

# Knowledge Level on HIV and Aids; A Baseline Survey Study Among Pwani University Staff

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**Abstract-** Knowledge level on HIV/AIDS is still of paramount importance to every individual across the world. This is because HIV virus is still a killer disease and no vaccine has been discovered to date. A baseline survey was conducted among 265 participants out of a total population of 379 in one of the Universities in Kenya (Pwani University) on staff knowledge level on HIV and AIDS. Questionnaires and interview schedules were used for data collection. Both qualitative and quantitative data analysis technique was used to analyze data. The study found out that staff HIV knowledge level varied on various areas tested, Knowledge level on HIV infection and transmission was 94.3%, CI 95.86-100,  $p < 0.05$  and protection was 95.7%. Due to varied response to and low knowledge level in some areas, further studies on prevention is still necessary.

**Index Terms-** HIV and AIDS, Knowledge level, University, staff.

## I. INTRODUCTION

Knowledge level on HIV/AIDS is still of paramount importance to every individual across the world. This is because HIV virus is still a killer disease and no vaccine has been discovered to date. The world HIV prevalence still stands at 36.7 million, 2.1 million are new HIV infections, 1.1 million AIDS-related deaths, 17 million people on antiretroviral treatment (UNAIDS (2016) 'Global AIDS Update 2016). In Kenya the prevalence stood at 56% down from 7.4% in 2009 (KAIS 2012). The tremendous efforts and commitment by all states spearheaded by the United Nations General Assembly has taken great strides to realize this achievement. However it's important to note that concerted efforts is still required to bring AIDS disease to an end by 2030. This was a declaration during the UN General Assembly high-level meeting on HIV/AIDS June 2016 at UN Headquarters in New York. The declaration will undertake a comprehensive review of the progress achieved in realizing 2006 and 2011 Political Declarations on HIV/AIDS with a progressive, concise action-oriented towards achieving the commitment of ending the AIDS epidemic by 2030.

Therefore the staff of Pwani University forms part of the above data and specifically, the Kenya population whose HIV prevalence rate currently stands at 56%. The current survey study was also timely following the Pwani University College (PUC) baseline survey which was conducted in, (2010) There was need to establish a dearth of empirical staff knowledge on HIV virus to mitigate on the appropriate prevention strategies

and to scale up level of awareness which could enhance the reduction efforts by all nations to bring HIV infection to an end. Particular reference in the study was focused on current statistics on HIV/AIDS, prevention methods, modes of transmission, treatment and general knowledge

## Rationale for the Survey

The PUC baseline survey, (2010) reported awareness level on HIV and AIDS as 93% for staff, Self Assessment risk 62% while 57% felt that condom use and condom distribution was one of the effective means of intervention strategies which could be embarked on effectively to help reduce the spread of the virus among the PUC community even though the prevalence rate was 1.2% among an estimated 3350 University college population by then. Despite the strides made in HIV prevention mitigation among the Pwani University community, HIV infection has remained a salient reality.

On the other hand, following the HIV and AIDS project funded by World Bank in conjunction with the Kenya Government under National AIDS Control Council (NACC) in Pwani University (2012-2013), Monitoring and Evaluation report on the project revealed that, voluntary counseling and testing accessibility was achieved by 59% from the entire PU community. This rate fell short of the Kenya National AIDS AND STI Control Council (NASOP) and Ministry of Health 2014/15 strategic plan campaign target which was also realized at 80% in 2015. To step up the national target in realization of vision 2030, concerted effort by the Ministry of Health, spearheaded by Her Excellency the first lady of Kenya Mrs. Margaret Uhuru Kenyatta as the patron, specific attention on child mortality reduction as a result of HIV through Prevention of Mother to Child Transmission (PMTCT) campaigns has yielded tremendous results.

The performance contract reports from the ACU department for the current academic year 2015/2016 submitted to the Government through Kilifi County Hospital and NACC office also revealed the following HIV prevalence rates among those who are HIV positives; Quarter One, 1.2%,; Second Quarter, 1.8% and Third Quarter 2.65% out of 217 PU staff and their families who visited the VCT clinic during the Health Drive weeks. All these prevalence in each quarter were reported as fresh HIV testing. These data implied that there is need to take stoke on staff knowledge level on HIV infection and mitigate on near zero prevalence rate.

## 1.2 Survey Objectives

The key objective of this survey was to obtain a baseline data on staff knowledge level on HIV virus and infection prevalence to mitigate for appropriate intervention strategies.

**Specific objectives:**

1. To establish levels of awareness of PU staff on HIV and AIDS in terms of;
  - Current statistics
  - Mode of Transmission
  - Prevention methods
  - Treatment, and
  - General knowledge
2. To suggest intervention strategies based on the baseline survey findings.

**II. METHODOLOGY**

The study used cross sectional survey research design which made it possible to cover a range of participants regardless of age difference and generate data required for both quantitative and qualitative data analysis. The study was carried out at Pwani University main campus, in Kilifi- Kenya among staff total population of 379. The sampling technique was simple random sampling procedure. The sample size was calculated using Krejcie et al, (2002) formula and table for calculating sample size. According to this formula, population above 400 at 95% confidence level and 3.5% margin of error yield 265 sample size. However, to yield accurate sample representation for the two distinctive members of Pwani University staff, (the teaching and non teaching), each population sample was sampled differently. That is the teaching staff population of 150 yielded sample sizes of 108 while the non teaching staff totals population of 229 yielded 155. Total sample size therefore was 263.

**Instrumentation**

The study used questionnaires to generate data on level of awareness among Pwani University staff on various aspects of HIV and AIDS. The key issues addressed included knowledge on prevalence rate on HIV and AIDS, transmission, prevention, treatment and general knowledge. The items were 32, with 5 sections. 4 sections out of 5 sections - carried 5 items while the general questions had 10 items. Two items were open questions to solicit opinion on improvement of programme. The items types were triangulated to achieve reliability and validity of results. The items ranged from true/false, strongly agree to strongly disagree, multiple choices and open ended questions.

**3.5 Validity and reliability**

The instruments were subjected to expert scrutiny to establish validity and reliability. Pilot study was conducted first to a certain the validity and reliability of the instrument. The

**4.2 Staff knowledge level on HIV prevalence rate**

alpha coefficient for the items was .0.648 suggesting that the items had a relatively high internal consistency. From the total population of staff of 379, 30% was sampled for pilot. Hence a sample size of 65 was used for pilot study.

