

## Community knowledge, attitude and practice towards Sexually Transmitted Diseases and HIV infection in Biharamulo and Muleba districts in Kagera Region, Tanzania

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**Abstract:** The study was conducted to determine knowledge, attitude and practice towards Sexually Transmitted Diseases and HIV infections among communities in Biharamulo and Muleba districts, Kagera Tanzania. A total of 915 study participants were recruited and most of them (96.3%) knew that there are diseases which could be transmitted through sexual contact. Seventy one percent of participants thought STDs could be acquired through sharing a towel while fifty percent thought HIV could be transmitted through insect bites. Eighty five percent of school pupils who participated in the study reported to have been taught about AIDS and less than 30% on sex and pregnancy. Sixty three percent of study participants were of the opinion that a girl or woman should not refuse to have sex after being given a gift, and having sex with an elder partner was thought to be acceptable by almost fifty percent of participants. Over 50% percent of interviewees thought a girl or woman should not refuse to have sex with their friends. Although 99% of interviewees reported to have ever heard about condoms, only 28% reported to have ever used them irrespective of been affordable. Most schoolboys and about 50% of schoolgirls reported to have experienced sex by the time of the study. Thirty eight percent of girls reported to have first sex at the age of 14 years. Nine percent of the participants who reported to have experienced sex were forced to do so. Knowledge regarding STDs and HIV/AIDS was high among participants, but a sizeable proportion report misconception on transmission of STDs/HIV such as through sharing a towel and insect bites. Therefore it is recommended that S&RH intervention programme should address these misconceptions in order to match knowledge and practice, and achieve the intended objectives.

**Key words:** HIV, AIDS, STDs, Tanzania

### Introduction

The Human Immunodeficiency Virus (HIV) epidemic continues to pose one of the most serious public health problems in most of the developing world. In Sub-Saharan Africa HIV/Acquired Immunodeficiency Syndrome (AIDS) is currently the leading cause of adult mortality. It is estimated that the prevalence of HIV infection in those aged between 15 to 49 years in Sub-Saharan Africa ranges from 9% to 26% (Ayres & Binswanger, 1999). It is increasingly suggested that AIDS is not only a medical problem but a social phenomenon as well (Velimirovic, 1987). Moreover, Sexually Transmitted Diseases (STDs) which have been associated with increased rate of HIV transmission are also common in Sub-Saharan Africa (Mayaud *et al.*, 1995, Mayaud *et al* 1997, Mosha *et al* 1993).

In Tanzania the first three cases of AIDS were reported in Kagera Region in 1983. Since then, the HIV epidemic has continued to grow at different rates in different parts of the country and by 1995, a total of 7064 AIDS cases were reported in Kagera Region. In the same year Mwanza and Shinyanga Region, which are close to Kagera Region, had 5858 and 3215 AIDS cases respectively (MoH, 1995). Moreover, other STDs such as syphilis are also common in Tanzania (Mosha *et al.*,1993). Since the establishment of STDs as co-factors which facilitate the transmission of HIV (Plummer *et al.*,1991), the HIV epidemic has been associated with high STD prevalence, mobility and socio-cultural disintegration especially in urban areas, refugee camps and in mining areas. Higher HIV prevalence have been reported in urban and roadside settlements rather than rural areas (Barongo *et al.*,1992). Moreover, population

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movement as a result of civil wars causes family and social disintegration, dependency and poverty (Mayaud *et al.*, 1997). These human migrations not only make access to medical services difficult, but also favours risk behavior such as frequent changes of sexual partners and unsafe sexual practices. These factors increase the probability of STD/HIV transmission and occurrence of Reproductive Health related problems including unintended pregnancy and unsafe illegal abortions.

Among the strategies for the control of the HIV epidemic include the control of STDs, which have been associated with increased susceptibility to infectiousness of HIV. It has been reported that early detection and effective treatment of STDs has a significant impact in reducing transmission of HIV (Grosskurth *et al.*, 1995). Other control strategies have focused on behavior change through health education. The strategies include advocating delayed sexual debut, abstinence, reduction of the number of sexual partners or promotion of safer sex including use of condoms and masturbation. However, for health education intervention to be effective and relevant, information on knowledge, attitude and practices of the targeted communities regarding S&RH issues including STDs and HIV is of utmost importance. Therefore this study was conducted in order to determine knowledge, attitude and practices towards STDs and HIV infection among residents of three divisions of Biharamulo and Muleba districts, in North - Western Tanzania.

