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Research Article

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ABSTRACT

The number of fishermen in Lake Victoria (Kenya) has increased gradually over the last 20 years. In the last decade, fishing communities in many developing countries have suffered from Human-Immune-Deficiency-Virus (HIV) and Acquired Immunodeficiency Syndrome (AIDs). The prevalence rates of HIV and AIDS is five to ten times higher in the Lake region than those in the general population. Vulnerability of fishing communities to HIV and AIDS is widely overlooked. Because they are neglected, they are unable to cope with the impact of HIV and AIDS. Many countries use Voluntary Counselling and Testing as an important prevention and intervention tool. The available Voluntary Counselling and Testing services in Kenya is not optimally utilized in the general population but information about its use was largely lacking for the fishing sector. The broad objective of this study was to identify factors that influence utilization of Voluntary Counselling and Testing services among fishermen at Dunga, Usoma and Asat beaches in Kisumu District. Purposive sampling was used to select three landing beaches with much fishing activity. The study population comprised of 520 registered fishermen at the Beach Management Unit from the three landing beaches of Dunga, Usoma and Asat. The results showed 200(81.63%) of the fishermen were aware of Voluntary Counselling and Testing services, while 32 (13.06%) utilized them. The reasons for using Voluntary Counselling and Testing were stated as planning for the future 144(58.8%), planning for marriage 112 (45.7%) and protecting the child 75(30.6%). Socio-demographic factors (age, sex, income, level of education) did not make a significant difference in utilization of Voluntary Counselling and Testing, but higher utilization 111(88.3%) was noted in couples living together with their sexual partners and when there was a religious affiliation 203(79.7%). This study confirmed that high awareness does not necessarily mean high uptake and utilization of Voluntary Counselling and Testing services. The study provides greater insights into the socio-demographic and socio-cultural factors that could be used to enhance utilization of Voluntary Counselling and Testing services in Kisumu District and other districts around Lake Victoria.

Keywords: Factors, Utilization, Voluntary Counselling, Testing Services, Fishermen, Dunga, Usoma, Asat Beaches, Kisumu District, Kenya.

INTRODUCTION

HIV and AIDS is a serious Public Health and socio-economic problem in many countries around the world (Kenya Demographic Health Survey, 2003). World Health Organizations (WHO) and United Nation Programmes for HIV and AIDS- UNAIDS 2009) indicate that since the beginning of HIV and AIDS epidemic, 60 million people have been infected with it, 25million people have died of HIV and AIDS related causes. In 2008, the Global AIDS epidemic rose to its highest ever; with an estimated 33.4 million people living with the virus there were 2.7million new infections and 2 million AIDS related deaths, at the same time around 430,000 children were born with HIV, bringing it to 2.1 million

the total number of children under 15 years living with HIV (UNAIDS & WHO 2009). HIV and AIDS has swept around the world in recent years. Approximately 95% of people living with HIV and AIDS Worldwide are in developing countries. Sub-Saharan countries remain by far the most affected region with estimates showing 22.4 million living with HIV and AIDS by the end of December 2008 (WHO & UNAIDS, 2009). About 67%, of all the people living with HIV and AIDS in the world, being in Sub-Saharan Africa and for nearly three quarters 72% of AIDS related deaths. More than three quarters 76%, of all women globally living with HIV and AIDS, being found in Africa. An estimated 1.9 million people were newly infected with HIV and more than 14million children in Sub-Saharan Africa had lost one or both parents to AIDS in 2008. In Kenya it is estimated that over 1.5 million people have died due to HIV and AIDS related illness with more than 1.4 million people currently living with HIV and AIDS and 1.8 million AIDS orphans, Kenya National Aids Strategic plan, National Aids Control Council, 2005/6-2009/10, NACC, 2005). Kisumu District has an average HIV prevalence of 11.2%, Kisumu Rural 8%, Kisumu town 15%, proportion positive in Voluntary Counselling and Testing 22% and proportion positive in Prevention Mother to Child Transmission 8% (Jones, 2006, District Medical Officer of Health, Kisumu 2006/2007). The Kenya Demographic Health Survey, 2003, 2008/9, KAIS, 2007), showed Kenya's HIV prevalence revised downwards to 7%. This means 1.1 million adults were infected with HIV and AIDS and about 2/3 of those infected being women (UNAIDS, 2004). The study confirmed a pronounced gap between HIV and AIDS awareness and safe sexual behaviours. Various HIV prevention strategies used in many countries: Voluntary Counselling and Testing as a prevention and intervention tool (Kamb, Dilow, Willis & Flshbein 1996), Prevention Mother to Child Transmission, that is the percentage of HIV positive pregnant women who received treatment to prevent transmission of the virus to their child increased from 33% in 2007 to 45% in 2008 (UNAIDS / WHO 2009) compared to only 9% in 2004 who received anti retroviral drugs, other strategies for HIV prevention focused on synergistic programs: Education, Training Health Workers, funding to strengthen the existing programmes and awarding major grants to Global Strategies for HIV prevention. Strategies for HIV and AIDS prevention in Kenya: Government of Kenya emphasizes on "Abstain, Be faithful and Correct" and consistent use of condom, Kenya is also increasing HIV counselling and testing to ensure that HIV negative couples maintain fidelity and the HIV discordant couples (one positive and one negative partner) receive counselling and condoms, Prevention Mother to Child Transmission blood safety, safe medical injections and other key issues.

