This contrasts findings in a retrospective study in Uganda in which 90% of the adolescents' demonstrated optimal adherence to ART of at least 95% (Nabukeera-Barungi *et al.*, 2015; Wien MO. *et al.*, 2012). A study among adolescents in Zambia showed better optimal adherence to ART at 81% (Mesic A. *et al.*, 2019). However, a study at Gertrude Children's Hospital in Nairobi-Kenya, revealed poor adherence to ART among adolescent, with adherence at 67.3% (Wambugu *et al.*, 2017).

The main reasons advanced for missed doses was forgetfulness and being too busy. These reasons were similarly found to explain missed doses in the study at Gertrude's Children's Hospital in Nairobi which established forgetfulness as the main cause of missed medication (Wambugu, *et al.*, 2018). This implies a lack of a correct attitude towards treatment.

Viral load is a measure of how well the drugs against HIV are suppressing the virus. With a good response, the viral load should be very low or undetectable. The global target for viral suppression is 90%. Out of the 47 respondents, 39 had their viral load results available for analysis. Out of the 39, 9 (23.4%) had a high viral load, while 63.8% were virally suppressed. This finding is not surprising given the poor adherence to ART. The national and global targets for viral suppression are 90%. A study in Cambodia had similar results, with viral suppression at 76.6% (Chhim, *et al.*, 2018). Studies in Kenya in 2018 revealed viral loads of suppression among adolescents on ART at 63.4% (Mwau *et al.*, 2018; KenPHIA, 2018).

Viral load suppression is the best way to assess adherence to ARVs, and therefore, the findings in the study help assess the level of adherence of the AYLWA at Nakuru County Referral Hospital, as well as know the extent to which the challenges they face may affect the same.

5.0. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary of Findings

The research revealed that the major socio-cultural challenges facing the AYLWHA are Stigma and discrimination. HIV/AIDS-related stigma was cited as a barrier to access and retention to HIV care. Alcohol was the only abused substance among the respondents and it was seen to contribute to non-adherence as it impairs the judgment of the AYLWA. This has also been seen to put them at risk of engaging in unprotected sex which may cause re-infection or transmission. Although the study reveals that majority of AYLWHA interviewed were not sexually active, this still puts the remaining AYLWA at risk of re-infection, early and unplanned pregnancies and unsafe abortions. Frequent change of caregivers also affects adherence to medication since at times the AYLWHA end up in the care of persons who may not be aware of their HIV status or may not be so supportive.

Although the study revealed that a high percentage of the respondents did not miss money for clinic visits, socio-economic challenges are still a significant challenge to several AYLWHA. Some walk long distances for lack of transport, even though they may have options for closer facilities to their homes, some prefer to come all the way because of factors such as stigma. Although the study further revealed that about 70% of the respondents had taken three or more meals in the last 24 hours, the remaining 30% had two or fewer meals, which may make adherence to medication difficult or have other dire consequences on their nutritional status.

The study revealed that viral suppression is lower than the recommended 90%. This is probably related to poor adherence which may be in turn due to the numerous challenges they face which may be socially, economically or clinically related.

5.2 Conclusions

- i. The main socio-cultural challenges faced by AYLWA at Nakuru County Referral Hospital are stigma and frequent change of caregivers resulting in poor adherence to ARV medications.
- ii. No major socio-economic challenges were affecting AYLWA at the health facility.
- iii. The main clinical challenges were poor adherence and low viral suppression amongst the AYLWA.

5.3 Recommendations

- i. Community Based Organisations and Non-Governmental organisations need to offer and strengthen psychosocial support to Adolescents and Youth Living with HIV/AIDS to enable them to cope with their status. The MOH need to educate the caregivers on the importance of the AYLWA having a consistent caregiver for continuity. The MOH further should avail more trained adherence counsellors for this role.

- ii. The hospital management and particularly the MOH needs to strengthen the Youth Friendly HIV services to improve responsiveness to the youth needs. This will enhance peer support.
- iii. The MOH need to commission a research to unearth the reasons behind poor adherence to ART among adolescents and youth living with HIV/AIDS.

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