**Data Collection Procedure**

Permission was sort and notification was given to the University administration to carry out the survey. The Ethics review Board was consulted for ethics certification. The questionnaires were then administered to the teaching and non teaching staff for a period of one month. Participants consent was sort before administration of the tool. The questionnaires were administered to the employees at their work station. Each questionnaire was accompanied with a consent form and a cover letter which explained the purpose of the study.

**Data Analysis Procedures**

After data collection, the questionnaires were coded and analyzed using both qualitative and quantitative data analysis technique. The Social Package for Statistics analysis (SPSS) was used to calculate the results.

**Ethical Considerations.**

The proposal was sent to the Ethics Review Committee for clearance before the questionnaires were administered. Informed consent was sought from respondents by providing a cover letter clearly explaining the purpose of the study. Anonymity and confidentiality was maintained. Participants were assured of privacy. Dissemination of findings after study completion was also declared as a protocol for the study undertakings to ensure community benefits from the study.

**III. FINDINGS AND DISCUSSIONS**

**Introduction**

Data of the study on PU staff knowledge level on HIV was analyzed using qualitative and quantitative data analysis techniques. The purpose of the study was to enhance accurate knowledge based information on HIV virus as a killer disease. Out of 263-sampled participants, 75% response rate was achieved. One limitation of the study was that the questionnaire did not capture the demographic characteristics of the participants other than one common characteristics that they were staff of the university categorized as teaching and non teaching staff.. The questionnaires were then coded and data reduced to manageable data for analysis. The study focused on five thematic areas only; HIV prevalence rate, prevention, transmission, treatment and general knowledge. The study findings are hereby presented.

**Table 4.1 Global HIV prevalence Rate**

| Globally the Number of HIV infected People are more than 1 M |           |         |                         |         |
|--|-----------|---------|-------------------------|---------|
|  | Frequency | Percent | 95% Confidence Interval | P-value |

|       |    |       |           |             |              |
|-------|----|-------|-----------|-------------|--------------|
| True  | 66 | 94.3  | <b>89</b> | <b>99.7</b> | <b>0.000</b> |
| False | 4  | 5.7   |           |             |              |
| Total | 70 | 100.0 |           |             |              |

The study sought to understand staff knowledge level on Global HIV prevalence rate. The results, 94.3 % ( CI = **89-99.7**, **P<0.05**) indicated that the staff knowledge level was high on global prevalence rate.

**Table 4.2 Kenya HIV prevalence Rate**

| <b>Number of HIV people in Kenya are 500,000</b> |           |         |                         |            |              |
|--|-----------|---------|-------------------------|------------|--------------|
|  | Frequency | Percent | 95% Confidence Interval |            | P-value      |
| True   | 2         | 2.9     |                         |            |              |
| False  | 68        | 97.1    | <b>93</b>               | <b>100</b> | <b>0.000</b> |
| Total  | 70        | 100.0   |                         |            |              |

From Table 4.2, the table revealed that knowledge level of staff on HIV prevalence rate in Kenya was equally high as the participants identified that HIV prevalence in Kenya could be more than only 500,000 populations (97.1%, CI =93-100, P<0.05). Similarly, knowledge was extended to staff

understanding of HIV prevalence in various regions of Kenya in Table 4.3. The data analysis revealed that staffs are aware that the region of Rift Valley is not the lowest region with HIV prevalence rate

**Table 4.3 Regional HIV prevalence rate in Kenya**

| <b>Lowest HIV prevalence in Kenya is Rift valley</b> |           |         |                         |            |              |
|--|-----------|---------|-------------------------|------------|--------------|
|  | Frequency | Percent | 95% Confidence Interval |            | P-value      |
| True   | 2         | 2.9     |                         |            |              |
| False  | 68        | 97.1    | <b>93</b>               | <b>100</b> | <b>0.000</b> |
| Total  | 70        | 100.0   |                         |            |              |

However, 2.9% of participants were of the contrary opinion, that there could be other regions in Kenya where the HIV and AIDS prevalence rate is higher than the Rift Valley.

**Table 4.4 HIV infection rate among married couples in Kenya**

| <b>HIV infection has increased among the Married couples in Kenya</b> |           |         |                         |            |              |
|---|-----------|---------|-------------------------|------------|--------------|
|   | Frequency | Percent | 95% Confidence Interval |            | P-value      |
| True  | 69        | 98.6    | <b>95.86</b>            | <b>100</b> | <b>0.000</b> |
| False   | 1         | 1.4     |                         |            |              |
| Total   | 70        | 100.0   |                         |            |              |

The study also sought to find out sources for the high HIV prevalence rate. Study revealed that HIV infection had increased among the married couples in Kenya (98.6%, CI 95.86) as one

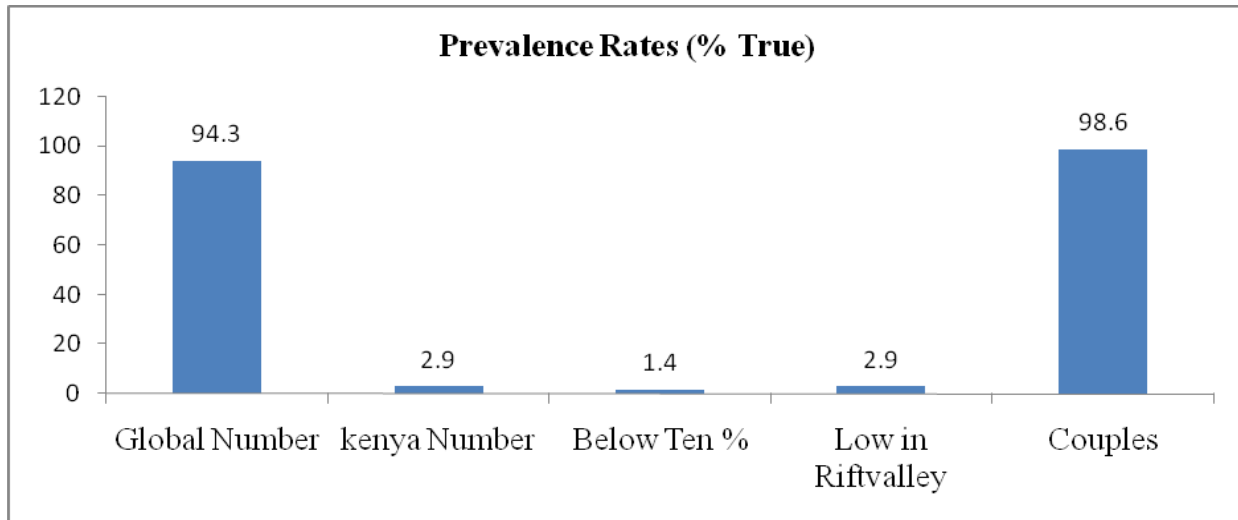
avenue of contracting HIV infection (Table 4.4). Only 1.4% was of the contrary opinion.