In 1999 the Government of Kenya declared HIV and AIDS a national disaster and established the National AIDS Control Council to coordinate the multi-sectoral response to HIV and AIDS (Kenya AIDS Indicator Survey, 2007). As a result of this declaration in the past four years, Kenya has witnessed considerable growth in funding of its HIV and AIDS National program from major Global initiatives. To mitigate the negative impacts of the HIV and AIDS epidemic, the Governments through the National AIDS Control Council embarked on accelerated interventions that have seen the country register commendable success in national response. Furthermore, the Kenyan government has expanded Voluntary Counselling and Testing to every part of the country.

Despite Government efforts on Voluntary Counselling and Testing; less than (1%) of the adult population aged 15 – 49 are accessing Voluntary Counselling and testing services (United Nation Programmes for HIV and AIDS, 2004). Kenya has a long history of fishing with the Luo, Luhya, and Abasuba ethnic groups having been active fishermen for more than five centuries. Lake Victoria continues to dominate Kenya's fishery resources. The number of fishermen in Lake Victoria (Kenya) has been increasing gradually over the last 20 years from 11,000 in 1971 to 40,000 in 1998 (Omweaga, Abila, Lwenya, Odada & Olago, 2006). According to the Food and Agriculture Organization (FAO), in the last decade, fishermen in many developing countries suffer from HIV prevalence rates often five to ten times higher than those in the general population (FAO, 2005; FAO, 2006). Since then, the vulnerability of fishing communities to HIV and AIDS has been widely overlooked (FAO, 2007).

The consequence is that they have been left largely beyond the reach of prevention, care and mitigation efforts. According to the FAO (2007) report, fishermen are five time more likely to die of AIDS-related illness than farmers in the Lake Victoria region, where sero-prevalence rates in lakeshore towns and villages in Kenya, Tanzania and Uganda are thought to have reached as high levels as 30% to 70% during the late 1990s (Yongo, 2000).

This study sought to identify factors that influence utilization of Voluntary Counselling and Testing Services among fishing communities in Kisumu District.

Research Questions

To meet the research objectives, the central research questions were:

1. What is the level of utilization of Voluntary Counselling and Testing services among fishermen at Dunga, Usoma and Asat beaches?
2. What are the socio cultural and economic factors that influence utilization of Voluntary Counselling and Testing services among fishermen at Dunga, Usoma and Asat beaches?

RESEARCH METHODOLOGY

The study used a cross sectional survey design to gather primary data. The study population comprised of 520 registered fishermen at the Beach Management Unit from the three landing beaches of Dunga, Usoma and Asat. A sample size of 245 was calculated using Fishers formular and divided proportionately across the three beaches. Face to face interviews using a structured questionnaire were conducted by research assistants. Student t- test was used to analyse normally distributed data, while chi-square or Fishers Exact and odds ratio where necessary was used to analyze proportions. Multivariate analysis involving the use of logistic regression was done to determine predictors of vulnerability among the fishing communities in the study area.

Demographic characteristics of the Study population

The respondents were asked to indicate their demographic characteristics and their responses were as shown in Table 1.

