

Assessment of Knowledge, Attitudes and Practices Regarding HIV/AIDS among Road Construction Workers and Adjacent Communities in Kwale County, Kenya

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Abstract

Knowledge, attitudes and practices (KAPs) regarding Human Immuno-deficiency Virus /Acquired Immuno-Deficiency Syndrome (HIV/AIDS) is one of the cornerstones in the fight against the disease. Construction workers and adjacent communities are vulnerable to infection because they are likely to engage in risky practices due to lack of adequate knowledge and information, compounded by other socio-economic and cultural factors. The aim of the study was to assess the knowledge, attitudes and practices regarding HIV/AIDS among road construction workers and adjacent communities on the Mwache Junction Tsunza-Mteza Section road construction project (MPARDP2) in Kwale County of the Kenyan Coast. A cross-sectional descriptive study using both qualitative and quantitative research methods was carried out. Study tools were a structured self-administered questionnaire for construction workers, a structured questionnaire for households and an FGD guide for focus group discussions. The results showed that the correct knowledge on HIV/AIDS for both construction workers and household respondents was high (87 % and 81% respectively). Further, it was established that communities have misconceptions about general knowledge on transmission, use of condoms, testing and what constitutes risk. The study concludes that more effort needs to be made to provide HIV/AIDS awareness prevention campaign and training to both construction workers and the adjacent communities. Specifically, there is a need to explore effective strategies for changing attitudes towards prevention of HIV/AIDS particularly in the community. Further, there should be a sustainable HIV/AIDS awareness prevention campaign and training program for the road construction workers and the adjacent communities.

Key words: HIV/AIDS, KAP, Condom, Prevention, Construction Workers, Respondents.

1. INTRODUCTION

The Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome (HIV/AIDS) has rapidly spread to many countries over the years since 1981 and it has become a global health challenge since then Nubed *et al.*, (1).

Sub-Saharan Africa (SSA) is the worst affected region in the world, with about two-thirds of the afflicted people worldwide living here, World Health Organization (2). According to UNICEF (3) and

UNAIDS (4), the majority (about 80%) of the 1.8 million adolescents living with HIV/AIDS live in SSA. Even in the general population, the majority (71%) of the people living with HIV (PLHIV) as well as new HIV/AIDS infections (70%) and AIDS-related deaths (74%) worldwide are recorded in SSA, Kharsany *et al.*, (5). By 2015, HIV/AIDS was reported to have been one of the leading causes of death in Africa, responsible for one in every five deaths in SSA by then, Adeleke *et al.*, (6).

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In Kenya, according to National AIDS and STI Control Programme report published in 2020, there were 1.3 million (95% CI: 1.2-1.4 million) adults aged 15-64 years 4.9% (95% CI: 4.5%-5.3%) and 139,000 children aged 0-14 years living with HIV 0.7% (95% CI: 0.4%-1.0%). HIV/Aids prevalence was twice as high among women at 6.6% (95% CI: 6.0%-7.1%), compared to men at 3.1% (95% CI: 2.7%-3.5%). The HIV prevalence was 4.7% (95% CI: 4.1%-5.3%) in urban and 5.0% (95% CI: 4.5%-5.5%) in rural areas. The annual incidence of HIV among adults in Kenya was 0.14% (95% confidence interval [CI]: 0.06-0.23%); 0.15% (95% CI: 0.01-0.29%) among women and 0.13% (95% CI: 0.02%-0.24%) among men. This corresponds to an estimated 36,000 (95% CI: 16,000-56,000) new infections per year among adults. The HIV prevalence among adults aged 15-64 years in Kwale was 4.2 % (95% CI: 2.4%-5.9%), Mombasa 5.6% (95% CI: 3.7%-7.5%) and Kilifi 2.3% (95% CI: 0.7%-4.5%), KENPHIA (7).

In addressing HIV and AIDS, the Kenyan government developed the Kenya AIDS Strategic Framework (KASF) (8) with the vision of a Kenya free of HIV infections, stigma and HIV related deaths. To this end, eight strategic directions and attendant priority intervention areas have been laid out in the KASF (8). Community and workplace interventions through advocacy, outreach testing and referral have been identified as key in addressing the pandemic. Priority populations as identified by the KASF (8) include migrant workers who are location specific and require targeted interventions. Among interventions targeted for these populations are behavior change interventions using specific interpersonal tools and techniques, regular outreach and contact with key populations through peer-based education treatment and support, offering harm reduction interventions and scaling up access to care services.

2. MATERIALS AND METHODS

2.1 Study Area and Study Design

The study was a cross-sectional descriptive study which employed both qualitative and quantitative methods.

2.2 Sampling, Methodology and Study Population

Sample design features used in the study included target sample size, sample allocation, sampling frame and listing, choice of domains, sampling stages, stratification, and the calculation of sample weights. Stratified sample computation was done leading to the selection of 40 road construction workers and 370 randomly selected households of the adjacent community. The reason for the choice of this study population is that construction workers are migratory by nature and they socialize and mingle with the adjacent construction site and route communities. The following assumptions and formulas were used to estimate the required sample size for this indicator.