**Table 4.5 Prevalence of women infected with HIV virus in Kenya**

| <b>Number of Women with HIV in Kenya is below 10%</b> |           |         |                         |            |              |
|---|-----------|---------|-------------------------|------------|--------------|
|   | Frequency | Percent | 95% Confidence Interval |            | P-value      |
| True  | 1         | 1.4     |                         |            |              |
| False   | 69        | 98.6    | <b>96</b>               | <b>100</b> | <b>0.000</b> |
| Total   | 70        | 100.0   |                         |            |              |

Majority (98.6%, 95% confidence level with a P-value<0.05) of the participants disagreed that only 10% of the total Kenya women population could be infected with the HIV virus. Figure 4.1 provides a summary of the responses on staff knowledge level on HIV and AIDS prevalence, rate. These

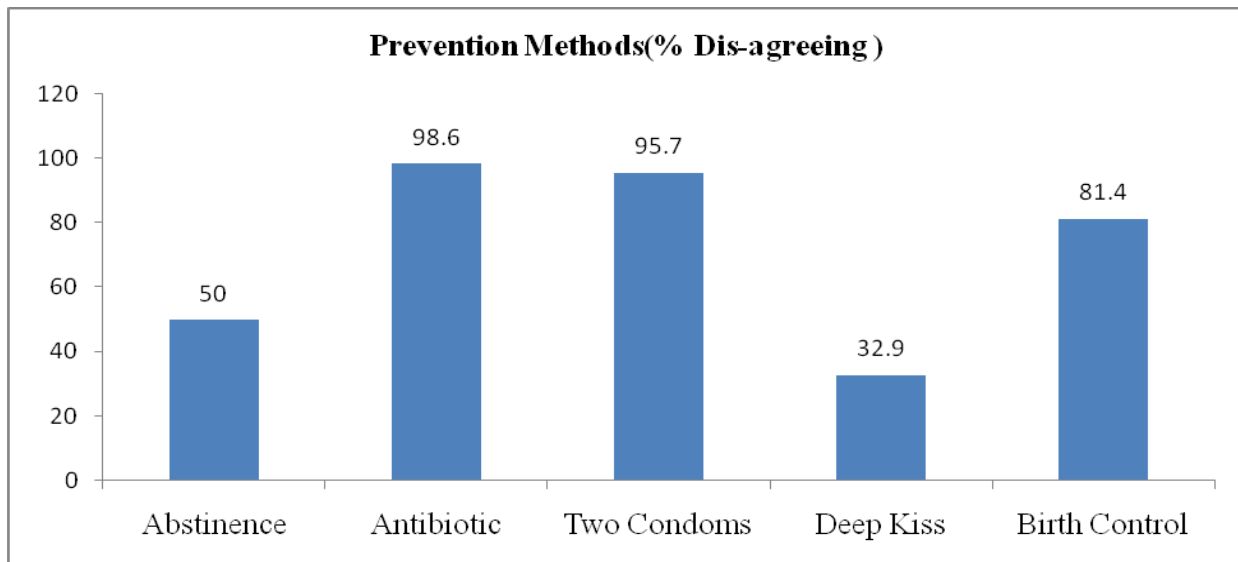
results revealed that staff knowledge levels on HIV and AIDS prevalence both globally and nationally was very high. The question may be weather such knowledge level is applied in actual prevention.



**Figure 4.1: Staff Awareness Level on HIV and AIDS Prevalence, (Global and National)**

**4.3 Staff knowledge level on HIV prevention.**

The Likert scale type of questionnaire was administered to the participants in this section to sought the staff knowledge level on HIV prevention. The scale ranged from; Strongly Disagree, Disagree, Don't Know, Agree and Strongly Agree. The responses were as given in Figure 4.2



**Figure 4.2: Staff Knowledge level on HIV infection on Prevention Methods.**

From Figure 4.2, it can be observed that 50% of the participants disagreed that abstinence is the only surest way of avoiding HIV. From Table 4.6, the results confidence level was 38.35, 61.65 with a P-value <0.05. This means that the other 50% had either confirmed or were not sure whether abstinence is the only surest way of HIV infection prevention.

**Table 4.6 Abstinence**

| Abstinence is the only surest way of avoiding HIV |           |         |            |                         |       |         |
|---|-----------|---------|------------|-------------------------|-------|---------|
|   | Frequency | Percent | Cumulative | 95% Confidence Interval |       | P-value |
| Strongly Disagree                                 | 18        | 25.7    | 25.7       | 38.35                   | 61.65 | 0.000   |
| Disagree  | 17        | 24.3    | 50.0       |                         |       |         |
| Agree   | 20        | 28.6    | 78.6       |                         |       |         |
| Strongly Agree                                    | 15        | 21.4    | 100.0      |                         |       |         |

|       |    |       |  |  |  |  |
|-------|----|-------|--|--|--|--|
| Total | 70 | 100.0 |  |  |  |  |
|-------|----|-------|--|--|--|--|

On the other hand, the respondents disagreed that the use of anti-biotic cannot prevent one from acquiring HIV virus (95.86%,-100% P-value <0.05) while only 1.4 had different

opinion. Implying that, staff are aware about the use of HIV prevention modes in relation to anti biotic.

**Table 4.7 Use of Anti Biotic**

| Use of antibiotic can prevent one from acquiring HIV |           |              |            |                         |            |              |
|--|-----------|--------------|------------|-------------------------|------------|--------------|
|  | Frequency | Percent      | Cumulative | 95% Confidence Interval |            | P-value      |
| Strongly Disagree                                    | 26        | 37.1         | 37.1       | <b>95.86</b>            | <b>100</b> | <b>0.000</b> |
| Disagree   | 43        | 61.4         | 98.6       |                         |            |              |
| Agree  | 1         | 1.4          | 100.0      |                         |            |              |
| <b>Total</b>   | <b>70</b> | <b>100.0</b> |            |                         |            |              |

Condom use has been one of the HIV preventive modes, however knowledge on its usage has been questionable to enable individuals effectively protect themselves from HIV infection. In

this study, 95.7% did not support the statement that wearing two condoms is a safe method of HIV prevention as shown in response distribution in Table 4.8 below.

