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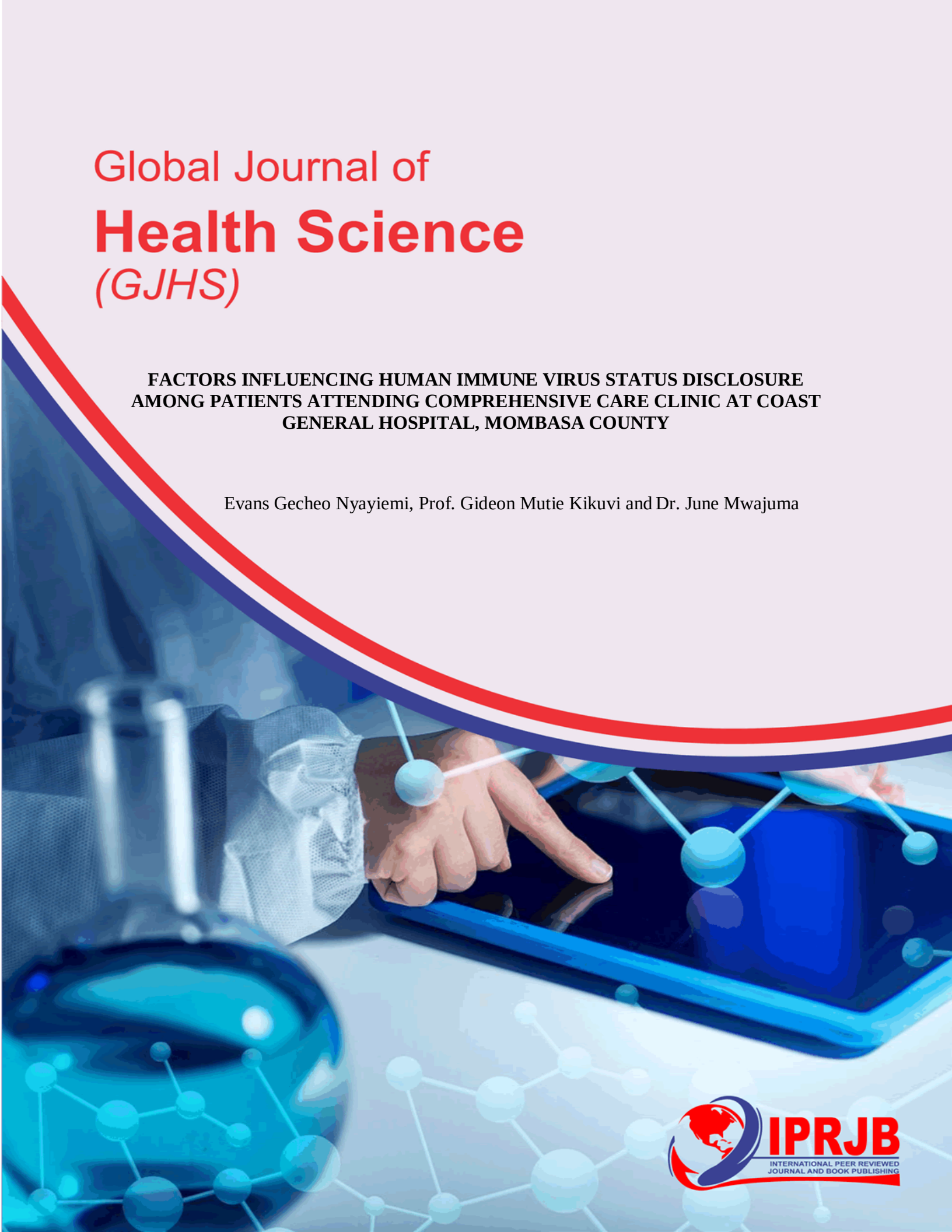
Evans Gecheo Nyayiemi, Prof. Gideon Mutie Kikuvi and Dr. June Mwajuma



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# FACTORS INFLUENCING HUMAN IMMUNE VIRUS STATUS DISCLOSURE AMONG PATIENTS ATTENDING COMPREHENSIVE CARE CLINIC AT COAST GENERAL HOSPITAL, MOMBASA COUNTY

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## ABSTRACT

**Purpose**: The study sought to determine the prevalence and factors influencing HIV disclosure among clients attending comprehensive care centre at Coast General Hospital, Mombasa County.

**Methodology**: A cross sectional research design was used. The study was conducted at Coast General Hospital involving 384 patients systematically randomly selected for purposes of data collection. The data was collected through semi structured questionnaires self-administered by the researcher. The collected data was cleaned, coded, entered and analyzed using SPSS version 20. Descriptive statistics, binary and logistic regression analysis with 95% confidence interval was carried out and p value less than 0.005 used to determine the significant association.

**Results**: The results indicated that there was a significant association between being a male and %). The Bivariate results indicated that education and occupation were statistically significant in influencing HIV status disclosure, this is well reinforced by the logistic regression which shows a similar trend of education and occupation as determinants of HIV status disclosure in addition to counseling (AOR, . 0.3)95% CI: 0.1, 0.8). The results also showed that there is no association between physical violence and HIV status disclosure.

**Unique contribution to theory, practice and policy**: This study identified stigma and discrimination among others such as fear of abandonment, fear of losing social support, and embarrassment to the family as a hindrance to HIV sero positive disclosure among PLWHA. Therefore, focus should be directed to community based education and awareness on importance of disclosure so as to reduce the perceived consequences of disclosure such as stigma and discrimination.