Table 1: Demographic Characteristics of the Study Population

Characteristics	Overall N=245 N (100%)	Dunga Beach N=103: N (42%)	Asat beach N=57 N (23.3%)	Usoma beach N=85 N (34.7%)
Age in Years				
Mean (95 % CI)	27.8	28(26.6-29.5)	28.8 (26.2-31.5)	27(25.3 – 28.8)
Sex				
Male	148(60.4)	66(64.1)	31(54.4)	51(60.0)
Female	97(39.6)	37(35.9)	26(45.6)	34(40.0)
Marital Status				
Married	103(42.0)	48(46.6)	26(45.6)	28(33.7)
Single	71(29.0)	27(26.2)	14 (24.6)	29(34.9)
Never married	14(5.7)	3(2.9)	6(10.5)	4(4.8)
Divorced/Separated	7(2.9)	4(3.9)	2(3.5)	2(2.4)
Cohabiting	10(4.1)	4(3.9)	0(0.0)	4(4.8)
Widowed	10(4.1)	6(5.8)	1(1.8)	2(2.4)
Married polygamous	4(1.6)	1(1.0)	1(1.8)	7(8.4)
Married monogamous	13(5.3)	5(4.9)	5(8.8)	4(4.8)
Steady partner living together	13(5.3)	4(3.9)	1(1.8)	0(0.0)
Steady partner not living together	3(1.2)	2(1.9)	1(1.8)	5(6.0)
Education				
University	7(2.9)	5(4.9)	5(8.8)	5(5.9)
College and intermediate institution	3(1.2)	15(14.6)	12(21.1)	15(17.6)
Primary	55(22.4)	46(44.7)	26 (45.6)	47(55.3)
Secondary	4(1.6)	29(28.2)	11(19.3)	15(17.6)
None	15(6.1)	4(3.9)	2(3.5)	1(1.2)
Occupation				
Fisherman	60(24.5)	27(26.2)	14(24.6)	19(22.4)
Fishmonger	61(24.9)	23(22.3)	17(29.8)	21(24.7)
Fish transporter	18(7.3)	11(10.7)	3(5.3)	4(4.7)
Other (specify)	108(43.3)	42(40.8)	23(40.4)	41(48.2)
Total monthly income				
Below 2,000	61(24.9)	26(25.2)	15(26.3)	20(23.5)
2,001-5,000	76(31.0)	31(30.1)	17(29.8)	28(32.9)

5,001-8,000	50(20.4)	23(22.3)	4(7.0)	23(27.1)
8,001-10,000	24(9.8)	9(8.7)	9(15.8)	6(7.1)
Above 10,000	34(13.9)	14(13.6)	12(21.1)	8(9.4)
If married does your Spouse live here?				
Yes	103(42%)	47(45.6)	27(47.4)	34(40.0)
No	142(58%)	57(54.4)	30(52.6)	51(60.0)

The results revealed that the mean age of the participants was 27.8 years of which male participants comprised of 148(60.4%) and females were 97(39.6 %) of the total sample population (245). The other key finding Table 4.1, out of the 245 participants enrolled in this study, the result showed almost no difference in percentage among fishmongers 61(24.9%) and fishermen 60(24.5%). Overall married participants were 103 (42.0%) at the three landing beaches of Dunga, Usoma, and Asat. Those married at the individual beaches were: Dunga 48(46.6%) of 103, Usoma 29(34.1%) of 85 and Asat beach 26(45.6%) of 57 participants were married. The level of education for the majority was up to primary. The distribution by Gender and their mean ages: Dunga 66(64.1%) were males, 37 (35.9%) were females, their mean age was 28(range = 26.6-29.5) years. At Asat 31(54.4%) were males, 26(45.6%) were females with a mean age of 28.8(range = 26.2-31.5) years and Usoma, males 51(60.0%), females 34(40.0%), their mean age was 27(range = 25.3-28.8) years.

RESULTS

Research Question 1: The research question responded to was: What is the level of utilization of Voluntary Counselling and Testing services among fishermen at Dunga, Usoma and Asat beaches? The response to this research question was as shown in Figure 1.

Figure 1: Distribution of Respondents based on levels of awareness, knowledge and Utilization of Voluntary Counselling and Testing services

The analysis carried out based on Voluntary Counseling and Testing information showed, a large majority of the respondents 200(81.63%) were aware of Voluntary Counseling and testing services. Based on self reported information only 32(13.06%) of the respondents knew about Voluntary Counseling and Testing Services, while 13(5.31%) had no information on utilization on Voluntary Counseling and Testing Services and had not been tested.

The socio-demographic characteristics associated with utilization of voluntary counseling and testing services were investigated and the findings were as shown in Table 2.