**Table 4.8 Condom Use**

| Wearing two condoms is a safe method of HIV prevention |           |              |            |                         |            |              |
|--|-----------|--------------|------------|-------------------------|------------|--------------|
|  | Frequency | Percent      | Cumulative | 95% Confidence Interval |            | P-value      |
| Strongly Disagree                                      | 24        | 34.3         | 34.3       | <b>90.97</b>            | <b>100</b> | <b>0.000</b> |
| Disagree   | 43        | 61.4         | 95.7       |                         |            |              |
| Don't Know   | 1         | 1.4          | 97.1       |                         |            |              |
| Agree  | 2         | 2.9          | 100.0      |                         |            |              |
| <b>Total</b>   | <b>70</b> | <b>100.0</b> |            |                         |            |              |

Responses for deep kissing as not causing HIV virus and not preventing one from HIV infection generated mixed reactions from the participants as revealed in Table 4.9. The results revealed that 32.9% disagreed and the 67.1% consented that there is high possibility that deep kissing can risk one to contract HIV virus. The confidence levels 56.15 and 78.05 also a test to the conflict of opinion. Studies have shown that latex condoms are highly effective in preventing HIV transmission when used consistently and correctly.

These studies looked at uninfected people considered to be at very high risk of infection because they were involved in sexual relationships with HIV-infected people. The studies found that even with repeated sexual contact, 98-100 percent of those people who used latex condoms correctly and consistently did not become infected implying that the high level knowledge of staff on condom use as both birth control method and HIV infection preventive mode was commendable.

**Table 4.9 Deep Kissing**

| Deep kissing cannot cause HIV Virus |           |              |            |                         |              |              |
|-------------------------------------|-----------|--------------|------------|-------------------------|--------------|--------------|
|                                     | Frequency | Percent      | Cumulative | 95% Confidence Interval |              | P-value      |
| Strongly Disagree                   | 3         | 4.3          | 4.3        |                         |              |              |
| Disagree                            | 16        | 22.9         | 27.1       |                         |              |              |
| Don't Know                          | 4         | 5.7          | 32.9       |                         |              |              |
| Agree                               | 40        | 57.1         | 90.0       | <b>56.15</b>            | <b>78.05</b> | <b>0.000</b> |
| Strongly Agree                      | 7         | 10.0         | 100.0      |                         |              |              |
| <b>Total</b>                        | <b>70</b> | <b>100.0</b> |            |                         |              |              |

There was a high percent disagreement, (81.4%) that birth control methods other than condom use could reduce the risk of HIV infections. However according to Janson *et al*, (2010) prolonged open-mouth kissing could damage the mouth or lips and allow HIV to pass from an infected person to a partner and

then enter the body through cuts or sores in the mouth. Because of this possible risk, the Centre for Disease Control (CDC) recommends against open-mouth kissing with an infected partner.

**Table 4.10 Family Planning Options**

| <b>Birth Control methods other than condoms reduce the risk of HIV infection</b> |           |         |            |                 |              |              |
|--|-----------|---------|------------|-----------------|--------------|--------------|
|  | Frequency | Percent | Cumulative | 95%<br>Interval | Confidence   | P-value      |
| Strongly Disagree  | 37        | 52.9    | 52.9       | <b>72.33</b>    | <b>90.47</b> | <b>0.000</b> |
| Disagree   | 20        | 28.6    | 81.4       |                 |              |              |
| Don't Know   | 1         | 1.4     | 82.9       |                 |              |              |
| Agree  | 9         | 12.9    | 95.7       |                 |              |              |
| Strongly Agree   | 3         | 4.3     | 100.0      |                 |              |              |
| Total  | 70        | 100.0   |            |                 |              |              |

Table 4.10 revealed that participants were aware that condom use in birth control had dual role. There are different choices or options for getting pregnant while reducing the chances of transmitting HIV are known as options for safer conception. Given the number of effective options for safer conception, women and men living with HIV are also interested in having children. A study carried out in USA by Special Forces Selection Assessment (SFAF), (2009) on [Becoming a Positive Parent: Reproductive Options for People with HIV](#) showed that almost seven in ten women living with HIV (ages 18 to 52) and

based in Toronto, Canada wanted to give birth despite their HIV status. The Women Living Positive Survey found out that the same proportion of women living with HIV in the US considered family planning as an important part of their HIV care methods.

**4.4 Staff knowledge level on HIV Transmissions.**

Generally the participants disagreed with the statements presented on HIV transmission methods. knowledge level was high at 98.6%, CI 95.86, P- value >0.000. See Table 4.11

**Table 4.11 Prevention of Mother to Child Transmission and Treatment (PMCT)**

| <b>All pregnant women infected with HIV can have HIV+ babies</b> |           |         |            |                 |            |              |
|--|-----------|---------|------------|-----------------|------------|--------------|
|  | Frequency | Percent | Cumulative | 95%<br>Interval | Confidence | P-value      |
| Strongly Disagree  | 28        | 40.0    | 40.0       | <b>95.86</b>    | <b>100</b> | <b>0.000</b> |
| Disagree   | 41        | 58.6    | 98.6       |                 |            |              |
| Agree  | 1         | 1.4     | 100.0      |                 |            |              |
| Total  | 70        | 100.0   |            |                 |            |              |

The results implied that there is possibility of HIV+ women giving birth to HIV- babies. Advances in HIV treatment have greatly lowered the chances of HIV+ mothers passing the HIV virus to their babies when they are born (Prenatal transmission, mother-to-child transmission, or vertical transmission). The chances of passing HIV virus from mother to baby today can be as low as one in 100% when Prevention of Mother to Child Transmission Treatment (PMTCT) is applied.

This same advancement of treatment has made it much more possible for people living with HIV virus to live longer and healthier lives. It has also made it possible to reduce the chances of passing HIV virus to a partner when trying to have a child. Therefore Participants disagreed that all pregnant women infected with HIV could have HIV positive babies was correct and an appropriate response.