**Key words**: *Prevalence, Factors, Impact, Human Immune Virus Status Disclosure*

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## 1.0 INTRODUCTION

### 1.1 Background of the Study

HIV/AIDS pandemic is one of the most destructive epidemics in the history of humankind. Globally at the end of 2010, an estimated 34 million people were living with HIV, including 3.4 million children less than 15 years of age. In the same year, there were 2.7 million new HIV infections worldwide, including 390,000 children less than 15 years old. The annual number of people newly infected with HIV has risen in the Middle East and North Africa in 2010. The trends in AIDS related death also differ, in East Europe and Central Asia, the number of people dying from AIDS related cause increased more than tenfold between 2001 and 2010 (UNICEF, 2011).

On the other hand, one third (34%) of all people living with HIV in 2009 resided in the 10 countries in Sub- Saharan Africa and this included approximately 40% of all women living with HIV. It is estimated that 31% of the people newly infected with HIV and 34% of all the people dying from AIDS related causes in the same year lived in these 10 countries (UNAIDS, 2011). HIV disproportionately affects women and young people. Women accounts half (52%) of the global adult prevalence and 60% in sub-Saharan Africa (UNAIDS, 2010).

HIV prevalence rate is disproportionately spread across the forty-seven (47) counties in Kenya, Mombasa included. Mombasa County has a total population of 1,068,307 people. About 54,670 people are living with HIV and AIDS (PLWHA) which translates to a prevalence rate of 7.4%. The HIV prevalence among women in Mombasa County is higher (10.5%) than that of men (4.5%). Over the years, the women living in the county have been more vulnerable to HIV infection than the men with approximately 55 per cent of individuals had their first experience of sexual intercourse before the age of 15, an indication of early sexual debut. There estimate of new infections annually is 1609. Despite the huge importance of HIV testing as a way to increase prevention and treatment, about 73 per cent of people in Mombasa County had never tested for HIV by 2009 (NACC, 2013).

HIV disclosure is the process of making known to others the sero positive or sero-negative status with specific regard to HIV infection (Kangwende, 2009). The prevention of new HIV infections through disclosure has been shown scientifically to reduce the incidence of HIV (Klopper, 2007). Disclosing one's HIV status is not easy. HIV status is intensely personal information and the act of disclosure can lead to both positive and negative results. This is why people living with HIV (PLWHA) are entitled to control over this crucial decision and should be provided with all the necessary support and information including information about their obligations under the criminal law to decide if, when and how they will tell other people about their HIV status. Disclosing one's HIV status is still widely perceived as socially dangerous. Similarly, another great risk people living with HIV face is the inadvertent or improper disclosure of their status, which can result in denial of employment, violence, and many other collateral consequences (Lin, 2008). Disclosing of HIV sero positive status has two sets of contrary effects. It may motivate partner for Voluntary counselling and testing (VCT), on the other hand, it may cause blame, discrimination, depression and loss of economic support (Deribe *et al.*, 2005)

### 1.2 Problem Statement

Recent statistics show that an estimated 1.6 Million people are living with HIV in Kenya (UNAIDS, 2013). Results from the 2014 Kenya Demographic and Health Survey (KDHS) show that 6% of Kenyan adults aged 15-49 are infected with HIV. Moreover, the provision of Highly Active Antiretroviral therapy (HAART) has led to an increase in the number of PLWHA. Unsafe sex is rampant and contributes to increased infection rates especially among couples. To make matters worse, Kenya's AIDS epidemic is mainly hetero-sexually transmitted. Being HIV positive is highly stigmatized and consequently the dominant public opinion on HIV and AIDS universally is that HIV is associated with promiscuity (Larkin, 2005). As such, this view prevents self-disclosure. Disclosure of an HIV-positive diagnosis has also been associated with feelings of anxiety, fear of harm or violence, stigma, discrimination and threats to personal well-being which make people afraid to disclose. It is thus difficult for PLWHA to freely disclose their positive status and overcome the stigma and discrimination enacted or anticipated from their immediate social support structures.

Many PLWHAs engage in sexual relations with people of unknown or negative sero-status without disclosure thus putting them at risk of HIV infection (Lugalla, 2011). Studies display lower spousal HIV disclosure rates in Sub-Saharan Africa (Vu et al, 2012) yet literature indicates that earlier studies on HIV disclosure have mainly been conducted among homosexuals and heterosexuals in developed countries (Makin, 2008). Few studies have focused on HIV disclosure among heterosexuals in the developing countries. This study analyzed the factors that influence HIV self-disclosure among heterosexuals in Mombasa in order to address this gap and add to the body of knowledge on the issue. Positive prevention is about helping PLWHA to acknowledge that they have a crucial role in controlling the HIV epidemic by: avoiding knowingly transmitting HIV to others, testing and disclosing their status to sexual partners (Noorman, 2007). Understanding the factors that influence HIV self-disclosure to sexual partners can help to suggest practical interventions and policy recommendations that can promote the practice.