Table 2: Socio-demographic characteristics associated with Utilization of Voluntary Counselling and Testing Services

Characteristic	Category	Total	Tested for HIV (Yes)		Chi-Square Test for χ^2 , df, p
		N	n	(%)	
Sex	Male	148	120	81.1	4.861; 2; 0.08
	Female	97	76	78.4	
Age (Years)	<= 20	48	37	77.1	8.869; 8; 0.35
	21 – 25	67	48	71.6	
	26 – 30	63	56	88.9	
	31 – 40	51	36	70.6	
	41+	13	9	69.2	
Occupation	Fishermen	63	82.4	18.539; 8; 0.01*	6.375; 6; 0.38
	Fishmonger	61	77.4		
	Fish transporter	18	66.7		
	Others	03	79.3		
Main Source of Income	Farming	15	8	53.3	11.415; 6; 0.07
	Business	111	85	76.6	
	Fish mongering	51	40	78.4	
	Other	1	1	100.0	
Total income per month	Below 2,000	42	29	69.0	5.993; 8; 0.64
	2,001 - 5,000	79	60	75.9	
	5,001 - 8,000	52	40	76.9	
	8,001 - 10, 000	24	18	75.0	
	Above 10,000	34	29	85.3	
Level of Education	None	58	48	82.8	2.260; 6; 0.89
	Primary	56	42	75.0	
	Vocational	124	95	76.6	
	Secondary	15	11	73.3	
Living with Sexual Partner	Yes	111	98	88.3	16.416; 2; <0.001*
	No	142	98	69.0	
Duration worked in the Beach	Less than a year	48	34	70.8	12.089; 8; 0.14
	1-2 years	79	66	83.5	
	3-5 years	34	28	82.4	
	Above 5 years	62	48	77.4	
	Not Indicated	30	20	66.7	
Religious Affiliation	Christian	203	161	79.3	18.539;8;0.01*
	Protestant	13	9	69.2	
	Muslim	20	18	90.0	
	Non believer	11	5	45.5	
	An atheist	1	1	100.0	

The different characteristics were examined against utilization of voluntary counseling and testing to establish significant determinants of utilization of voluntary counseling and testing using chi-square to determine p -value whether it was significant. Table 2 showed that utilization of Voluntary Counseling and testing was not largely affected by socio-demographic characteristics of the population. However, whether the respondent was living with sexual partner was significant, associated with utilization of voluntary counseling and testing services ($p<0.001$) with 111(88.3%) of those who were living with partners reported to have been tested compared to only 142(69%) of those not living with partners. In addition, those among religious affiliations were seen to influence utilization of Voluntary Counseling and testing services.

The study further investigated factors that influence utilization of voluntary counseling and testing. The findings were as shown in Table 3.

Table 3: Factors that influence Utilization of Voluntary Counselling and Testing Services

<i>Reason for Community Utilization of Voluntary Counselling and Testing</i>	Distribution N=245	
	F	(%)
Plan for the future	144	58.8
Protect Partner	98	40.0
Protect Child	75	30.6
If Sick	71	29.0
Social belonging	45	18.4
Insurance	33	13.5
Ignorance	1	0.5
<i>What would be the reasons for not taking HIV and AIDS test at the Voluntary Counselling and Testing</i>	N= 245	
	F	(%)
Cultural beliefs	170	69.4
Fear of knowing	43	17.6
Lack of confidentiality	33	13.5
Stigma	26	10.6
Social Belonging	16	6.5
Loss of job/employment	14	5.7
Religious grounds	13	5.3
Insufficient counseling by medical personnel	12	4.9

From Table 3, it was established that varied factors determined utilization of Voluntary Counseling and Testing services: Insurance, plan for the future, protect partner, protect child, if sick, social belonging and ignorance as to why they were tested.

On the other hand respondents listed the following determinants of non-utilization of VCT services: Cultural beliefs, religion, fear of knowing their HIV status, stigma, fear of loss of job/employment, social belonging, lack of confidentiality, insufficient counseling by medical personnel and ignorance (not knowing).

Research Question 2: The research question responded to was: What are socio cultural and economic factors that influence utilization of Voluntary Counselling and Testing services among fishermen at Dunga, Usoma and Asat beaches? In response to this research question respondents indicated several socio-cultural and economic factors that influence utilization of Voluntary Counselling and Testing services.

One hundred and seventeen (47.6%) of respondents said cultural festivals promoted the spread of HIV in the community. Another group of 163(66.5%) of respondents said that widow inheritance promoted the spread of HIV in the same community. While 67(27.3%) of the respondents indicated that women had no say on matters of sexuality but 106(42.9%) disagreed with that notion, while 86(34.7%) believed that sex is a social problem for the African man

and woman but 103(42%) disagreed. Negative cultural practices such as cultural festival and widow inheritance in the community did not influence the utilization of Voluntary Counseling and Testing services, ($P=0.005$) and forced sex, unprotected sex and alcohol ingestion did not significantly improve utilization of Voluntary Counseling and Testing services.