**Table 4.12a Urine and sexual intercourse**

| <b>Passing Urine immediately after sexual contact can prevent HIV</b> |           |         |            |                 |              |              |
|---|-----------|---------|------------|-----------------|--------------|--------------|
|   | Frequency | Percent | Cumulative | 95%<br>Interval | Confidence   | P-value      |
| Strongly Disagree   | 31        | 44.3    | 44.3       | <b>88.89</b>    | <b>99.70</b> | <b>0.000</b> |
| Disagree  | 35        | 50.0    | 94.3       |                 |              |              |
| Don't Know  | 3         | 4.3     | 98.6       |                 |              |              |
| Agree   | 1         | 1.4     | 100.0      |                 |              |              |
| Total   | 70        | 100.0   |            |                 |              |              |

From table 4.12a, the results indicated that 94.3% disagreed with the above statement that passing urine after sex has nothing to do with HIV transmission at 88.89 CI. However,

there is need to worry about the small minority of 5.7% who reasoned on the contrary for they pose high sexual risky behaviours to their sexual partners

**Table 4.12b Practice of Anal sex**

| <b>Having Anal sex cannot transmit HIV virus</b> |           |         |            |                         |                   |              |
|--|-----------|---------|------------|-------------------------|-------------------|--------------|
|  | Frequency | Percent | Cumulative | <b>95%<br/>Interval</b> | <b>Confidence</b> | P-value      |
| Strongly Disagree                                | 33        | 47.1    | 47.1       | <b>93.19</b>            | <b>100</b>        | <b>0.000</b> |
| Disagree   | 35        | 50.0    | 97.1       |                         |                   |              |
| Don't Know                                       | 1         | 1.4     | 98.6       |                         |                   |              |
| Agree  | 1         | 1.4     | 100.0      |                         |                   |              |
| Total  | 70        | 100.0   |            |                         |                   |              |

Table 4.12b revealed participants knowledge level on whether anal sex practices is one of the methods which enhances HIV transmissions. From the results, it is clear that the participants disagreed categorically that anal sex cannot contribute to HIV virus transmission. These results were statistically significant at 5% level of significance.

However, anal sex is a common practice among men who have sex with men, heterosexual men and women, and transgender individuals. It is a known risk factor for HIV infection and transmission. It is important that education on HIV prevention includes accurate information on the fluids that can transmit HIV through this type of sex.

A study by Baggeley, (2010) concluded that rectal fluid has implications for HIV transmission through anal sex when the HIV-negative person is the insertive partner (that is, inserts their penis into a partner's anus). Research shows that this type of anal sex can carry a significant risk of HIV transmission. The average risk of HIV infection through a single act of condomless insertive

anal sex with an HIV-positive partner is slightly higher than through vaginal sex but much lower than if the HIV-negative person takes the receptive role during anal sex.

In another study Heywood, (2012) and MaBride, (2010) revealed that anal rectal fluid contributes to the risk of HIV transmission where the insertive partner is HIV negative. If an HIV-negative person has incentive anal sex with an HIV-positive partner, rectal fluid containing HIV can come into contact with the urethra and/or the penis foreskin. Both the urethra and foreskin are vulnerable to HIV infection.

Herbernick *et al* (2010) and Rithinghoff *et al* (1999) study also asserted that rectal fluid may not be the only fluid involved in the risk of HIV transmission during this type of sex. If the lining of the rectum has been damaged in some way, blood may also be present in the rectum. In such circumstances, blood containing HIV can come into contact with the foreskin and urethra and also contribute to the risk of HIV transmission.

**Table 4.13 Menstrual Periods**

| <b>A women cannot get HIV if she has sex during her menses</b> |           |         |            |                         |                   |              |
|--|-----------|---------|------------|-------------------------|-------------------|--------------|
|  | Frequency | Percent | Cumulative | <b>95%<br/>Interval</b> | <b>Confidence</b> | P-value      |
| Strongly Disagree  | 18        | 25.7    | 25.7       | <b>84.87</b>            | <b>100</b>        | <b>0.000</b> |
| Disagree   | 46        | 65.7    | 91.4       |                         |                   |              |
| Don't Know   | 6         | 8.6     | 100.0      |                         |                   |              |
| Total  | 70        | 100.0   |            |                         |                   |              |

From Table 4.13, 91.4% were of the contrary opinion to the statement that a woman cannot get HIV if she has sex during her menses. The responses suggested the possibility of being infected even during menses periods. There was high percentage (98.6)

disagreement to the statement that coughing and sneezing also do not spread HIV. These responses implied that the probability of HIV transmission due to coughing and sneezing is insignificant. The findings summary is shown in Figure 4.3 below.