Assumptions:

- 95% Confidence Level for sample selection.
- 3% margin of error in estimates.
- A standard deviation of .5
- A population of 200,000 people in Matuga and Kinango combined.

Formula:

$$\text{Sample size} = \frac{\frac{z^2 \times p(1-p)}{e^2}}{1 + \left(\frac{z^2 \times p(1-p)}{e^2 N}\right)}$$

Where:

- N = population size
- e = Margin of error
- z = z-score
- P = Population Proportion

2.3 Data Collection Tools

A validated self-administered questionnaire was used to collect quantitative data while an FGD guide was used to collect qualitative data.

2.4 Data Analysis and Management

Collection of quantitative data employed web-based digital technology. Quantitative data were collected, transmitted, and analyzed real-time using the

statistical package for social scientists (SPSS), and stored in an online database. Qualitative data were collected by taking field notes, recording, and transcription of the interview notes. The qualitative data were analyzed using manual organization and theme categorization process.

3.0 RESULTS AND DISCUSSION

RESULTS

3.1 DEMOGRAPHIC CHARACTERISTICS OF HOUSEHOLDS RESPONDENTS AND CONSTRUCTION WORKERS

Most of the household respondents interviewed were female (60.8%), men were (39.2%) while majority of the construction workers interviewed were male (77.5%) and 22.5% were female. During FGDs with men, women and youth groups, 68% of the participants were female while 32% were men.

3.1.1 Marital Status of Household Respondents and Construction Workers

76% of the household respondents interviewed were married, followed by single at 15%, 6% divorced and widower 3%. Majority of the construction workers interviewed were married (66%), followed by single (31%) and divorced / separated (3%) respectively. During FGDs with men, women and youth groups, majority of FGDs participants were married (68%), followed by single (29%), divorced (1.5%) and widower (1.5%).

3.1.2 Household Respondents and Construction Workers level of Education

Most of the household respondents interviewed had primary level of education (56.1%), followed by no education (26.8%), secondary (16.8%), college/university (3.8%) and vocational school (1.1%). Majority of construction workers had college / university level of education (67.5%), followed by secondary (22.5%), primary (5%) and vocational school (2.5%). During FGDs with men, women and youth groups, most of the FGD participants had primary level of education (50.7%), followed by no education (29.2%), secondary (15.4%), and

college/university (4.6%) respectively.

3.1.3 Age Distribution of the Respondents

The average age of the respondents was 35 years, minimum 18 years and a maximum of 75 years. During FGDs with men, women and youth groups, the average age of the participants was 38 years, minimum 17 years and a maximum of 80 years while the average age of the construction workers was 31 years, minimum 21 years and a maximum of 60 years.

3.2 HOUSEHOLDS RESPONDENTS AND CONSTRUCTION WORKERS KNOWLEDGE ABOUT HIV/AIDS

This section presents the findings on knowledge about HIV/AIDS among household respondents and construction workers.

3.2.1 Household Respondents and Construction Workers who have ever heard of HIV/ AIDS

Nearly all household respondents (99.2%) had heard of HIV/AIDS, while 97.5% of the construction workers had heard of HIV/ AIDS. During Focus Group discussions with men, women and youth, all participants (100%) mentioned they had heard about HIV and AIDS.

3.2.2 Knowledge of Household Respondents about HIV/AIDS

Correct knowledge on HIV/AIDS was generally high (81%) among household respondents for instance: a person can become HIV infected by practicing unprotected sex (91%), HIV cannot be transmitted by using common dishes (81%), HIV can be transmitted from mother to child (during pregnancy or birth) (75%) and HIV cannot be transmitted by shaking hands (91%). Other correct knowledge includes: HIV can be transmitted through blood transfusion or infected blood products (91%), a person can reduce the risk of becoming infected with HIV by having one faithful sexual partner who is not infected with HIV (91%), a person can become infected with HIV by having unprotected sex with someone who looks absolutely healthy (91%),

among others (Table 1).

During focus group discussions with men, women, and the youth, correct knowledge on HIV/ AIDS was found generally high among them. The modes of HIV transmission were well captured in the narrative of an 80-year-old man. ***“HIV is not gotten by stepping on something, you have to look for it, through sex.”*** (Men FGD participant Mwanduri village).

HIV/AIDS knowledge was high especially among the men and the youth. Men displayed higher knowledge of HIV/AIDS as they mentioned more correct ways of transmission including blood transfusion with contaminated blood and from HIV infected mother to child. However, there was lack of some basic factual information on how HIV is transmitted and prevented. For example, among the women, there was misconception that one could get HIV through sharing a bathing soap while among the men, there was fear that a mosquito could transmit HIV.

In all the groups, knowledge of mother to child transmission of HIV was mentioned. Majority mentioned hospital delivery despite this being low and most participants also did mention breast feeding. It was however clear that majority did not have factual information on HIV prevention from infected mother to child. “Exclusive breast feeding” or alternative feeding practices was found to be lacking. Also, only one man and one youth who had knowledge of ARVs as prevention of HIV transmission from mother to child and Pre-Exposure Prophylaxis (PrEP) use for HIV negative people respectively (Table 1).