In the category of economic factors, income was defined as total amount of money earned by individual fishermen per month at the respective beaches of Dunga, Usoma and Asat. Main source of income was derived from farming, fishing, fish mongering and other business activity along the three beaches. Properties most likely owned by fishermen were Boats, Fishnets and Fish as commodity for sale as food.

The study sought to establish the knowledge related to determinants of utilization of Voluntary Counselling and Testing services. The findings were as shown in Table 4.

Table 4: Knowledge related factors on utilization of Voluntary Counselling and Testing Services

		Respondent		Tested for HIV		Chi-Square Test
		n_{resp}	$(\%)_{resp}$	n_{tested}	$(\%)_{tested}$	χ^2 , df, p
Aware of Voluntary Counselling and Testing	Yes	232	(94.7)	190	(77.6)	15.164 ; 2 ; 0.001
	No	13	(5.3)	36	(14.7)	
Knows what one can do to avoid being HIV infected	Yes	171	(69.8)	140	(81.9)	22.117 ; 12 ; 0.03
	No	15	(6.1)	9	(60.0)	
Source of information about HIV/AIDS	From nearby health facility	78	(31.8)	64	(82.1)	0.595 ; 2; 0.74
	Self initiative	9	(3.7)	7	(77.8)	
	Library information desk	14	(5.7)	10	(71.4)	
	Church organization	35	(14.3)	30	(85.7)	
	CBO's/NGO's offices	26	(10.6)	23	(88.5)	
	From adverts	28	(11.4)	21	(75.0)	
	Others	1	(.05)	0	(.0)	
Knows how one would know HIV status	By blood test when you become thin	85	(34.7)	67	(78.8)	0.509 ; 4 ; 0.97
	When sickly by-uptake of Voluntary Counselling and Testing.	78	(31.8)	63	(80.8)	
Knows how do people get HIV/AIDS	Through unsafe sex	148	(78.3)	118	(79.7)	1.913 ; 4 ; 0.75
	Through blood transfusion	40	(21.2)	33	(82.5)	
	Through sharing of utensils	1	(.5)	1	(100.0)	
Knows it is possible for a healthy looking person to have the AIDS virus	Yes	150	(61.2)	121	(80.7)	
	Don't know	12	(4.9)	9	(75.0)	
	No	21	(8.6)	18	(85.7)	

Table 4 shows a high level of awareness of Voluntary Counselling and Testing among respondents with 232 (94.7%) but a test of chi square for p value was insignificant where knowledge on what respondents could do to avoid being infected contributed to utilization of Voluntary Counselling and Testing were significant with $p=0.001$ and $p=0.003$ respectively on chi-square test for each.

The study further investigated attitudes and beliefs affecting utilization of Voluntary counseling and testing services. The findings were as shown Table 5.

Table 5: Attitude and Beliefs affecting Utilization of Voluntary Counselling and Testing Services

		Indicator Observation among all respondents		Tested for HIV among response category $N=n_{resp}$		Chi-Square Test
Response Category		n_{resp}	$(\%)_{resp}$	n_{tested}	$(\%)_{tested}$	χ^2 ; df; p
Indicator of attitude, belief,						
Would talk to partner or spouse before testing for HIV	Yes	173	70.6%	154	(86.0)	11.537 ; 2 ; 0.003
	No	47	19.2%	33	(68.8)	
Would tell partner/spouse the result of your HIV	Yes	170	69.4%	155	(88.6)	15.928 ; 2 ; <0.001
	No	42	17.1%	28	(63.6)	