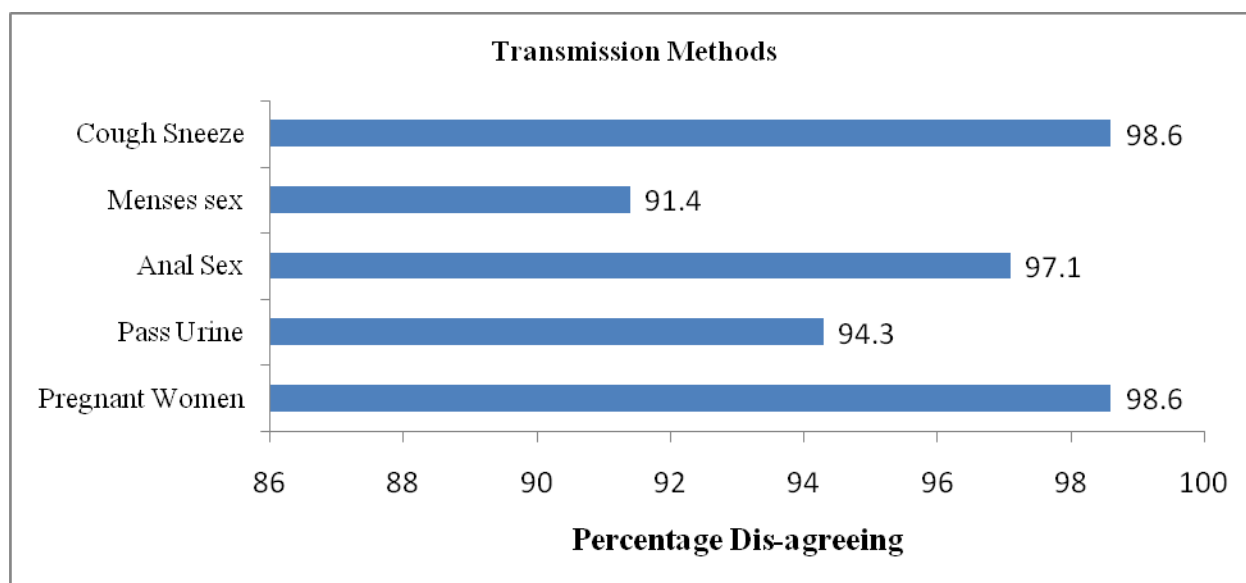


Figure 4.3: Staff knowledge level on HIV Transmission Methods

#### 4.5 Staffknowledge level on HIV Treatment

Data analysis in this section majorly focused on handling of AIDS patients, Symptoms of AIDS in stage 3, HIV treatment status, HIV Infection and CD<sub>4</sub> Count. Figure 4.3. revealed that participants were highly knowledgeable that when handling HIV patients, gloves usage are paramount (97.1% , CI 93.19-99.7, P-value<0.05 levels). 84.3% indicated that Herpes is the symptom of AIDS which is most likely to occur in stage 3 while 94.3%, observed that eating from the same plate with an infected person

would not necessarily transmit HIV virus. Majority of respondents supported the following statements as being true about HIV and AIDS treatment; That there is no cure of HIV virus, ARVs reduces HIV infections, 94.3% HIV weakens body immunity and that an infected person may look and feel okay for years yet they are HIV infected individuals (1.4%). The response most appropriate was the use of ARVs as a form of treatment with CI 88.89, 99.70, P-value <0.05.

Table 4.14 True facts about HIV treatment

| Which is not true about HIV treatment                     |           |              |            |                         |             |              |
|---|-----------|--------------|------------|-------------------------|-------------|--------------|
|   | Frequency | Percent      | Cumulative | 95% Confidence Interval |             | P-value      |
| There is no cure for HIV                                  | 3         | 4.3          | 4.3        |                         |             |              |
| ARVs reduces infection rate but HIV weakens body immunity | 66        | 94.3         | 98.6       | <b>88.89</b>            | <b>99.7</b> | <b>0.000</b> |
| An infected person may look and feel okay for years       | 1         | 1.4          | 100.0      |                         |             |              |
| <b>Total</b>  | <b>70</b> | <b>100.0</b> |            |                         |             |              |

Another set of questions tested facts about HIV and the results are presented below

Table 4.15 Most false Facts about HIV virus

| Which is not correct about HIV                        |           |              |            |                         |              |              |
|---|-----------|--------------|------------|-------------------------|--------------|--------------|
|   | Frequency | Percent      | Cumulative | 95% Confidence Interval |              | P-value      |
| An infected couple can give birth to a healthy infant | 1         | 1.4          | 1.4        | <b>84.87</b>            | <b>97.93</b> | <b>0.000</b> |
| AIDS causes HIV                                       | 64        | 91.4         | 92.9       |                         |              |              |
| Baby can be infected through breastfeeding            | 2         | 2.9          | 95.7       |                         |              |              |
| Mosquito bites cannot cause HIV infection             | 3         | 4.3          | 100.0      |                         |              |              |
| <b>Total</b>  | <b>70</b> | <b>100.0</b> |            |                         |              |              |



From Table 4.15, the result revealed that the participant were highly knowledgeable that AIDS does not cause HIV virus (91.4%, CI 84.87 to 97.93) and an infected couple can give birth to a healthy infant (1.4%) however it's still correct due to PMTCT prevention measures. Baby can be infected through breastfeeding (2.9%) and Mosquito bites cannot cause HIV

infection. When presented with a set of choices on CD<sub>4</sub> Count, majority of the respondents (87.1%, CI 79.5 to 97.93) observed that a person with HIV infection develop AIDS when the CD<sub>4</sub> Count is below 200. Figure 4.4 below displays the response levels.

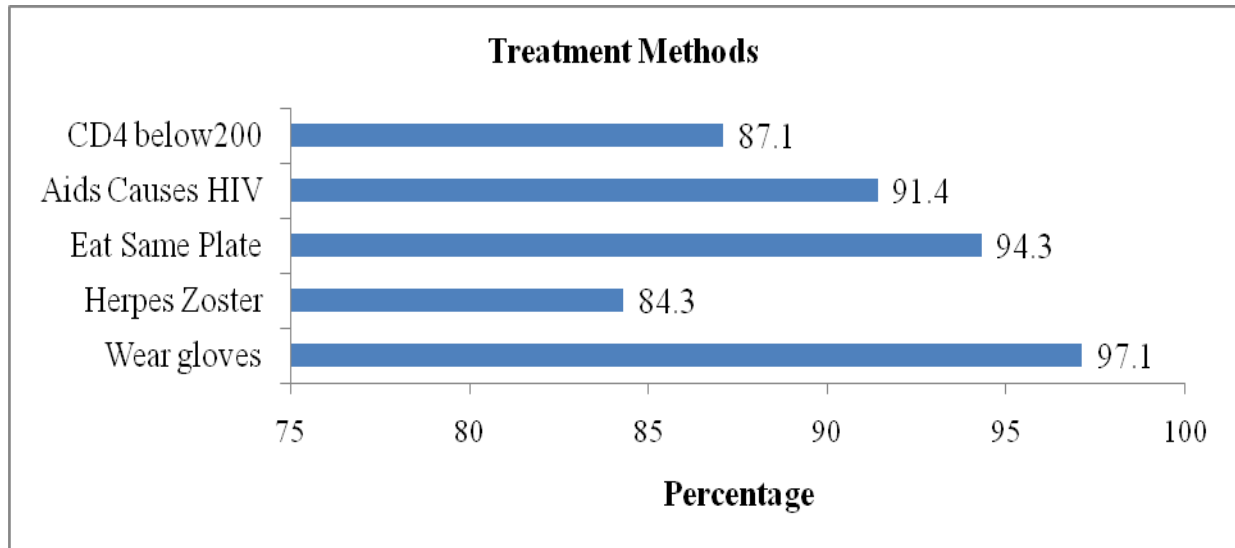


Figure 4.4: Knowledge level on HIV Treatment

**4.6 General Knowledge on HIV and AIDS transmission, treatment and prevention**

A series of general knowledge questions were administered through the questionnaire overall understanding of knowledge on HIV and AIDS among the staff. Table 1.15 revealed that 95.7% disagreed that the person who dies first is the one who brought