3.2.3 Knowledge of Construction Workers about HIV/AIDS

Correct knowledge on HIV/Aids was generally high (87%) among construction workers for instance: a person can become HIV infected by practicing unprotected sex (95%), HIV cannot be transmitted by using common dishes (83%), a person can reduce the chance of becoming infected by using condoms during sexual intercourse (100%) and HIV cannot be transmitted by coughing (90%). Other correct knowledge found includes that a person can reduce the risk of becoming infected by using condoms during sexual intercourse (100%), HIV can be transmitted through blood transfusion or infected

blood products (100%), a person can reduce the risk of becoming infected with HIV by having one faithful sexual partner who is not infected with HIV (94%) and a person can become infected with HIV by having unprotected sex with someone who looks absolutely healthy (85%), among others. However, 45% of construction workers incorrectly mention that HIV can be transmitted by kissing (Table 2), among others.

3.2.4. Household Respondents and Construction Workers Sources of HIV/AIDS Information

Most of the household respondents interviewed mentioned their main source of information on HIV/ AIDS as from mass media (42%), followed by friends / neighbours (25%), family doctor (15%), family members (11%), others (4%) and at workplace (3%) . Most of the construction workers interviewed mentioned their main source of information on HIV/AIDS as from mass media (46%), followed by friends / neighbours (16%), at workplace (14%), family doctor (9%), family members (9%) and others (7%).

3.2.5. Household Respondents and Construction Workers Best /Preferred Sources of HIV/ AIDS Information

Majority of the household respondents interviewed mentioned their best / preferred source of information on HIV/ AIDS as from mass media (55%), followed by family doctor (24%), others (8%), friends / neighbours (7%), family members (2%) and at workplace (1%). Most of the construction workers interviewed mentioned their best / preferred source of information on HIV/ AIDS as from health worker (35%), bill boards (25%), work place health talk (21%), SMS (11%), colleague (5%) and partner/spouse (4%).

3.3. HOUSEHOLD RESPONDENTS AND CONSTRUCTION WORKERS ATTITUDES TOWARDS HIV/AIDS

This section presents the findings on attitudes towards HIV/ AIDS among household respondents and construction workers.

Table 1: Knowledge of Household Respondents about HIV/AIDS

Question	Yes	No	Don't Know	No response	Total
Can a person become HIV infected by practicing unprotected sex?	91 %	2%	6%	1%	100%
Can HIV be transmitted by using common dishes?	9%	81%	10%	0%	100%
Can HIV be transmitted from mother to child (during pregnancy or birth)?	75%	12%	12%	1%	100%
Can HIV be transmitted by shaking hands?	4%	91%	5%	0%	100%
Can HIV be transmitted through blood transfusion or infected blood products?	91%	4%	5%	0%	100%
Can HIV be transmitted by kiss?	22%	56%	22%	0%	100%
Can HIV be transmitted by using non sterile needles or other non-sterile medical equipment?	94%	2%	3%	1%	100%
Can HIV be transmitted through breast milk?	82%	9%	9%	0%	100%
Can HIV be transmitted by coughing?	10%	77%	13%	0%	100%
Can HIV be transmitted by sharing needles?	92%	5%	2%	1%	100%
Can HIV be contracted through sweat?	9%	72%	18%	1%	100%
Can HIV be transmitted by sharing one toilet?	85%	7%	8%	0%	100%
In your opinion, can a person reduce the chance of becoming infected by using condoms during sexual intercourse?	76%	12%	12%	0%	100%
Do you think a person that looks absolutely healthy could be infected with HIV?	71%	11%	18%	0%	100%
Can a person reduce the risk of becoming infected with HIV by having one faithful sexual partner who is not infected with HIV?	91%	4%	5%	0%	100%

Table 2: Knowledge of Construction Workers about HIV/AIDS

Question	Yes	No	Don't Know	No response	Total
Can a person become HIV infected by practicing unprotected sex?	95 %	5%	0%	0%	100%
Can HIV be transmitted by using common dishes?	10%	83%	3%	4%	100%
Can HIV be transmitted from mother to child (during pregnancy or birth)?	73%	20%	5%	2%	100%
Can HIV be transmitted by shaking hands?	0%	98%	0%	2%	100%
Can HIV be transmitted through blood transfusion or infected blood products?	100%	0%	0%	0%	100%
Can HIV be transmitted by kiss?	45%	45%	8%	2%	100%
Can HIV be transmitted by using non sterile needles or other non-sterile medical equipment?	90%	8%	2%	0%	100%
Can HIV be transmitted through breast milk?	78%	8%	13%	1%	100%
Can HIV be transmitted by coughing?	5%	90%	3%	2%	100%
Can HIV be transmitted by sharing needles?	98%	0%	2%	0%	100%
Can HIV be contracted through sweat?	8%	80%	8%	4%	100%
Can HIV be transmitted by sharing one toilet?	3%	88%	5%	4%	100%
In your opinion, can a person reduce the chance of becoming infected by using condoms during sexual intercourse?	100%	0%	0%	0%	100%
Do you think a person that looks absolutely healthy could be infected with HIV?	93%	7%	0%	0%	100%
Can a person reduce the risk of becoming infected with HIV by having one faithful sexual partner who is not infected with HIV?	93%	7%	0%	0%	100%
Can a person reduce the risk of becoming infected with HIV by always using sterilized injecting equipment?	92%	1%	6%	1%	100%
In your opinion, can a person reduce the chance of becoming infected by using condoms during sexual intercourse?	100%	0%	0%	0%	100%
Can an HIV positive pregnant woman prevent her unborn child from becoming infected by taking ARV treatment during pregnancy?	68%	13%	18%	1%	100%
In your opinion, can a person become infected with HIV by having unprotected sex with someone who looks absolutely healthy?	85%	5%	8%	2%	100%