Believes religion plays a role in the utilization of Voluntary Counselling and Testing.	Yes	148	60.4%	125	(82.8)	0.172 ; 2 ;
	No	67	27.3%	56	(82.4)	0.918
Thinks polygamy would influence Voluntary Counselling and Testing utilization	Yes	158	64.5%	139	(86.3)	8.660 ; 2 ;
	No	53	21.6%	38	(70.4)	0.013
Believes women are able to make decisions to seek for health services without undue influence from their partners	Yes	152	74.1%	132	(84.6)	3.546 ; 2 ;
	No	53	25.9%	39	(73.6)	0.170
Thinks if a family teacher has AIDS he can be allowed to continue teaching	Yes	189	77.1%	158	(81.9)	7.906 ; 2 ;
	No	20	8.2%	15	(75.0)	0.019
Would you like to retain it a secret if a member of family got infected with HIV	Yes	110	52.6%	84	(76.4)	2.428 ; 2 ;
	No	99	47.4%	84	(84.8)	0.297
Believes children aged 12-14 years be taught about using a condom to avoid AIDS	Yes	165	67.3%	136	(82.4)	1.215 ; 2 ;
	No	48	19.6%	39	(76.5)	0.545
If relative was to get infected with HIV would be willing to take care	Yes	151	61.6%	122	(80.8)	0.714 ; 2 ; 0.70
	No	17	6.9%	13	(76.5)	
Looks at AIDS disease just like any other diseases	Yes	59	25.1%	48	(81.4)	0.410 ; 2 ; 0.81
	No	124	50.6%	101	(81.5)	

Table 5 shows results on the analysis of indicators of beliefs against the dependent variable of utilizing Voluntary Counselling and Testing services. From the table, the significant determinants of utilization of Voluntary Counselling and Testing services included willingness to disclose status to partner ($p<0.001$); belief that polygamy could influence utilization ($p=0.013$); Attitude towards infected family teacher ($p=0.019$); and as earlier illustrated willingness to talk to partner before testing for HIV ($p=0.003$). It was found that if respondents would talk to their partner or spouse before testing, the majority were found to have taken the test. The difference was found to be statistically significant ($p=0.003$). Higher Voluntary Counselling and Testing utilization was found among those who thought their partners had no extra marital affairs as compared to those thinking there was an extramarital affair. $X^2=7358$, $df = 2$, $p=0.025$. Multiple sexual partners did not influence utilization of Voluntary Counselling and Testing services. ($p=0.153$).

The significant determinants of utilization of Voluntary Counselling and Testing were: willingness to disclose status to partner ($p<0.001$), belief that polygamy would influence utilization of Voluntary Counselling and Testing ($p=0.013$). This study also assessed the effects of personal practice related to utilization of Voluntary Counselling and Testing service. Only a few of the respondents 18(17.3%) reported that their partners forced them to engage or to have unprotected sex or threatened them in the event one does not accept their demands, while 172 (70.2%) disagreed with the notion that there was forced sexual practices. For those who believed that their partners had extra marital affairs 136(55.5%), Voluntary Counselling and Testing.

Utilization was high 115(84.6%) compared to 37 (33.9%) of those respondents who said their partners had no extramarital affairs. The findings indicated that there was significant relationship between partners having extramarital affairs and the utilization of Voluntary Counselling and Testing services. $X^2 = 7.358$ $p = 0.025$. More positively, the partner having extramarital affair did not particularly affect the respondents feeling of having a counter extra marital affair. This study also examined the effect of multiple sexual partners, where 33(13.0%) of the respondents reported to have multiple sexual partners.

This did not influence the utilization of Voluntary Counseling and Testing services ($p=0.153$). Most of the respondents 139(56.7%) reported having had sexual intercourse with another person other than their regular partner while 106 (43.3%) did not report having any sexual intercourse. Out of 139 reported respondents, 61(43.9%) did not use condoms on their last sexual intercourse with their other partner. Those who did not use condoms were more likely to be tested for HIV, 52 (85.2%) compared to those who used 78 (56.1%); $x^2=34.413$, $p= 0.001$.

DISCUSSION

From the study, it was established that varied factors determined utilization of Voluntary Counselling and Testing services: Marriage, family planning, Insurance, plan for the future, protect partner, protect child, if sick, social belonging and ignorance as to why they were tested. On the other hand respondents listed the following determinants of non-utilization of Voluntary Counselling and Testing services: cultural beliefs, religion, fear of knowing their HIV status, stigma, fear of loss of job/employment, social belonging, lack of confidentiality, insufficient counseling by medical personnel and ignorance (not knowing).

Negative cultural practices such as cultural festival and widow inheritance in the community did not influence the utilization of Voluntary Counselling and Testing services, and forced sex, unprotected sex and alcohol ingestion did not significantly improve utilization of Voluntary Counselling and Testing services. In the category of economic factors, income was defined as total amount of money earned by individual fishermen per month at the respective beaches of Dunga, Usoma and Asat. Main source of income was derived from farming, fishing, fish mongering, and other business activity along the three beaches. Properties most likely owned by fishermen were Boats, Fishnets, and Fishes as commodities for sale as food. The findings indicated that there was significant relationship between partners having extramarital affairs and the utilization of Voluntary Counselling and Testing services. More positively the partner was having extramarital affair did not particularly affect the respondents feeling of having a counter extra marital affair.