## 2.0 LITERATURE REVIEW

### 2.1 Aetiology of Acquired Immunodeficiency Syndrome

The human immunodeficiency virus (HIV) has infected tens of millions of people around the globe in the past three decades with devastating results. In its advanced stage, acquired immunodeficiency syndrome (AIDS), the infected individual has no protection from diseases. While medical treatment can delay the onset of AIDS, no cure is available (Seid, 2012).
AIDS is a complex of symptoms and infections caused by the HIV virus as it impacts the immune system. A person must come in contact with the virus; it enters the body through blood and body fluids. As HIV damages the immune system, infected persons become vulnerable to infections or diseases known as opportunistic diseases. These opportunistic infections generally do not pose a threat to persons with healthy functioning immune systems. Medical treatments, particularly the antiretroviral medications, have delayed the onset of AIDS in persons who are infected with HIV (Maman, 2009).

### 2.2 Mode of Transmission of HIV

HIV is commonly transmitted through unprotected vaginal or anal intercourse with an infected person. Most cases of sexual transmission of HIV occur within stable relationships in high HIV prevalence African settings making disclosure very important (Sieggel, 2009). However, HIV can also be transmitted through mother to child transmission especially during delivery of the baby or breast feeding of the child (Stirratt,2066). Among those abusing drugs through injection/s it is tran smitted through sharing of unsterile contaminated needles, or probably when healthcare workers are involved in needle prick accidents. This is also the case with contaminated surgical instruments, for example during traditional circumcision which is common in communities in African, Kenya included. Another mode of transmission is through blood transfusion of an infected blood and contact of a mucous-membrane surface with infected blood or body fluid.

### 2.3. Epidemiology of HIV and AIDS

HIV/AIDS is a global pandemic. As of 2012, approximately 35.3 million people are living with HIV globally. Of these, approximately 17.2 million are men, 16.8 million are women and 3.4 million are below 15 years old. There were about 1.8 million deaths from AIDS in 2010, down from 2.2 million in 2005. Sub-Saharan Africa is the region most affected. In 2010, an estimated 68% (22.9 million) of all HIV cases and 66% of all deaths (1.2 million) occurred in this region. This means that about 5% of the adult population in this area is infected. Here, in contrast to other regions, women compose nearly 60% of cases. South Africa has the largest population of people with HIV of any country in the world, at 5.9 million.

### 2.4. Proportion of HIV Status Disclosure

In a study by Olley *et al;* (2004) on HIV sero status disclosure and its relationship to risky sexual behaviours among sexually active individuals, they reported that 78% had not disclosed their HIV sero status to their sexual partners, while 46% also had no knowledge of their sexual partner's sero status. The high percentage of non-disclosure is an indicator that most PLWHA found it difficult to share their sero positive status with others including their sexual partners. The study by Olley et al., (2004) also noted that such people who had not disclose their status end up engaging in risky sexual behaviours hence spreading the virus to others. Similarly, Sarna *et al.*, (2009) observed that a large proportion of PLWHA despite knowing their status still engaged in unprotected sex with HIV negative partners or partners of unknown status putting them at risk of getting infected. Their study is relevant to the current work on prevalence and factors influencing disclosure among PLWHA, however, it is inadequate in terms of gender disparity on disclosure, a gap which this study attempted to fill.

### 2.5. Factors influencing HIV sero positive disclosure among PLWHA

The factors influencing HIV sero positive disclosure among PLWHA are: stigma, religion, fear of violence and conflict, personal and interpersonal factors, age, gender, Cultural Factors associated with HIV status Disclosure and education level.

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### 2.6. Impact of HIV Sero positive Disclosure among PLWHA

The disclosure of distressing information can elicit harsh or negative judgements from others, resulting in a loss of social support, love and more negative feelings toward the discloser (Angelwicza, 2011). For instance, it is feared that once the victims share his/her HIV status with others, there may be ostracism, negative reactions from family, friends and/ or lack of community support (Bachanas, 2013), resulting in the long run, in damaging consequences for both the victim and the entire family (Lester, 2002).

## 3.0 RESEARCH METHODOLOGY

A cross sectional research design was used. The study was conducted at Coast General Hospital involving 384 patients systematically randomly selected for purposes of data collection. The data was collected through semi structured questionnaires self-administered by the researcher. The collected data was cleaned, coded, entered and analyzed using SPSS version 20. Descriptive statistics, binary and logistic regression analysis with 95% confidence interval was carried out and p value less than 0.005 used to determine the significant association.

## 4.0 RESULTS AND DISCUSSIONS

### 4.1. Socio-demographic characteristics of study Respondents

The study enrolled 384 HIV infected persons where a total of 258 (67.2%) females and 126 (32.8%) male respondents were interviewed. Majority of study respondents were married 222 (57.8%) followed by those cohabiting 86 (22.4%), single 54 (14.1%) then divorced 22 (5.7%). A large proportion of respondents, 240 (62.5%) reported a monthly income of less Ksh. 10,000 followed by Kshs.10, 000-20,000 who were 67 (17.4%). Most respondents reported to had completed primary education 174 (45.3%), 106 (27.6%) had completed secondary school while 50 (13%) had no formal education. Almost three quarters 267 (69.5%) of the respondents were Christians. Most of the study respondents belonged to the age group of 40-50 years (40.4%) and the overall mean age was 43 years (Standard deviation 9.9). Men were significantly older [44.8 years (SD10.3)] than that of female (40.6 (SD 9.6)), $p<0.005$.

### 4.2. HIV Positive status disclosure and timing of the respondents attending Comprehensive Care Clinic at Coast General Hospital, Mombasa County, Kenya

#### 4.2.1. Disclosure of HIV Sero-positive Status among PLWHA

The disclosure of their HIV positive status was at 88% (338) to at least someone while 12% (46) had not disclosed their HIV status to anyone.