## Materials and Methods

### *Study area and population*

Biharamulo (2°40'S; 31°49'E) and Muleba (2°00'S; 31° 30'E) districts lie on Lake Victoria Basin and Located in northwestern Tanzania. Study participants were recruited from Chato and Ilemela wards in Biharamulo and Kimwali and Mazinga wards in Muleba. The main occupations of the inhabitants of the four wards are subsistence farming, fishing, and employment at the cotton ginning factory and petty business. Chato ward is sub-divided into four villages with

a total of 24 sub-villages (Kitongoji). The sub-villages selected for the study were two for Nyambogo, and three each for Ilemela, and Kanyama village. In Kimwani ward, Nyakabango village with six sub-villages was visited and three sub-villages were selected for the study. In Mazinga ward, Ikuza village, which is an island with a total of 7 sub-villages, was visited and three sub-villages were selected for the study. The sub-villages in each village were listed and randomly selected. A list of all people aged between 15 and 55 years in each of the selected sub-village were listed by sub-village leaders. From the sub-villages lists, random selection of individuals was done in order to obtain 100 study participants per village.

### *Data collection*

A day before meeting with study participants sub-village leaders visited the randomly selected households and informed all members living in those households to meet at common the place. School children were told to attend school as usual because specific days were set for visiting the selected schools. Study participants were informed on the purpose of the study and were given choice on whether to participate or not. Oral informed consent to take part in the study was obtained from all study participants. The community based KAP questionnaire survey was done at pre-determined central place for each sub-village. Interviewers administered structured questionnaire in order to collect data from study participants. The questionnaire mainly consisted of close-ended questions and was pre-tested before being used in the field. Because of the sensitive nature of S&RH issues a male member of the research team interviewed male participants, likewise a female member of the research team interviewed female participants.

### *Data analysis*

Questionnaires were reviewed for completeness and consistency. The coded data were double entered in computer using Dbase IV (Borland International, Scotts Valley, California) and analyzed with EPI-Info 6.0 and STATA version 4 Software.

**Table 1: Knowledge of sexually transmitted Diseases and HIV among study participants by age groups**

Age groups	15-25 N=348	26-35 N=306	36-45 N=170	46-55 N=84	55+ N=7	P- Values
Gonorrhoea	64.4%	80.1%	77.7%	76.2%	28.6%	0.000
Syphilis	67.2%	82.0%	75.9%	72.6%	57.1%	0.002
HIV	89.9%	87.6%	87.7%	85.7%	42.9%	0.161
Herpes	2.6%	2.3%	2.9%	4.8%	14.3%	0.137
GDS	3.7%	4.3%	8.2%	9.5%	0%	0.060
GUS	3.5%	7.8%	5.9%	9.5%	0%	0.081
PID	0.3%	1.3%	1.8%	1.2%	0%	0.527
Bloody urine	7.2%	3.6%	5.3%	10.7%	14.3%	0.046

Key: GDS = Genital Discharge Syndrome; GUS = Genital Ulcer Syndrome; PID = Pelvic Inflammatory Disease

## Results

### *Socio-demographic characteristics*

A total of 915 study participants (491(53.7%) males and 424(46.3%) female) were recruited and interviewed from eight villages namely Chato, Lubambangwe, Bwina, Itare, Ilemela, Kanyama, Nyambogo, and Ikuza. Most (75%) of the individuals were in the 15 – 35 years age group. While 64% of participants reported to have attained education of between standard five and seven, 18% reported to have never been to school. The majority of the respondents were Christians (79.3%) and of the Sukuma tribe. The major occupation was subsistence farming, but fishing was also an important occupation for lakeshore and island communities. The majority of study participants were not born within the study area and about a third of females had moved into the area within the past four years.

### *Modes of transmission of STDs:*

The majority (96.3%) of respondents knew that STDs are diseases which are transmitted through sexual contact. The majority (88%) knew that HIV is one of the STDs. However, a very small proportion of respondents mentioned Herpes, Genital Discharge Syndrome (GDS), Genital Ulcer Syndrome (GUS) and Pelvic Inflammatory Disease (PID) (Table 1). Knowledge of gonorrhoea and syphilis varied significantly between different age groups ( $p < 0.001$  and  $p = 0.002$  respectively.) The proportion of those who knew STDs was lowest for those in the 55+ year age group (Table 1). Most participants knew that HIV, GDS and GUS could be transmitted sexually (Table 2). About forty percent of respondents thought that they could get an STD through sharing a towel. Seventy one percent of participants thought that an HIV infected individual could still look healthy, while 22% thought the individual could