Voluntary Counselling and Testing is recognized as an essential component of prevention and intervention tool in transmission of HIV (Kamb, Dilow, Willis & Fishbein, 1996). This study established that 94.8% of respondents were aware of Voluntary Counseling and Testing services. This compares well with findings on HIV and AIDS awareness and knowledge on Voluntary Counselling and Testing. According to Kenya Demographic Health Survey, 2003, 2008/2009 and KAIS, 2007 the awareness of HIV and AIDS is 99% for Kenyan men and women. More importantly this study also established that 13.06% of respondents interviewed knew about Voluntary Counselling and Testing and had been tested, yet majority did not utilize the services at the three landing beaches. Comparing with the general population, voluntary counseling and testing Government targets for 2010 was at least 2 million Kenyans to be tested annually for HIV comprising 500,000 Voluntary Counselling and Testing and 1.5 million clinical tests from the sentinel surveys in antenatal clinics, but when looking at the level of uptake its relatively low at the beaches.

The Government's National Policy on HIV and AIDS (Government of Kenya, 2005), its target (Kenya National HIV and AIDS Strategic Plan 2005/2006-2009/2010/2011) was to encourage 90% of the population to use Voluntary Counselling and Testing services. Utilization of Voluntary Counselling and Testing services among fishermen and the general community is poor/low. Concerted effort is needed and advocacy to bring about behavior change that would correspond to high awareness about Voluntary Counselling and Testing to actual uptake among fishermen.

Most of the respondents who had been tested indicated planning for the future or to get married. Other studies conducted in the country show that most people got tested to plan for the future or getting married as opposed to planning their current life (Painter, 2001). Only 30.6% of the population was tested for HIV with a bid to protect the unborn foetus. Comparative analysis of Voluntary Counselling and Testing utilization in the three beaches studied indicated no significant differences in the proportion of individuals tested. Utilization of Voluntary Counselling and Testing made individuals to know their HIV status, protect their partner from infection (Yoder and Matings, 2004, Kyalogonza and Mirro, 2004, Yongo, 2000). Utilization of Voluntary Counselling and Testing is acknowledged as an effective way of reaching out to high risk groups (Balmer et al., 2000).

From it, this study established varied factors that determined utilization among fishing community (fishermen) at Dunga, Usoma and Asat landing beaches to be: Marriage, family planning, insurance, plan for the future, protect partner, protect child, if sick and social belonging but on the other hand, some respondents gave the following reasons for non-utilization of Voluntary Counselling and Testing services: Cultural belief, religion, fear of knowing, social belonging, lack of confidentiality and insufficient counselling by medical personnel. When we compare the above with studies elsewhere that have shown a high acceptance and utilization of Voluntary Counselling and Testing programmes. Across a number of countries Abidjan, Kenya, Tanzania, Malawi, Zambia and Zimbabwe (Solomon et al., 2004), their value of utilization of Voluntary Counselling and Testing services was Questionable. People had only a desire for Voluntary Counselling and Testing for a purpose as stated but not for purpose of determining their HIV status, elsewhere in Zambia, (Sangiwa et al, 2000, Solomon *et al.*, 2004, Sherr et al, 2007), showed those who tested do not always return for their results. The same way those above only utilized Voluntary Counselling and Testing services to achieve their goals.

A study by Wilson *et al.*, 1992, pointed out one variable, most significantly associated with to return for post test counselling that agrees very well with one of the above stated determinant factors that influence utilization of Voluntary Counselling and Testing services: "Fear of knowing" agrees with perceived probability of positive HIV test