3.3.1 Household Respondents Attitudes towards HIV/AIDS

Half of the household respondents agree that it is uncomfortable to discuss about condom use with their sexual partner (52 %). Most of the household respondents agree with the opinion that purchasing a condom would intimidate them (62%) while 45% agree with the opinion that condom use is acceptable by the majority people of their age (Table 3).

3.3.2. Household Respondents and Construction Workers opinion towards HIV/AIDS

60.3% of the household respondents opinion towards HIV/ AIDS mentioned it as being a shame, followed by it's not a shame (37.8%), do not know (1.1%) and no response (0.8%). Majority of the construction workers opinion towards HIV/AIDS mentioned it as not being a shame (72.2%), followed by it was a shame (11.1%), do not know (8.3 %) and no response (8.3%) .

Table 3. Household Respondents Attitudes towards HIV/AIDS

Opinion	agree	disagree	Don't Know	No response	Total
It is uncomfortable to discuss about condom use with the sexual partner.	52%	33%	9%	6%	100%
Purchase of a condom would intimidate me.	62%	27%	7%	4%	100%
Condom use is acceptable for the most people of my age.	45%	25%	25%	5%	100%

Table 4: Household Respondents Attitudes towards people with HIV/AIDS

Attitude	Yes	No	Don't Know	No response	Total
Would you work with an HIV positive colleague in the same office?	95%	3%	10%	1%	100%
Would you use a common toilet with an HIV positive colleague?	92%	5%	3%	0%	100%
Would you have lunch at the same canteen your HIV positive colleague goes?	92%	4%	2%	2%	100%
Would you share a room with someone HIV positive?	86%	10%	2%	2%	100%
Would you shake hands with someone HIV positive?	93%	6%	1%	0%	100%
Would you buy food from an HIV positive retailer?	85%	11%	2%	2%	100%
Do you think an HIV positive teacher should work in school?	84%	9%	6%	1%	100%

3.3.3. Household Respondents Attitudes towards People with HIV/AIDS

Positive attitude towards HIV/ AIDS was generally high among the household respondents at (89.6%). Majority of the household respondents mentioned they would work with an HIV positive colleague in the same office (95%), 92% would use a common toilet facility with an HIV positive colleague and 92% said they would have lunch at the same canteen where an HIV positive colleague goes. Most of the household respondents said they would share a room with someone who is HIV positive (86%), they would shake hands with someone who is HIV positive (93%), they would buy food from a HIV positive retailer (85%) and they think a HIV positive teacher should work in a school (84%) (Table 4).

3.3.4. Construction Workers Attitudes towards people with HIV/AIDS

Positive attitude towards HIV/AIDS was generally high among the construction workers (86.4%). 88% of the construction workers said they would work

with a HIV positive colleague in the same office, 80% said they would use a common toilet with a HIV positive colleague and 90% said they would have lunch at the same canteen where a HIV positive colleague goes.

Majority of the construction workers said they would share a room with someone who is HIV positive (80%), 90% would shake hands with someone who is HIV positive and 85% said they would buy food from a HIV positive retailer. Majority of the respondents think HIV positive teacher should work in school (95%).

83% of the construction workers mentioned they would not dismiss a worker from their enterprise if it was known that he / she was HIV positive while 85% mentioned they would not deny a worker at their enterprise promotion, salary increases, training or other career development opportunities, if he / she was HIV positive. 88% of the construction workers on behalf of company management mentioned they have not heard of any cases of discrimination of HIV positive co-workers (Table.5).