**Table 2: Knowledge on Sexual & Reproductive Health among study participants**

Variables	Response	Males N=491	Female N=424	Total N=915
Condition	Gonorrhoea	74.5%	71%	72.9%
	Syphilis	71.5%	77.4%	74.2%
	HIV	81.3%	95.6%	88%
	Herpes	4.7%	0.7%	2.4%
	GDS	9.2%	0.7%	5.3%
	GUS	10.4%	0.7%	5.9%
	PID	1.0%	0.9%	1.0%
	Bloody urine	10%	1.4%	6%
Transmission of STD	GDS	77.2%	52.6%	65.8%
	GUS	80.2%	66.3%	73.8%
	HIV thro sex	92.9%	99.1%	95.7%
	HIV thro eating	16.3%	15.6%	16%
	STD into towel	44.2%	42%	43.2%
Prevention of STD	Standing	23%	8.5%	16.3%
	Condom	92.7%	90.6%	91.7%
	Abstinence	96.1%	98.8%	97.4%
	Chloroquine	38.3%	19.8%	29.7%
	Contraceptive pills	89.6%	94.1%	91.7%

not look healthy. Although 50% of respondents said one could not get HIV through an insect bite, 40% thought it is possible whereas 10% had no idea at all. The majority of study participants knew that HIV could not be transmitted through sharing clothes. For those who thought HIV could be transmitted through sharing clothes, there were significantly more males than females ( $P=0.002$ ).

#### **Care for AIDS patients and Health Education:**

Sixty five percent of respondents thought the best place for caring HIV/AIDS patients was at health care facility. However, home was the ideal place for care for 34% of the respondents. The preference for home care of HIV/AIDS patients was statistically significantly higher for females than males while the preference for hospital care was significantly higher for men than women ( $p<0.001$ ). Less than one percent of respondents considered traditional healers as the best providers of care for HIV/AIDS patients.

Seventy two percent of respondents knew that one could get pregnant at first sex. A quarter, 25% thought it takes more than one sexual encounter. This opinion was similar between males and females. Over ninety percent of study participants knew that one could avoid getting pregnant by using contraceptive pills, abstinence and condoms (Table 2). However, 30% and 16% of respondents thought one could avoid getting pregnant by taking chloroquine and having sex while standing respectively.

A total of 33 (16 boys and 17 girls) of study participants were pupils. Eighty five percent of them reported to have been taught on AIDS, and less than 30% on sex and pregnancy. Ninety four percent of study participants reported that using a condom could protect an individual from contracting HIV and STDs.

#### **Attitude towards Sexual and reproductive Health (SRH):**

As regard to whether it is acceptable to have sex with an elder partner. 41% agreed, 58% disagreed and 1% of the responding were uncertain. Sixty three percent (574/915) were of the opinion that a girl or a woman should not refuse to have sex after being given a gift. This group comprised 63% male and 37% females. Only 37% of study participants though girls or women should not necessarily have sex after receiving a gift. While 43% and 40% of male and female respondents respectively though girls or women could refuse to have sex with their friends, 56% and 60% of male and female interviewees respectively thought they shouldn't refuse. Eighty percent of study participants thought that the best age for a boy and a girl to practice sex is between 15 to 20 years and 14 to 20 years respectively. Thirty percent of respondents said the best age to have sex is <14 years. These preference was significantly higher for females than males ( $P<0.001$ ). Although most (99%) of study participants reported to have ever heard about condom, only 28% reported to ever used a condom. The difference between males and females who reported use and none use of condoms was statistically significant ( $P<0.001$ ). Of those who reported to ever have used a condom, only 39% used it at first sexual encounter and 36% during the last sexual encounter. The difference between males and females who reported use or non use of condoms during the last sexual intercourse was statistically significant ( $P=0.002$ ).

**Table 3: Type of sexual partner at first and last sex among School children**

Sex with	Male N=15		Females N=8	
	1 <sup>st</sup> sex	Last sex	1 <sup>st</sup> sex	Last sex
Fellow pupil	46.8%	33.3%	05%	37.7%
Same age	40.0%	33.3%	50%	50%
Older person	0%	13.3%	0%	0%
Young person	13.3%	20.0%	0%	0%
Teacher	0%	0%	0%	0%

Thirty three percent of study participants reported that their religious denomination prohibits condom use, and there was no significant difference between males and females ( $p=0.391$ ). Over 60% of respondents reported that the long-term sex partners or husband/wife got irritated when condoms were used. A total of 423 (47%) of study participants believe that women who preferred to use condom during sexual intercourse were prostitutes. This was observed more among males (62%) than females ( $P<0.001$ ). Thirteen percent complained that the cost of condom was high and unaffordable. Majority (74%) of the study participants reported to have easy access to condoms. Half (50%) of participants promised to use condoms in future sexual encounters, 47% were unable to guarantee this and 3% were undecided.

### Sexual behavior

Ninety and forty seven percent of schoolboys and girls respectively reported to ever had sex by the time of the study. Whereas none of the boys reported to ever have first sex at the age of 14 years, 38% of girls reported to have had first sex at that age. The majority of boys reported to have had first sex at the age of 15 years. Over 40% of both boys and girls reported that their sexual partners at first sex were fellow pupils and of the same age. None of the pupils reported to ever had sex with a schoolteacher (Table 3). Nine percent of respondents reported to have experienced forced sex. The proportion of those who reported to experience forced sex was significantly higher for females than males ( $p<0.001$ ). A high proportion (91%) of females than males (45%) reported to have one sexual partner currently. In the past one-year a third and 14% of male and female respondents respectively had up to 4 sexual partners. The number of sexual partners differed significantly by marital status and age group ( $P=0.005$ ) (Table 4).