#### 4.2.2. Preferred audience for Disclosure of Sero-Positive Status among PLWHA

Respondents were asked their preferred person for disclose their HIV sero positive status. From the 384 respondents, 39.06 % (150) had disclosed to their partners/Spouses, 14.58 % (56) to their relatives (cousins, aunts, uncles and in-laws etc.), 15.75% (54) to their children and 8.6% (30) to their parents. About 10.16 % (39) had informed their mothers while 7.81% (30) told their fathers.

Some, 14.06 % reported to their children their HIV positive status. This was followed by 9.11% (35) who disclosed to their brother, and 5.21% (20) to sisters.

There was statistical significant difference in preferred audience for disclosure by sex. Respondents preferred mostly to disclose to the person of the same sex. Female respondents (76.92 %) were more likely to disclose to their mothers than their male counterparts (23.07%). Inversely, the results show that males disclosed more to their fathers and brothers (53.33% and 57.14%) *vis a' vis* their female counterparts at 46.67 % and 42.86 %.

### 4.2.3. Knowledge on the Importance of Disclosure of Sero-Positive Status among PLWHA

In order to establish whether the respondents had knowledge on the importance of disclosure of their HIV positive status to others, two item questions were asked; i) whether disclosure is important and ii) reasons for disclosure of HIV status. Out of 384 respondents, 234 (60.9%) reported that it is important to disclose to others about their HIV status while 150 respondents (39.1%) felt that disclosure was not significant. Among 234 respondents who said it was important to disclose the information to others, a half (54.70%) observed that it helped in gaining support from partners or relatives. Some (12.82%) felt that disclosure can help in preventing others from infection while others (8.97%) argues that it was one way of countering stigmatization and discrimination in the society. However, getting advice regarding care and treatment (5.13%), and educating others (2.56%) on HIVAIDS were minor reasons for disclosure of one's status.

### 4.2.4. Timing of Disclosure of Sero-Positive Status

The study also sought to establish the timing of disclosure among the 338 respondents who disclosed their sero positive status to others. Out of 338 respondents who disclosed their HIV positive status; 125 (36.98 %) disclosed in less than a month while 122 (36.09%) disclosed between 1 and 2 months. However, 39 (11.54%) of the respondents disclosed between 3 and 5 months later. Unfortunately, 52 (15.38%) disclosed after 5 months after being notified of their sero positive status.

There were no significant statistical differences among the genders on timing of disclosure. However, men disclosed their HIV sero-positive status slightly earlier than women.

## 4.3. Determinants of Disclosure of HIV Sero-Positive Status among PLWHA

This study attempted to establish the determinants of disclosure of HIV sero-positive status among PLWHA to others. This was important because sexual intercourse is the major means of HIV transmission in Africa and particularly in Kenya.

### 4.3.1. Socio-Demographic characteristics associated with HIV positive Status disclosure

Results indicates that males (92.06%) were more likely to disclose their HIV status to their sexual partners more than their female counterparts (86.05 %) ($p<0.001$). Increasing education level ($p=0.024$), occupation ($p=0.004$) and income ($p=0.067$) were statistically associated with the higher chances of HIV status disclosure. In terms of age, less youths (15.38%) disclosed their sero positive status compared to the aged (84.62%.

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### 4.3.2. ARV status

From 338 respondents, 279 (82.54%) who were on ARVs disclosed their HIV status to their sexual partners as opposed to 20 (43.48%) respondents who did not disclose. The difference attained a statistical significance (P= 0.448). Worries and knowing the importance of HIV status disclosure did not determine disclosure status of people living with HIV attending comprehensive care centre at Coast General Hospital, (OR= 0.738; 95% CI 0.488-1.115, p= 0.148). In addition, results indicate that out of 338 respondents who disclosed their sero positive status had gone through counseling, 298 (88.17%) as opposed to 46 (100 %) respondents who did not disclose their status (p= 0.056), suggesting that counseling plays an important role in facilitating disclosure to spouses.

### 4.3.3. Worries

The study observed that more than a half of those who had disclose their status were not worried 237 (70.12%) compared to those who had not disclose their HIV status to their sexual partners 38 (82.61%). The study also noted that being worried could trigger PLWHA to disclose their status. On the other hand, condom use was found to be statistically significant, (OR= 0.249, 95% CI: 0.086, 0.720, p<0.001). This means the use of condoms is associated with less HIV status disclosure to their spouses, 47.83% versus 18.64% respectively. The findings also indicated that physical violence was not statistically significant, p=0.684. Therefore, there is no association between physical violence and HIV status disclosure.

**Table 1: Bivariate analysis of determinants of disclosure among PLWHA attending care and treatment at Coast General Hospital**

| Variables | Disclosure Status | | OR(95% CI) | P value |
|---|---|---|---|---|
| | **YES (n=338) (%)** | **NO (n=46) (%)** | | |
| Gender | | | | |
| **Males** | 116 (92.06) | 2 (4.35) | 0.005 | 0.001 |
| **Females** | 222 (86.05) | 44 (95.65) | | |
| Age group in years | | | | |
| [1]*Youth **18-24** | 12 (3.5) | 18 (39.13) | | 0.166 |
| **25-39** | 40 (11.83) | 23 (50) | | |
| Aged **40-50** | 125 (36.98) | 3 (6.52) | | |
| **50-60** | 62 (18.34) | 2 (4.35) | | |
| **>60** | 99 (29.29) | - | | |
| Monthly income (Kshs) | | | | |
| **<10,000** | 160 (47.34) | 33 (71.74) | | 0.067 |
| **10,000-20,000** | 83 (24.57) | 3 (6.52) | | |
| **20,000-30,000** | 67 (19.82) | 8 (17.39) | | |
| **>30,000** | 28 (8.28) | 2 (4.35) | | |
| Educational level | | | | |
| **No formal education** | 31 (9.17) | 28 (60.87) | | 0.024 |