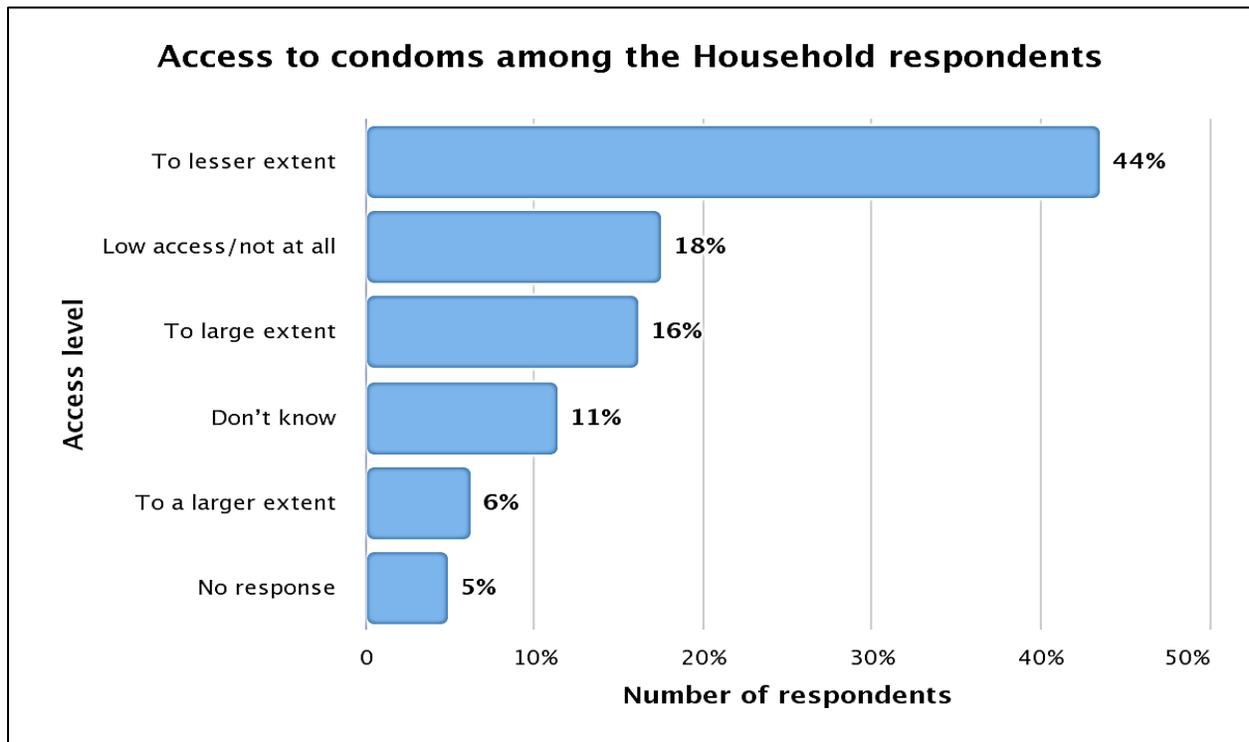


Figure 1: Access to Condoms among Household Respondents

Table 5: Construction Workers Attitudes towards people with HIV/AIDS

Attitude	Yes	No	Don't Know	No response	Total
Would you work with an HIV positive colleague in the same office?	88%	3%	0%	9%	100%
Would you use a common toilet with an HIV positive colleague?	80%	5%	3%	12%	100%
Would you have lunch at the same canteen your HIV positive colleague goes?	90%	3%	0%	7%	100%
Would you share a room with someone HIV positive?	80%	5%	5%	10%	100%
Would you shake hands with someone HIV positive?	90%	2%	0%	8%	100%
Would you buy food from an HIV positive retailer?	85%	3%	12%	0%	100%
Do you think an HIV positive teacher should work in school?	95%	3%	0%	2%	100%
In your opinion, would a worker from your enterprise be dismissed if it was known that he/she is HIV positive?	0%	83%	17%	0%	100%
In your opinion, would a worker at your enterprise be denied in promotion, salary increases, training or other career development opportunities, if he/she was HIV positive?	3%	85%	12%	0%	100%
Since you work for this company, have you heard of any cases of discrimination of HIV positive co-workers on behalf of company management?	3%	88%	8%	1%	100%

3.4 HOUSEHOLD RESPONDENTS PRACTICES ON HIV/AIDS

3.4.1. Household Respondents and Construction Workers Willingness to Care for family member with HIV/AIDS

All the household respondents (97.6%) said they were willing to care for a family member with HIV/AIDS while only 2.2 % were not. Majority of the construction workers (94.4%) said they would be

willing to care for a family member with HIV/ AIDS while the rest (5.6 %) did not respond.

3.4.2. Household Respondents and Construction Workers confidentiality on household members with HIV/AIDS

Majority (77%) of the household respondents interviewed mentioned they would keep confidentiality about their household members with HIV/AIDS while 18% mentioned they would not.

Most (56%) of the construction workers interviewed mentioned they would keep confidentiality about their household members with HIV/AIDS while 19% mentioned they would not, 19% did not respond and 6% didn't know.

3.4.3. Household Respondents and Construction workers preferred person to disclose HIV status

Household respondents preferred disclosing their HIV status to their spouse (32%), doctor (27%), parents (23%), co-worker (7%), would not tell anybody (5%), friends (4%). Construction workers preferred disclosing their HIV status to their parents (28%), spouse (27%), doctor (25%), would not tell anybody (7%), friends (7%), no response (5%) and don't know (2%).

3.4.4. Access to condoms among Household Respondents

Most household respondents said they have at least access to condoms (44%), low access / not at all to condoms (18%), to large extent (16%), don't know (11%), larger extent (6%) and no response (5%) (Figure 1).

3.4.5. Household Respondents who have taken a HIV test over the past 12 months

Slightly more than a half (51.6%) of the household respondents mentioned they had taken a HIV test over the past 12 months while 46.8% have not

and 1.6% did not respond. Most (66.7) of the construction workers mentioned they had taken a HIV test over the past 12 months while 30.6% have not and 2.8% did not respond.

3.4.6. On whose wish Household respondents and Construction workers took a HIV test

Majority of the Household respondents took a HIV test on their own wish (74.9%), on doctor's request (22.5%) and on someone's advice (2.6%). Majority of the Construction Workers took a HIV test on their own wish (83.3%), on doctor's request (8.3%) and on someone's advice (8.3%).