### Discussion

The people in the study area are relatively mobile, and hence the majority of the study participants were not born in the area and about a third of women had moved into the area very recently. This might be linked with economic activities in the area such as fishing, mining and petty business. Mining, fishing and roadside settlement communities have been shown to be at an increased risk for sexually transmitted diseases including HIV. The prevalence of HIV was higher in rural roadside settlement and Lakeshore fishing communities than other rural communities (Barongo *et al.*, 1992). Therefore, HIV control efforts should address fishing, mining and roadside settlement communities, because they are at an increased risk and could accelerate the HIV epidemic to other communities.

Although most of those who participated in the survey knew that HIV, gonorrhoea and syphilis are transmitted through sexual contact, only few could mention GDS, GUS and PID. The lack of knowledge of signs and symptom of sexually transmitted disease is likely to affect treatment-seeking behavior. Therefore, public education on STDs and the importance of seen prompt treatment need to be emphasized. Early and effective treatment of STDs significantly reduces the incidence of HIV (Grosskurt *et al.*, 1995).

There was misconception that HIV infection could be transmitted through an insect bite or sharring of clothes among communities in the two districts. Intervention efforts aiming at behaviour change through safer sex or use of condoms may be hampered by such misconception. It is therefore important that appropriate health education intervention address these misconceptions. Traditionally in the study area care of AIDS patients is done at health facilities.

**Table 4: Reported number of sexual partners among study participants by Age group**

Age groups (years)	15-25 N=348	26-35 N=306	36-45 N=170	46-55 N=84	55+ N=7	p-Value
0	15%	13.1%	23.5%	34.5%	57.1%	0.005
1	65.8%	72.2%	63.5%	52.4%	42.9%	
2-4	14.1%	12.8%	11.2%	11.9%	0%	
5-9	1.4%	0.6%	1.2%	1.2%	0%	
>10	0.3%	0.3%	0%	0%	0%	

**N = Number of sex partners**

This is probably the reason for the response of about two thirds of the respondents that health facility is the best place for care of AIDS patients. However, as the HIV epidemic continues to grow it has been realized that health facilities won't be able to cope with the demand. Thus other alternative sources of care such as home or community based should be explored, developed and strengthened. The preference for home care of HIV/AIDS patients by one third of respondents may also be a reflection of the strong stigma attached to HIV/AIDS. Surprisingly traditional healers did not emerge as an important group for provision of care for HIV/AIDS patients.

The findings that it takes more than one sexual encounter to get pregnant, and that one could avoid getting pregnant by taking chloroquine or having sex on standing posture reflects the the limitation of school education curriculum especially at primary level which majority of population have attained. Thus, although the majority of school girls and boys reported to have been taught on AIDS, only a few admitted to have been taught on sex and pregnancy. This low level of understanding on sexuality may predispose women especially adolescents to have sexual and reproductive health problems early and unintended pregnancies, unsafe and illegal abortions. The consequences of these may be death, infertility or long-term disability. In the lake Victoria basin of Tanzania, and elsewhere in Africa prevalence of STDs and HIV have been reported high among adolescents (Brabin et al., 1995); Grosskurth *et al.*, 1995.

The attitude expressed by about half of the study participants that having sex with an elder partner was acceptable is likely to increase the list of contracting HIV among young people. Observations from cross sectional studies indicate that the proportion of HIV infected individuals increases with age. Our findings also indicate that receiving a gift or being friends justifies having sex. This suggests that an individual with capability to give gift is likely to have several sexual partners hence an increased risk of contracting STDs and HIV. Moreover, women being an economically disadvantaged group in many Tanzanias societies, are likely to receive gifts and thus be exposed sexually to

individuals with several sexual partners. This calls for the need of poverty alleviation programmes targetting females.

Sex at early age and having multiple sexual partners were common in the study districts. Both school boys and girls reported to have sex debut at very early teen ages. Similar young age of sex initiation has been reported elsewhere in Africa (Bledsoe & Cohen, 1993). Having multiple sexual partners place young people at risk of early pregnancy and other sexual reproductive health related problems. (Barongo *et al.*, 1992).

Since the population in the study area is relatively mobile possibly as a result of fishing, mining and petty business we recommend the introduction of a community based high transmission area intervention programme that should consist of community based poverty alleviation programme; community care and support intervention programme which will emphasize on an alternative sources of care and support of AIDS patients and community-peer health education programme.

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