results in both it hinders utilization of Voluntary Counselling and Testing services and return for post test counselling. In Northern Uganda, differences in attitudes towards utilization of Voluntary Counselling and Testing services showed that ethnicity, marital status and gender were some of the determinants of willingness to be tested (Nuwaha et al, 2002). which actually concurs with our initial findings on determinant factors of utilization of Voluntary Counselling and Testing services. The other negative aspect of individual not having utilized Voluntary Counselling and Testing services such as fear of knowing compares well with a study on psychological factor of denials and avoidance coping (i.e. not wanting to know) on the part of those who knew they are at risk of being infected (Wilson et al,1992), stigma, fear and discrimination; some religious and moralists believe that having HIV and AIDS is a result of moral fault (<http://www.aids.stigma.net>), this agrees well with what is stated as to what would be a reason of not taking HIV test (utilization of Voluntary Counselling and Testing services), "the fear of knowing" religious beliefs agrees well with this study on a study by (Maman et al., 2001) exploring sex, age and marital composition, the factors in this findings compares well with cultural beliefs interfering with utilization of Voluntary Counselling and Testing services and the same time its factors points to gender inequality a factor which affects utilization of Voluntary Counselling and Testing among women. Finally a study by (Nuwaha et al, 2002) found out that factors influencing Voluntary Counselling and Testing for HIV were consequence of test result, this compare well with fear of knowing in my study results, influence from sexual partner compares with reasons for utilizing Voluntary Counselling and Testing services in order to protect the partner and partly could be placed under cultural beliefs in which an individual is at constraints in (uptake or non uptake) utilization of Voluntary Counselling and Testing services especially women are always oblivious and in fear of their spouses' reactions comparing other determinants of utilization of Voluntary Counselling and Testing in cases of planning for the future, a number of studies have focused on this question by looking at those who come for Voluntary Counselling and Testing and more importantly why they do so (Balmer et al, 2000, Maman et al.,2001), showed the ability to plan for the future as perhaps the main perceived benefit for the utilization of Voluntary Counselling and Testing, either because it allowed couples to proceed with unprotected sexual intercourse, marriage and pregnancy.

These are same determinants confirmed in this study carried out at Dunga, Usoma and Asat beaches on factors influencing utilization of Voluntary Counselling and Testing services (Sherr et al, 2007) examined the determinants of utilization of Voluntary Counselling and Testing found out in rural Zambia cohort among testers and non-testers; age, increasing education and knowledge, to be a factor that influenced utilization of Voluntary Counselling and Testing services.

A study by Maman et al (2001) points that gender inequality puts women at risk depending on the promiscuous lifestyle of their husbands. This was a significant factor affecting utilization of Voluntary Counselling and Testing services, thus it would appear that unequal power relations that limit women control over their risk of being infected, and in their place also limits their testing behaviour. A study by Omwega, et al (2006) established women in fishing communities other than sell beer, they also double as commercial sex workers and in most cases, the fishermen are attracted to them mainly for the sexual relationship in exchange for fish. These activities do not influence utilization of Voluntary Counselling and Testing services instead promoted spread of HIV infection. This may in a way agree with results on income per month in this study. Mangesha and Yohannis (2006) in their study results of the behavioural variables showed the effects of others (friends, religious leaders and couples) who were found to have statistical effect towards Voluntary Counselling and Testing acceptance, which may very well compare with determinants of utilization and non-utilization of Voluntary Counselling and Testing services.

CONCLUSIONS

- i. Awareness level was high but utilization of Voluntary Counselling and Testing services was found to be as low as 13% in this study.
- ii. This study concluded that there were varied factors that determined utilization and non-utilization of Voluntary Counselling and Testing services like willingness to disclose status to partner and polygamy.
- iii. Negative cultural practices such as cultural festival and widow inheritance in the community did not influence the utilization of Voluntary Counselling and Testing services, but instead, promoted spread of HIV in the community.
- iv. Generally, knowledge of HIV would be assumed to enhance the utilization of Voluntary Counselling and Testing services, but in this study, it was not.
- v. Respondents who talked to their partners or spouses before testing, the majority had taken the test before.

RECOMMENDATIONS

- i) There is need for further investigation to be put in place aimed at scaling up utilization of Voluntary Counselling and Testing services despite high awareness level. This study found utilization of Voluntary Counselling and Testing services to be as low as 13%, yet National target of Voluntary Counselling and Testing utilization was at 90%
- ii) The use of both determinant factors that influence the utilization of Voluntary Counselling and Testing services and non-utilization determinants should be used to enhance utilization of Voluntary Counselling and Testing services in both cases among fishermen at Dunga, Usoma and Asat beaches of Lake Victoria, Kisumu District.
- iii) Discourage negative cultural practices among them: cultural festival and widow inheritance, it impacts negatively on utilization of Voluntary Counselling and Testing services and promotes spread of HIV among fishermen at Dunga, Usoma and Asat.
- iv) Utilize knowledge on HIV and AIDS, other interventions, advocacy and counseling to enhance utilization of Voluntary Counselling and Testing services among fishermen.
- v) Involve partners, spouse or couple; it would enhance utilization of Voluntary Counselling and Testing services.

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