3.4.7. Household Respondents HIV/ AIDS Prevention Practices

Only 13% of the household respondents mentioned of having used a condom at their last sexual intercourse while the majority 81% did not use while 6% did not respond. Majority of the household respondents reported they would be willing to take a repeat HIV test (73%). Majority of the household respondents (83%) mentioned that it is possible to take the HIV test in their town/city. Half of the household respondents (50%) had signed an agreement confirming their consent to take the HIV test while 47% did not. Majority of the household respondents (88%) mentioned they had benefited from the pre-test counseling before taking a HIV test. Majority of the household respondents (97%) mentioned they were aware of their HIV test result and were informed on the test results in person (97%) (Table 6).

Table 6: Household Respondents HIV/AIDS Prevention Practices

Practices	Yes	No	No response	Total
Would you take the HIV test/repeat the HIV test?	73%	17%	11%	100%
Is it possible to take the HIV test in your town/city?	83%	11%	5%	100%
Did you sign an agreement confirming your consent to take the HIV test?	50%	47%	3%	100%
Before testing did you benefit from the pre-test counseling?	88%	12%	0%	100%
We are not interested in the result, but are you aware of your HIV test result?	97%	2%	1%	100%

Have you been informed on test results in person?	97%	3%	0%	100%
After taking the HIV test, did you benefit of post-test counseling?	78%	22%	0%	100%

3.4.8. Reasons why Household Respondents and Construction Workers won't take a HIV test

The Household Respondents mentioned the following reasons as to why they would not take an HIV test., they thought they were healthy (46%), do perceive themselves as at risk of getting HIV (23%) , and being afraid of the test results (19%), fear being discriminated at the workplace (1%), and afraid the doctors will not keep confidentiality (1%).The construction workers mentioned the following reasons as to why they would be unwilling to take an HIV test, Do not perceive themselves at risk of getting HIV(14%), I think am healthy (14%) and 71% did not respond respectively.

3.4.9. Possible places to take a HIV test for the household respondents and construction workers

Majority of the household respondents mentioned possible places to take a HIV test as at the hospital (71%), followed by Family doctor (11%), VCT centres (11%) and private medical institution (5%).About half of the construction workers mentioned possible places to take a HIV test as the VCT centers (51%) followed by hospital (29%), Family doctor (7%), private medical institution (7%) and other (5%).

3.4.10. Distance Covered by Household Respondents and Construction Workers to get a HIV test

Most Household respondents mentioned they needed to cover up to 5km to get an HIV test (48%), 6-10 km (12%), 11-20 km (7%), and more than 20Km (7%). 25% of construction workers needed to cover more than 20 km to get an HIV test, 25% needed to cover 6-10 km and 50% did not respond . During Focus group discussions with men, women and youth, majority of the participants mentioned that HIV services are far and there is need to improve access by bringing them near to the community. *"We cover 6-16 km to seek for services and the cost of travel by bodaboda are exorbitant"*. Men FGD participant Chidunguni village.

3.4.11. Household Respondents who have received information about HIV/AIDS awareness in the last six months

Majority of the household respondents (74.1%) reported of not having had any information on awareness campaign about risky behaviour for HIV infection conducted in the last six months while only 22.4% had.

3.4.12. Construction Workers have received HIV/ AIDS education/ training in the last 6 months

Most of the construction workers (63.9%) reported of not receiving any education/ training on HIV/ AIDS in the last six months while only 22.2% had and 13.9% did not respond.

3.4.13. Extent of Household Respondents Awareness of Risky Behavior for HIV Infection

Most household respondents said they were aware of risky behaviour for HIV infection to some extent (42%), well aware (38%), not aware (10%), very aware (5%) and no response (5%).

3.4.14. Household Respondents Necessity of HIV/AIDS Care Support Services

Majority of the household respondents mentioned HIV/ AIDS care support services as being very necessary (69%), to some extent necessary (21%), don't know (7%), no response (2%) and not at all necessary (1%). During focus group discussions with men, women and youth, majority of the participants mentioned that HIV/AIDS care support services were very necessary.

3.4.15. Household Respondents Satisfaction of Services offered at the Health Facility

Household respondents were satisfied with the services offered at the health facility to a lesser extent (47%), a large extent (27%), no response (16%) and not at all (10%).

3.4.16. Household Respondents Necessity of HIV/AIDS Care Support Services

Majority of the household respondents mentioned HIV/AIDS care support services as being very necessary (68.9%), to some extent necessary (21.4%), don't know (7%), no response (1.6%) and not at all necessary (1.1%).

3.4.17. Construction Workers Possibility of getting HIV Care and Support Services at work place

Majority of the construction workers mentioned that it was possible (75%) to get HIV care and support services at work place including treatment, no response (15 %), not possible (8%) and not really possible (3%) .

3.4.18 Construction Workers Agreement on Workplace Condition that ensures Non-Discrimination of HIV positive people

25% of construction workers partially agreed that there should be condition at workplace that ensures non - discrimination of HIV positive people, 25% totally agree, 25% don't know, 15% no response and 10% totally disagree.