HIV virus to the partner. This fact implies that it is not a must that the person who brought the virus will die first. Other factors such as genetic factors, lifestyle, sexual behaviors, treatment and adherence, nutritional level and type play a great role in longevity. 4.3% of the respondents confirmed the statement and were certain that this is always the case. See Table 4.16

Table 4.16: Death of HIV Positive Couple

| One who dies first is the one who brought it |           |         |            |                         |     |         |
|--|-----------|---------|------------|-------------------------|-----|---------|
|  | Frequency | Percent | Cumulative | 95% Confidence Interval |     | P-value |
| True   | 3         | 4.3     | 4.3        |                         |     |         |
| False  | 67        | 95.7    | 100.0      | 90.97                   | 100 | 0.000   |
| Total  | 70        | 100.0   |            |                         |     |         |

The participants labeled the statement that Orphans whose parents have died of HIV virus are most likely to get HIV infection as false (87.1%, CI 90.97-100). However this fact depends on precautions undertaken during child birth as well as during breast feeding. It also depends on whether the children were born before their parents contracted the Virus

On the other hand, majority of the participants confirmed that sexually transmitted infectious diseases can predispose one into getting HIV infection (94.3%, CI 88.89 P-value <0.05). This area needs further awareness creation as the few who are not well informed about STIs and HIV and AIDS could easily contract the disease through negligence in effectively taking care of the any slight incidence of SITs while 94.3% were of the opinion that HIV prevention programmes as very important. The results implied that the staff supports the programme. 90% were of the opinion that discordant couples may not necessarily contract HIV virus from each other but the one infected needs to be protected.

Knowledge level on alcohol and Drug abuse as a predisposing factor in contracting HIV was reported at 95.7%, CI 90.7-100, implying the link between HIV infection and alcohol consumption as a risky factor.

Therefore counseling and testing for HIV is an entry point to care and treatment as correctly observed by participants with a knowledge level of 98%. This confirms the significant role of counseling programmes related to HIV and AIDS in the Universities and donating blood cannot make one be infected with HIV but instead its one way of knowing ones HIV status. Participants correctly recognized that those who are most at risk of HIV infection included Truck drivers, IDU's, University students, and Fish monger. There were different opinions in relation to the groups at risk in contrasting HIV/AIDS. The statistics for the groups at less risk of being infected are given in Table 1.4. Most respondents felt that all the groups were less at risk of contracting the HIV Virus as sown in Table 4.17

**Table 4.17: Groups at Risk of Contracting HIV Virus**

| Which group is at less risk |           |         |            |                 |            |         |
|-----------------------------|-----------|---------|------------|-----------------|------------|---------|
|                             | Frequency | Percent | Cumulative | 95%<br>Interval | Confidence | P-value |
| Truck drivers               | 1         | 1.4     | 1.4        |                 |            |         |
| IDU's                       | 2         | 2.9     | 4.3        |                 |            |         |
| University students         | 22        | 31.4    | 35.7       |                 |            |         |
| Fish Mongers                | 1         | 1.4     | 37.1       |                 |            |         |
| All the above               | 44        | 62.9    | 100.0      | 51.64           | 74.16      | 0.000   |
| Total                       | 70        | 100.0   |            |                 |            |         |

In addition, majority of the respondents, 92.9%, CI 86.91, 98.89, P-value < 0.05) felt that solo masturbation is a low risk in HIV infection (Table 4.18), since the other methods such as

unprotected anal sex, lesbianism and homosexuality involve exchange of body fluids which can easily infect others.

**Table 4.18: Low Risk Infection**

| Which of the following is a low risk in HIV infection |           |         |            |                 |            |         |
|---|-----------|---------|------------|-----------------|------------|---------|
|   | Frequency | Percent | Cumulative | 95%<br>Interval | Confidence | P-value |
| Solo masturbation                                     | 65        | 92.9    | 92.9       | 86.91           | 98.89      | 0.000   |
| Unprotected anal sex                                  | 1         | 1.4     | 94.3       |                 |            |         |
| Lesbianism  | 4         | 5.7     | 100.0      |                 |            |         |
| Total   | 70        | 100.0   |            |                 |            |         |

The keeping of HIV test results secretive from people also generated different opinions. 71.4% strongly disagreed with disclosure of HIV status being made open. This result indicates that HIV disease is still highly stigmatized. This also shows how

the society perceives those who suffer from HIV infection. Highly confidential and secretive matter and Not yet openly accepted. Table 4.19 reveals distribution of participant's opinion on this.

**Table 1.19: HIV Test Results Status.**

| HIV results should be kept open so that we can avoid those infected |           |         |            |                 |            |         |
|---|-----------|---------|------------|-----------------|------------|---------|
|   | Frequency | Percent | Cumulative | 95%<br>Interval | Confidence | P-value |
| Strongly Disagree   | 50        | 71.4    | 71.4       | 90.97           | 100        | 0.000   |
| Disagree  | 17        | 24.3    | 95.7       |                 |            |         |
| Agree   | 1         | 1.4     | 97.1       |                 |            |         |
| Strongly Agree  | 2         | 2.9     | 100.0      |                 |            |         |
| Total   | 70        | 100.0   |            |                 |            |         |

The study revealed that the staff HIV knowledge level was very high generally. This was a commendable indicator for HIV reduction efforts campaigns for the realization of vision 2030 and individual wellbeing. The study also revealed that the staff positively support HIV program in the University (94.3%).

The study outcome; that despite high knowledge level on HIV and AIDS among scholars, correct and accurate information in some areas tested still had lapses. However, the study limitation was that the study did not look into the correlation between high knowledge level and risky sexual behaviours. So that the study could further conclude to what extent high knowledge levels translates to healthy behaviours which can possible prevent one from HIV infections. Further studies in HIV was still recommended

**Strength , limitation and Conclusion**

One strength of this study was that the sample size was large, thus endowing enough statistical power to data analysis.