[1] In Kenya youths are considered as those aged between 18 and 35 years, however, this study considered youths as those below 40 years of age.

| | | | | |
|---|---|---|---|---|
| **Primary** | 124 (36.69) | 17 (36.96) | | |
| **Secondary or higher** | 183 (54.14) | 1 (2.17) | | |
| Occupation | | | | |
| **Employed** | 163(48.22) | 12 (26.09) | | 0.004 |
| **Self employed** | 134 (39.64) | 16 (34.78) | | |
| **Unemployed** | 41 (12.13) | 18 (39.13) | | |
| ART status | | | | |
| **Yes** | 279 (82.54) | 20 (43.48) | | 0.448 |
| **No** | 59 (17.46) | 26 (56.52) | | |
| Disclosure counselling | | | | |
| **Yes** | 298 (88.17) | - | | 0.056 |
| **No** | 40 (11.83) | 46 (100) | | |
| Worried | | | | |
| **Yes** | 101 (29.88) | 38 (82.61) | | 0.205 |
| **No** | 237 (70.12) | 8 (17.39) | | |
| Importance of disclosure | | | | |
| **Yes** | 263 (77.81) | 9 (19.57) | | 0.148 |
| **No** | 75 (22.19) | 37 (80.43) | | |
| Physical violence | | | | |
| **Yes** | 14 (4.14) | 31 (67.39) | | 0.684 |
| **No** | 324 (95.86) | 15 (32.61) | | |
| Condom use | | | | |
| **Yes** | 275 (81.36) | 22 (47.83) | | 0.006 |
| **No** | 63(18.64) | 24 (52.17) | | |

### 4.4. Logistic Regression of the determinants of HIV status disclosure among PLWHA

To further ascertain the socio-demographic factors associated with HIV sero positive status disclosure among PLWHA, a logistic regression analysis was conducted with 95% confidence interval (95% CI). The results indicated that there was a significant association between being a male and HIV status disclosure (92.06 %). This means that females were less likely to disclose their status (86.05% OR 95% CI: 0.3, 0.1, $p<0.001$) compared to males. The Bivariate results indicated that education and occupation were statistically significant in influencing HIV status disclosure, this is well reinforced by the logistic regression which shows a similar trend of education and occupation as determinants of HIV status disclosure in addition to counseling (AOR, . 0.3)95% CI: 0.1, 0.8)

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**Table 2: Logistic Regression of the determinants of HIV status disclosure among PLWHA**

| Variables | Disclosure Status | | AOR (95% CI) | P value |
|---|---|---|---|---|
| | **YES (n=338) (%)** | **NO (n=46) (%)** | | |
| Gender | | | | |
| **Males** | 116 (92.06) | 2 (4.35) | 1 | 0.001 |
| **Females** | 222 (86.05) | 44 (95.65) | 0.3 (0.1, 0.6) | |
| Age group in years | | | | |
| Youth **18-24** | 12 (3.5) | 18 (39.13) | 1 | 0.299 |
| **25-39** | 40 (11.83) | 23 (50) | 0.2 (0.0, 4.4) | |
| Aged **40-50** | 125 (36.98) | 3 (6.52) | 0.4 (0.1, 2.8) | |
| **50-60** | 62 (18.34) | 2 (4.35) | 0.7 (0.1, 5.2) | 0.372 |
| **>60** | 99 (29.29) | - | 0.0 (0.0) | 0.756 |
| Monthly income (Kshs) | | | | |
| **<10,000** | 160 (47.34) | 33 (71.74) | 1 | |
| **10,000-20,000** | 83 (24.57) | 3 (6.52) | 2.5 (0.8, 7.9) | 0.067 |
| **20,000-30,000** | 67 (19.82) | 8 (17.39) | 1.6 (0.6, 4.6) | 0.134 |
| **>30,000** | 28 (8.28) | 2 (4.35) | 1.2 (0.4, 2.4) | 0.045 |
| Educational level | | | | |
| **No formal education** | 31 (9.17) | 28 (60.87) | 1 | |
| **Primary** | 124 (36.69) | 17 (36.96) | 0.0 (0.0) | 0.133 |
| **Secondary or higher** | 183 (54.14) | 1 (2.17) | 0.0 (0.0) | 0.388 |
| Occupation | | | | |
| **Employed** | 163(48.22) | 12 (26.09) | 1 | |
| **Self employed** | 134 (39.64) | 16 (34.78) | 0.0 (0.0) | 0.999 |
| **Unemployed** | 41 (12.13) | 18 (39.13) | 0.0 (0.0) | 0.999 |
| ART status | | | | |
| **Yes** | 279 (82.54) | 20 (43.48) | 1 | |
| **No** | 59 (17.46) | 26 (56.52) | 0.0 (0.0) | 0.999 |
| Disclosure counselling | | | | |
| **Yes** | 298 (88.17) | - | 1 | |
| **No** | 40 (11.83) | 46 (100) | 0. 3 (0.1, 0.8) | 0.038 |
| Worried | | | | |
| **Yes** | 101 (29.88) | 38 (82.61) | 1 | |
| **No** | 237 (70.12) | 8 (17.39) | 0.0 (0.0) | 0.995 |
| Importance of disclosure | | | | |
| **Yes** | 263 (77.81) | 9 (19.57) | 1 | |
| **No** | 75 (22.19) | 37 (80.43) | 0.0 (0.0) | 0.996 |
| Physical violence | | | | |
| **Yes** | 14 (4.14) | 31 (67.39) | 1 | |
| **No** | 324 (95.86) | 15 (32.61) | 0.0 (0.0) | 0.999 |
| Condom use | | | | |
| **Yes** | 275 (81.36) | 22 (47.83) | 1 | |
| **No** | 63(18.64) | 24 (52.17) | 0.0 (0.0) | 0.998 |