3.4.19. Construction Workers Possibility of getting information about available VCT services at work place

Majority of the construction workers (75%) mentioned it was possible to get information about available VCT services at work place, 18% did not respond and 8% said it's not possible.

3.4.20 Construction Workers Agreement that the Company Pays Special Attention to inform its employee about HIV/ AIDS issues

40% of construction workers totally agreed that the company pays special attention to inform its employees about HIV/AIDS issues, 15% totally disagree, 13% no response, 13% don't know, 15 %

partially agree and 5% partially disagree.

3.4.21. Construction Workers Company that has a HIV Workplace Policy

30.6 % of construction workers mentioned that their company has a HIV workplace policy, 30.6% didn't know, 27.8% said there was no policy and 11.1% did not respond.

3.4.22. Construction Workers Knowledge of the content of the HIV Workplace Policy

45% of construction workers were very informed about the content of the HIV workplace policy, 36% were informed to a certain extent and 18% didn't response.

3.4.23. Construction Workers Necessity of an Employer based HIV/AIDS Workplace Policy

Half (50%) of the construction workers mentioned it was very necessary to have an employer based HIV/AIDS workplace policy, to some extent necessary (23%), no response (13%), don't know (10%) and not at all necessary (5%).

3.4.24. Construction Workers Awareness that the company doesn't infringe the right of HIV positive people

42% of construction workers totally agreed that the company doesn't infringe the right of HIV positive people, 25% don't know, 14% no response, 8% partially agree, 8% totally disagree and 3% partially disagree.

3.4.25. Components of HIV/AIDS Workplace Policy Mentioned by Construction Workers

The components of HIV/AIDS workplace policy mentioned by construction workers were education on HIV prevention (21%), supporting in training HIV positive (15%), distribution of information (12%), confidentiality of medical report (9%), no mandatory HIV testing for workers (6%), non - discrimination of HIV positive people, and no job termination for HIV people (3%).

3.4.26. Household Respondents and Construction Workers sex experience

Majority of the household respondents (87.3%) said

they have had sexual intercourse while 10.8 % refused to answer, and only 1.9 % had not had any sexual intercourse. Majority of the construction workers (95%) have had sexual intercourse while the rest (5%) refused to answer.

3.4.27. Number of Sexual Partners Household Respondents and Construction Workers has

Majority of the household respondents had one sexual partner (78%), more than one sexual partner (16.1%), no sexual partner (3.1%) and no response (2.8%). Slightly more than a half (55.3%) of construction workers had one sexual partner and the rest (44.7%) had more than one sexual partner.

3.4.28. Household Respondents and Construction workers frequency of use of condoms over the last 12 months

Majority of the household respondents had never used condoms over the last 12 months (70%), sometimes used condoms (18%), used condoms at every sexual intercourse (9%), refused to answer (2%) and had no sexual intercourse in the last 12 months (2%). 39% of the construction workers had never used condoms over the last 12 months, sometimes used condoms (34%), used condoms at every sexual intercourse (24%) and refused to answer (3%).

3.4.29. Household respondents and construction workers who used condoms on their last sexual intercourse

Only 13.4% of the household respondents reported having used condoms in the last sexual intercourse while 80.7% did not and 5.9% refused to answer. 36.8% of construction workers used condoms in the last sexual intercourse while 60.5% did not and 2.6% refused to answer.

3.4.30. Household Respondents reasons for not using condoms

Reasons why household respondents did not use condoms during their last sexual intercourse were they trusted their partners (70%), I don't want to use condoms (9%), didn't have condoms with them (5%), want to have children (4%), partner refused to use it (3%), no response (2%) and other (2%).

During the focus group discussions with men,

women and youth groups, all the groups' participants had knowledge on the methods of protecting themselves from HIV infection and mentioned condom use as a way of HIV protection. However, the practices were diverse for all the groups.

For example, in one FGD of twelve women, no single woman disclosed having ever used a condom while in the second FGD of twelve women, only two disclosed to ever having used condoms but for family planning purposes only.

Men were open about use of condoms. Majority had used condoms during sex with casual partners with two not reporting ever having used condoms. The men however did say that the information shared in the FGD about condom use should not be disclosed to their spouses. An elderly man was however frowning as the men discussed freely about condom use. Men disclosed that they had purchased condoms from a shop / chemist while women and youth mentioned health facility as their main source.

The youth proposed that condoms access should be made available in more youth friendly ways and locations. For example, one youth did emphasize this by saying:-

"There are condoms provided by the China construction company but this is accessible only to their employees". Youth group participant, Mkumbi Village.

One participant among the men felt condom use has contributed in fueling the epidemic while both in the men and youth FGDs, two participants thought they and their women would not prefer sex with condoms as they are not fun as it reduces sexual pleasure and satisfaction.

This was captured in the emphasis in the narrative by one man and one of the youths who said

"Having sex with a condom is like eating sweets with a wrapper on". Men group participant Mwanduri village and Youth group participant, Tsunza village.

Misconceptions on HIV transmission however came as found as one respondent from the men wanted to know why a mosquito could not transmit HIV after sucking blood from a HIV infected individual. One

youth also had issues with the quality of condoms as a HIV protective device captured in his thinking aloud rhetoric

“I Read somewhere that condoms have holes and HIV can just sieve through and get one infected with HIV.”