**APPENDICES**

**APPENDIX 1: CONCENT NOTE**



**STUDY ON PWANI UNIVERSITY STAFF KNOWLEDGE LEVEL ON HIV / AIDS**

*Dear Participant,*

We are pleased to inform you that you have been sampled among the academic staff to participate in this survey. This survey is undertaken for the purpose of the University’s performance contract report for the academic calendar of 2015/2016. The questionnaire is composed of 30 items assessing staff knowledge level on HIV and AIDS prevalence rate, prevention, transmission, treatment methods and general knowledge. You are hereby requested to respond to this questionnaire as honestly as you can. Your participation is highly appreciated.

**Kindly note the following:**

**Consent:** Participation is voluntary. You are free to ask questions related to the study at any time as you fill the questionnaire.

**Privacy and Confidentiality:** The interview will be conducted in your work environment. The questionnaires are anonymous (no name should be written on the questionnaires). All information given shall be kept confidential and for this study purpose only.

**Community Benefits and Reward**

This study will gauge your mind on facts about HIV and AIDS, enhance your critical knowledge on healthy living and improve your response to behavior change. The findings will be disseminated to Pwani University community to help improve HIV prevention strategies.

**Contact Information:** If you have any questions you may contact AIDS Control Unit department Pwani University.

I therefore agree to participate in this study

**Participant, Sign**-----**Date**-----

**Interviewer, Sign**-----**Date**-----

**THANK**

**APPENDIX TWO**



**AIDS CONTROL UNIT DEPARTMENT**

**QUESTIONNAIRE FOR THE STUDY ON PWANI UNIVERSITY STAFF KNOWLEDGE LEVEL ON HIV AND AIDS**

This survey is undertaken for the purpose of the University’s performance contract report for the academic calendar of 2015/2016.

The questionnaire is composed of 30 items assessing staff knowledge level on HIV prevalence rate, prevention, transmission, treatment methods and general knowledge.

*You are hereby requested to kindly respond to the following questions honestly.*

**PLEASE TICK APPROPRIATE RESPONSE TO THE FOLLOWING QUESTIONS**

**Prevalence Rate**

| NO | STATEMENT  | RESPONSE |       |
|----|--|----------|-------|
|    |  | True     | False |
| 1  | Globally the number of people infected with HIV virus are more than 1M |          |       |
| 2  | In Kenya, the number of people living with HIV virus are 500,000       |          |       |
| 3  | Women infected with the HIV virus in Kenya are below 10%               |          |       |
| 4  | The region with the lowest HIV prevalence in Kenya is Rift Valley      |          |       |

|    |  |  |  |
|----|--|--|--|
| 5a | HIV infection has increased among the married couples in Kenya |  |  |
|----|--|--|--|

**Prevention methods**

| NO | STATEMENT   | RESPONSES         |          |            |       |                |
|----|---|-------------------|----------|------------|-------|----------------|
|    |   | Strongly Disagree | Disagree | Don't know | Agree | Strongly Agree |
| 1  | Abstinence is the only surest way of avoiding HIV.                        |                   |          |            |       |                |
| 2  | Use of anti-biotic can prevent one from acquiring HIV.                    |                   |          |            |       |                |
| 3  | Wearing two condoms is a safe method of HIV prevention                    |                   |          |            |       |                |
| 4  | Deep kissing cannot cause HIV virus                                       |                   |          |            |       |                |
| 5  | Birth control methods other than condoms reduce the risk of HIV infection |                   |          |            |       |                |

**Transmission Methods**

| NO | STATEMENT  | RESPONSES         |          |            |       |                |
|----|--|-------------------|----------|------------|-------|----------------|
|    |  | Strongly Disagree | Disagree | Don't know | Agree | Strongly Agree |
| 1  | All pregnant women infected with HIV can have HIV+ babies.                             |                   |          |            |       |                |
| 2  | Passing urine immediately after sexual contact can prevent one from getting HIV virus. |                   |          |            |       |                |
| 3  | Having Anal sex cannot transmit HIV virus  |                   |          |            |       |                |
| 4  | A woman cannot get HIV if she has sex during her menses.                               |                   |          |            |       |                |
| 5  | Coughing and sneezing do not spread HIV.   |                   |          |            |       |                |

**Treatment Methods**

1. Which of the following options is a MUST while handling an AIDS patient with sores,
  - a) Wear gloves when birthing them
  - b) Throw away cups and plates after feeding
  - c) Clean their sores with *jik*
  - d) Don't touch them
2. The following are symptoms of AIDS, which one is most likely to occur in stage 3
  - a) Herpes zoster
  - b) Coughing out blood
  - c) Night sweats
  - d) Generalized lymphadenopathy
3. Which of the following is not true about HIV treatment
  - a) There is no cure of HIV
  - b) Eating from the same plate with an infected person will give you HIV
  - c) HIV weakens your body immunity
  - d) An infected person may look and feel okay for years
4. The following statements are correct about HIV, which one is not.
  - a) An infected couple can give birth to a healthy infant.
  - b) AIDS causes HIV
  - c) Baby can be infected through breastfeeding
  - d) Mosquito bites cannot cause HIV infection
- 5 When does a person with HIV infection have AIDS?
  - a) When CD4 count is below 200

- b) When CD4 count is 400
- c) When CD4 count is at 1000
- d) When CD4 count is 500

**General Knowledge**

- i) In a couple who are both HIV positive, the one who dies first is the one who brought it . True  
False
- ii) Orphans, whose parents have died of HIV, are most likely to get HIV.   
True  False
- iii) Sexually transmitted infections can predispose one into getting HIV.   
True  False
- iv) There is no need in spending a lot of money on HIV programs since there is no cure anyway.   
True  False
- v) There is no need for a concordant couple to use protection since they both have the virus. True  
False
- vi) Alcohol and Drug abuse is a predisposing factor in contracting HIV.   
True  False
- vii) Counseling and testing for HIV is an entry point to care and treatment.   
True  False
- viii) Donating blood can make one be infected with HIV.   
True  False
- ix) Which of the following is a low risk in HIV infection: a) Homosexuality   
b) Solo masturbation   
c) Unprotected anal sex   
d) Lesbianism
- x) The following are most at risk of HIV infection, which one is not.   
a) Truck drivers   
b) IDU's   
c) University students   
d) Fish mongers   
e) All the above
- xi) HIV test results should be kept open so that we can avoid those infected.   
Strongly Disagree  Disagree  Agree  Strongly Agree
- xii) Suggest appropriate intervention strategies to improve HIV and AIDS prevention and control programme in the University.

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