### 4.5. Impact of the HIV status disclosure among PLWHA

The study attempted to establish some of the effects of HIV status disclosure among PLWHA. It observed that disclosure had both negative and positive outcomes. It was established that twice as many women as men living with HIV felt that disclosing their sero-positive status will lead to stigmatization. Many women (9.7%) also felt that upon disclosure, they would be physical abused by their sexual partners compared to men at 1.59%. Majority of the men (11.90%) were bored with condom use compared to their female counterparts at 3.1%. Both sexes had reduced frequency of having sex with their partners with male at 7.14% and female at 6.98% On the other hand, twice as many women as men thought that disclosure will lead to end of sexual relations altogether. For male respondents, their major fear of disclosure on their sexual life is stigma at 30.16 % which also affected their female counterparts at 32.56%. This was followed by fear of end of support from relatives and sexual partners at 20.63%.

On the other hand, the study established that HIV status disclosure had positive outcome that stretched from HIV prevention to medical adherence. Both male (22.22 %) and female (17.83%) respondents acknowledged that disclosure promote adherence to antiretroviral therapy (ART) which is known to improve prognosis among HIV infected persons. Others also disclosed to gain social support from relatives and family members while some felt that disclosure triggers economic support for PLWHA. Twice as many women (7.75%) as men (3.97%) felt that disclosure reduces stress on the infected person and their caregivers. Many men (8.73%) disclose to promote awareness on the significance of disclosure and HIV compared to women (6.20 %). Disclosure positively impacted in terms of commitments to relations and change of behavior. This reinforces the findings of Derlega *et al.,* (2002) who also established that being in a close or supportive relationship and the need to maintain this relationship was a key factor to disclosing one's HIV positive status. Majority of the women (10.47%) also felt that disclosure helped to demystify stigmatization and discrimination of PLWHA compared to male respondents (2.38%).

## 5.0 DISCUSSION, CONCLUSION & RECOMMENDATIONS

### 5.1. Socio-Demographic characteristics of PLWHA and Disclosure status

This study established that HIV sero positive status disclosure was high (88%) among PLWHA.

Despite high female enrolment (258) in this study, it was however established that majority of men (92.06%) had disclosed their HIV sero-positive status compared to women (86.05%) ($p<0.001$). The higher disclosure rate among male in this study is in line with other findings reported in Kenya, Tanzania and Namibia which reported an 83.3% disclosure rate among men as compared to 76.8% among females (Bachanas, 2012). It is also in agreement to the findings of a study conducted among PLWHA in Ethiopia which indicated that gender is an associated factor of HIV status disclosure (Deribe, 2008). According to Issiaka (2001) women reported low disclosure because they were more fearful for their HIV status diagnosis being known (Issiaka, 2001). However, this is contrary to other findings which reported high female disclosure (Ngula and Miller, 2010).

The study also associated the link between education and disclosure. It argues that with increasing education level (p=0.024), there was higher chances of HIV status disclosure. For instance; respondents with no formal education had the lowest prevalence of disclosure as compared to those with better education. This finding is comparable to the study done among PLWHA in Burkina Faso, whereby illiterate women were less likely to disclose their HIV status to others compared to those with higher education (Bouillon, 2007). In this study, the findings of a low prevalence among respondents with no formal education may have resulted from the fact that they did not understand the importance of disclosure (13%).

It is also argued here that the difference in HIV status disclosure among PLWHA with no formal education is due to their inability to analyze, internalize and act on health related information. These stretch from the importance of disclosure among sexual partner(s), adherence to ART, use of condom and seeking for counselling to overcome unnecessary worries. In this regard, Makin *et al.*, (2008) observed that women who had partners with tertiary education were more likely to disclose their HIV status than those with partners with low education level. Based on Makin *et al.*, (2008) observation, the study argues that education and awareness are complementary in HIV sero positive disclosure among PLWHA attending Comprehensive Care Unit at Coast General Hospital in Mombasa County.

This study did not demonstrate an association between HIV status disclosure among PLWHA and demographic factors such as age, occupation, and time taken before disclosure. This result contradicts other studies which reported rates of disclosure varied between ages, occupation and time taken before disclosure (Issiaka *et. al.*, 2001; Daniel *et al.*, 2004 and Kim *et al.*, 2007). The results are however in agreement with a study by Arthur *et al.*, (2007) who did not find any significant differences in rates of HIV disclosure by gender.