Clarification on quality of condom and HIV transmission were however made and different examples on other social ways in which HIV cannot be transmitted were provided.

“Condom disposal after use is concern”. “It has been observed that children picked up used condoms for their use as balloons”. Men group participant Mwanduri village.

3.4.31. Construction Workers Reasons for not using condoms in their last Sexual Contact

Reasons why construction workers did not use condoms during their last sexual intercourse were that trusted their partners (38%), thought it was not necessary (22%), did not want to use condoms (16%), I use other contraceptive (6%), Didn't have a condom with me (6%), want to have children (3%), partner refused to use it (3%), partner refused to use it (3%) and other (3%).

4. DISCUSSION

Knowledge, attitudes and practices (KAP) studies are very useful tools prior to any intervention to assess the extent to which individuals or communities are ready to adopt risk-free behaviors, National AIDS Control Committee Central technical Group (9). In this study, literacy level was found to be among the construction workers (90%) and very low among the community members (78.4%). This suggests that with higher education level among construction workers, they are more capable of educating themselves by proactively seeking information on HIV/AIDS from multiple sources and therefore more capable of understanding the information they obtain. These findings are consistent with those of Samsul *et al.*, (10). There is a low level of literacy, general unemployment and low-income levels among community study

participants which may increase HIV vulnerability in the community at large.

Results from this study show that the correct knowledge on HIV/AIDS for both construction workers and household respondents was very high (87 %) and 81% respectively. The modes of HIV transmission were well captured during FGDs where an 80-year-old man said ***“HIV is not gotten by stepping on something, you have to look for it, through sex.”*** Comparing with the report of Thanavanh *et al.*, (11) in which 46.3 % had high levels of knowledge and 22.4 % had poor knowledge, this study participants were better informed about HIV/AIDS. However, 45% of construction workers incorrectly mentioned that HIV could be transmitted by kissing. During FGDs with women group members, there was misconception that one could get HIV through sharing a bathing soap. In a FGD with youth and men there was a perception that one could get HIV through a mosquito bite.

Further, correct information is crucial to knowledge acquisition about any behavior change intervention, including HIV/AIDS. Both construction workers and household respondents interviewed mentioned their main source of information on HIV/AIDS as mass media, 46 % and 42% respectively. However, construction workers prefer to get information on HIV/AIDS from health workers (35%) while household respondents from mass media (55%). These findings are similar to those of Bamise *et al.*, (12) who reported the media (Television, 76.9 %; radio, 75.5 %; newspapers/handbills, 74.4 %) as major sources of information on HIV/AIDS to secondary school adolescents in Nigeria. These results are also inconsistent with those of studies on Children, Teens, and Entertainment Media (13) which showed that low percentages of the media outlets as sources of information directed towards young people directly indicated that the media may not be the primary channel to use for any intervention on HIV/Aids targeting adolescents.

Positive attitude towards HIV/AIDS was generally high for both construction workers (86.4%) and household respondents (89.6%). However, attitude towards condom use was varied. Although majority

(79%) mentioned that use of condom as absolutely necessary if one has a sexual relation with an occasional partner, most of them (62%) agreed that purchase of a condom would intimidate them and was uncomfortable to discuss about condom use with their sexual partner (52%). The study found out that condoms use was low. For instance only 13.4 % of the household respondents and 36.8% of construction workers used condoms in the last sexual intercourse. The main reasons for not using condoms in their last sexual intercourse was they trusted their partners, didn't want to use a condom, didn't have a condom and partner refused to use a condom. These findings are consistent with those of National AIDS and STI Control Programme (NAS COP) (14) where majority of the respondents of the KAP saw themselves as having low risk or no risk at all especially where they had one sexual partner. Condom use is low even among persons with more than one partner and even with the upward trend. During focus group discussions, women and youth were shy in discussing condom use.

During focus group discussions, youth and men groups' participants mentioned that access to condoms is limited, especially on youth friendly places. Condom disposal after use was raised as a big concern. ***"It has been observed that children picked up used condoms for their use as balloons"*** (Men group participant Mwanduri village).

On practices about HIV/AIDS this study also found out that 66.7% of construction workers and 51.6% of the household respondents had taken a HIV test over the past 12 months. These figures are lower than those set by National Ministry of Health. Kenya is strongly committed to the Joint United Nations Programme on HIV/AIDS (UNAIDS) targets for ending the AIDS epidemic, where by 2020, 90% of all persons living with HIV should know their HIV status; 90% of all persons diagnosed with HIV should receive antiretroviral therapy (ART); and 90% of all persons receiving ART should have suppressed viral loads. Those who didn't take a HIV test gave reasons that they thought they are healthy, they don't feel like they have a risk situation and being afraid of the test results. Access to HIV testing services was seen as a challenge as most people

mentioned they cover long distances to obtain them.

5.0 CONCLUSION

It can be concluded from this study that community members and construction workers respondents have a high level of knowledge on HIV/AIDS. However, the attitudes among the two groups were found to be varied (positive and negative). Similarly, practices were also varied with some risk taking and protective behaviors being found to exist among the two categories of the study participants.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interests regarding the study or this article.

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