### 5.2. Proportion of PLWHA and HIV Status Disclosure

This study established a high (88%) HIV sero positive status disclosure among PLWHA attending comprehensive care centre at Coast General Hospital. This is contrary to the findings by Sarna *et al.*, (2009) which observed that only 37% of the respondents disclosed their HIV status to sexual partners in Mombasa. The low rate of HIV positive status disclosure established by Sarna *et al.*, (2009) is supported by other similar findings in Africa which reported lower rates of disclosure at 16.7% as compared to 86% in western countries (Medley, 2004, and Kairania, 2010). The low disclosure rates among PLWHA limits their ability to access necessary support resulting in early progression to death and increased risk of infection and low uptake of protection among sexual partners.

The higher rate of disclosure in this study may be attributed to the presence of intervention programmes which encouraged disclosure to partners and others in the hospital. Majority who had disclosed were on ART and had gone through adherence counseling which encouraged disclosure. However, the timing of disclosure varied among PLWHA with majority (36.98 %) revealing their HIV sero positive status after three months. The study also established that some (12%) of PLWHA had not disclosed their HIV sero positive status to anyone. The respondents gave various reasons for non-disclosure which stretched from fear of stigma to discrimination.

### 5.3. Determinants of Disclosure of HIV Sero-Positive Status among PLWHA

#### 5.3.1. ART status

The present study shows that there was no significant difference between those who were taking ART and those who do not and disclosure to spouses (55.7% vs.44.3% respectively). The opposite was found in a study done in Uganda (Kadowa, 2009) which found that people who were on ART were more likely to disclose their HIV status than those who were not on ART. The findings of this study could be explained by the fact that despite of adherence counseling they receive before starting ART but there are also other factors to be considered by a person before disclosing. Disclosure among couples threatens the relationship and brings fear of discontinuation of material and financial support from partner.

#### 5.3.2. Disclosure counselling

Counseling was found to influence disclosure rate among respondents in study. Counseling can be individual or couple and the contents may include knowledge and Skills to live positively and disclosure. This finding agrees with other study done in rural Kenya (Melonie M, 2010) suggesting that those who receive counseling were more likely to disclose their status to their spouses.

#### 5.3.3. Condom use

Bivariate analysis found condom use to be statistically significant, which was associated with HIV status disclosure to their spouses. This finding is similar to the study done by Kairania et al, 2010. This finding could be explained by the fact that PLWHA who are using condoms are self-confident that they cannot transmit HIV infections or new HIV infections (if partner is already HIV positive) to their partners. Therefore, they become confident in disclosing their HIV status.

#### 5.3.4. Knowledge on the importance of HIV Status disclosure

Regardless of the present study findings that there was no statistical difference in the level of knowledge on the importance of disclosure of HIV status in PLWHA between respondents who disclosed and those who did not disclose, disclosure is still important. It enables HIV infected person to receive care and socio-economic support from partners and relatives, promote safer sex behavior, promote adherence to ART and prevent spreading of HIV infection to others. This finding is comparable to the study done in Zimbabwe among women who attended PMTCT clinic (Mucheto P, 2011). However, bivariate analysis showed statistical difference on the level of knowledge on the importance of disclosure by level of education, that education influences disclosure. This may have resulted by the fact that people with formal education can get information on importance of disclosure more easily by reading materials from different sources. The negative association between HIV disclosure and importance of disclosure could be explained by the fact that although people understand the importance of disclosure but due to fear of discrimination, stigma and divorce, they decided not to disclose their HIV status to partners or relatives. However, this finding was not statistically significant when multivariate logistic regression was conducted.

### 5.4. Impact of the HIV status disclosure among PLWHA

This study established that stigma and discrimination was associated with negative outcome of HIV status disclosure among PLWHA attending the comprehensive care centre at Coast General Hospital in Mombasa County. This was in agreement to the argument advanced by Mathews *et al.,* (1999) who noted that people are in a constant dilemma about disclosure on one hand, because they may find enhanced social support; but on the other hand, they run the risk of being stigmatized. The study observed that twice as many women as men risked stigmatisation and discrimination upon disclosure of their HIV sero positive status. However, this is contrary to the findings of a study conducted by Phoebe *et al*., (2015) which argued that the perceived level of enacted stigma and discrimination among PLWHA did not determine their disclosure.

This study argues that the high number of respondents that faced stigma was partly due to cultural practices in Africa which associate HIV with a curse and/or sexual immorality. This reinforces the arguments advanced by several scholars that cultural practices and ignorance on HIV across cultures promotes stigmatisation and influence HIV status disclosure disproportionately (Olley, Seedat & Stein, 2004, Simbayi *et al*, 2007, Wong *et al.*, 2009 and Vu *et al.,* 2012). This compounded by religious prejudices which view HIV and AIDs from a moral perspective, hinders disclosure among PLWHA.

The study also established that some of the women respondents (5.81%) feared disclosure due to physical abuse and violence by their sexual partners compared to men at 1.59%. This chimes well with the arguments of Simbayi *et al.,* (2006) that individuals often attempt to hide their HIV positive status due to fear of physical abuse and general violence. In addition, it is in line to other studies conducted in Kenya which reported that majority of women feared disclosure of their HIV sero positive disclosure due to violence (Rakwar, 1999 & Farquhar, 2000). This study argues that violence whether physical, social and/or psychological is caused by a feeling of betrayal or embarrassment to the family.

Disclosure also influenced sexual behaviour. For instance; the study observed that some men (11.90%) were bored with condom use compared to their female counterparts at 3.1%. Therefore, this led to reduced frequency of having sex with their partners with male at 7.14% and female at 6.98%. On the other hand, twice as many women (11.63%) as men (6.35%) thought that disclosure will lead to end of sexual relations altogether. The change in sexual behaviour can promote or hinder HIV sero positive disclosure among PLWHA. This is well advanced in a study by Olley *et al;* (2004) on HIV sero status disclosure and its relationship to risky sexual behaviours among sexually active individuals; they reported that 78% had not disclosed their HIV sero status to their sexual partners, while 46% also had no knowledge of their sexual partner's status. But of most importance, is that those who had disclosed had changed their sexual behaviour with some avoiding sex while others using condoms during sex.

This study also associated HIV sero positive disclosure with positive consequences among PLWHA.The study observed that disclosure among PLWHA promoted adherence to antiretroviral therapy (ART) which is known to improve prognosis among HIV infected persons. Similar arguments had been made by Medley *et al.,* (2004) that HIV status disclosure, apart from increasing emotional and social support, improved access to medical care, thus antiretroviral

therapy (ART) and reduces stress among PLWHA (Medley ***et al.,*** 2004). This study established that twice as many women (7.75%) as men (3.97%) felt that disclosure reduced stress on the infected person and their caregivers about their predicaments. Stress is experienced by PLWHA on how to break the information about their status to close relatives and family members, but more significantly, the fear of death.

In view of the foregoing discussion, the study argued that some men (8.73%) disclosed their HIV sero positive status to create awareness on the significance of HIV disclosure compared to women (6.20 %). Education and awareness on HIV disclosure is one of the key mitigation measures against new transmissions especially in developing countries. According to Baker *et al.,* (2010), there are many research findings showing that, higher education level is associated with lower level of HIV/AIDS risk taking and high disclosure rates. However, this study found no significant statistical differences between education level and disclosure; however, it noted that awareness on the importance of HIV status disclosure was helpful among PLWHA.

By and large, HIV status disclosure positively impacted in terms of commitments to relations and change of behaviour. This reinforces the findings of Derlega *et al.,* (2002) who also observed that being in a close or supportive relationship and the need to maintain this relationship was a key factor to disclosing one's HIV positive status. The study also revealed that disclosure helped to demystify stigmatisation and discrimination of PLWHA compared to male respondents.

### 5.5. Conclusion of the Study

Disclosure of HIV positive status to sexual partners, friends or relatives is one of the main tools for prevention and care strategies of HIV infection worldwide. However, the rate of HIV positive status disclosure among HIV positive adults still continued to be low. This is because disclosure is something that PLWHA experiences and struggles. To suffice in this study, the process of disclosure is complex and fraught with mixed emotions, and the outcomes can be unpredictable and difficult to handle. Positively, this study established that majority of the respondents (88%) had disclosed their HIV sero positive status to others. There was evidence that more men (92.06%) disclosed their sero positive status to their sexual partners as compared to the women (86.05%). However, this had no significant statistical inference on gender and disclosure at Coast General Hospital.

The study findings also show that disclosure counselling was a significant determinant of disclosure. On bivariate analysis on the socio-demographic characteristics associated with sero positive disclosure, it was observed that, educational status of sexual partner (s), age, occupation, income, and use of condom were significantly associated with HIV sero positive status disclosure. Still on disclosure, the study generally revealed enough evidence to conclude that, factors such as stigma and discrimination as well as counselling played a significant role in influencing PLWHA to either disclose or not to disclose their status.

Despite the general importance of HIV status disclosure some PLWHA hide their sero positive status even from their sexual partners which increase the incidence of HIV/AIDS transmission. In light of this, the study established that the major common barriers to disclosure of HIV sero-positive status was stigmatization and discrimination which was statistically significant at 95%

level of significance, p=0.02 (AOR=2.05, 95% CI=1.01-4.19). It seems that some PLWHA were willing to disclose their status but negative attitudes towards them characterised by stigma and rejection made them not to disclose. This compounded by breach of confidentiality and public embarrassment among others such as fear of divorce and accusation of infidelity contributed to non-disclosure (11.98%). Interestingly, those who perceived emotional and social support or perceived access to medical care and treatment including ART and were not deterred by stigmatization and discrimination rather experienced acceptance and encouragement were likely to disclose their status. Finally, the study calls for the understanding of the predictors of sero-positive disclosure among PLWHA which is a step towards devising targeted strategies aimed at promoting HIV testing and disclosure thus enhancing HIV prevention and risk reduction efforts in Africa and particularly Kenya.

### 5.6. Recommendations of the Study

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

1. The health workers should address the issue of open discussion among PLWHA to enhance HIV status disclosure to others as part of the wider mitigation measures against HIV status transmission.
2. This study established more men disclosed their status compared to women. Therefore, women should be empowered psychologically to enable them cope with negative impacts of disclosure such as stigma and discrimination.
3. The study noted that education and awareness on the significance of disclosure could increase the proportion of HIV sero positive disclosure among PLWHA. Therefore, there should be emphasis on education and counselling on disclosure upon HIV positive diagnosis.
4. This study identified stigma and discrimination among others such as fear of abandonment, fear of losing social support, and embarrassment to the family as a hindrance to HIV sero positive disclosure among PLWHA. Therefore, focus should be directed to community based education and awareness on importance of disclosure so as to reduce the perceived consequences of disclosure such as stigma and discrimination.
5. Further studies are needed to compare these results in Mombasa County with other regions on HIV status disclosure among PLWHA.

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