

## Trends in HIV/AIDS Voluntary Testing in Tanzania: A Case of Njombe Urban, Njombe Region

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### Abstract

This article presents and analyzes status and trends for people who were voluntarily tested for HIV/AIDS infections in Njombe Town Council in Njombe region. The analysis covers five year period between 2007 and 2011. This period was specifically chosen because it was in July 2007 that the government of Tanzania inaugurated a campaign for HIV/AIDS voluntary counselling and testing. Nevertheless, trends for the people who are using Voluntary Counselling and Testing (VCT) centres and the associated results regarding HIV/AIDS infections are not clearly established. The article utilizes data collected from three Voluntary Counselling and Testing (VCT) centres in Njombe Urban. Percentages of people infected with HIV/AIDS were computed using a calculator. Findings demonstrate that the number and percentages of people who were voluntarily tested for HIV/AIDS was increasing suggesting that over time more and more people were using voluntary testing and counselling centres (VCT). Interestingly, while the number of people visiting VCT centres revealed increasing trend, HIV/AIDS infections showed decreasing trend over the years for all of the VCT centres under consideration. Notwithstanding decreasing trend for HIV/AIDS infections, many people were living with HIV/AIDS particularly women. Overall, infections accounted for 6.5% at Njombe Health Centre higher than at Njombe Lutheran VCT centre and at Kibena Hospital, where both recorded 5.1% of people infected with HIV/AIDS. Controlling new cases for HIV/AIDS infections will help to re-direct resources to development initiatives at all levels. Therefore, concerted efforts are needed to curb further HIV/AIDS infections in Njombe urban and in Tanzania more generally.

**Keywords:** HIV/AIDS, infection trends, urban Tanzania

### 1. Introduction

In the past three decades, Acquired Immunodeficiency Syndrome (AIDS) has increasingly become one of the serious development challenges in the world. AIDS is described as a pandemic disease because it affects people in the whole world though in varying degrees of intensity. The pandemic has diverted resources meant for development activities to issues related to combating the problem. A considerable number of people have been affected since the disease was first identified in the US in 1981. About 33.3 million people were living with HIV/AIDS worldwide by 2009 (UNAIDS, 2010: 23; Lloyd-Jones, 2012: 18). The number of infected people increased to 34 million in 2010 (UNAIDS, 2011: 2). This suggests that HIV/AIDS prevalence is increasing at the global level. In addition, a considerable number of people are living with the virus unknowingly. The demographic and socio-economic impact of HIV/AIDS affects men and women differently. The impact is also differentiated by geographical regions and by wealth status. The global south has been severely hit by the pandemic compared to the global north, mainly due to its high poverty incidence. This suggests that the poor are more at risk both in rural and urban areas since they cannot bargain and make the right choices as regards to sexual activity. Further, gender inequality and physiological differences accelerate more HIV/AIDS infection rates in women compared to men (UNAIDS, 2010: 23). The world in its year 2000 Millennium Development Goals (MDGs) declared to combat the problem of HIV/AIDS in addition to Malaria and other diseases by 2015. Efforts have been particularly focused on the way HIV/AIDS spread, factors accelerating its spread and how to control new cases. Despite efforts to control the problem, this study argues that it is difficult to curb new infections by 2015 as anticipated in the Millennium Development Goals and that the pandemic will continue to threaten both health and development initiatives particularly in Sub-Saharan Africa where the incidence of poverty is still high.

Although HIV/AIDS prevalence reveals increasing trend at the global level, it shows decreasing patterns in Sub-Saharan Africa (SSA). This can be explained by the fact that more efforts have been devoted to controlling

HIV/AIDS pandemic in this region. Both the public and the private sector are key players in combating the problem at all levels. Control measures include awareness creation, emphasis on voluntary counselling and testing, behavioural changes such as avoiding multiple partners, abstinence; use of condom during sexual activity and use of anti-retroviral therapy (ART). Despite decreasing trends for HIV/AIDS, still more than half of the people living with HIV/AIDS in the World are found in Sub-Saharan Africa (SSA) (Philemon and Kessy, 2008: 1). Worldwide, HIV/AIDS prevalence stood at 0.8% while it has persisted at 5% since 2007 in most parts of SSA (Bongaarts *et al.*, 2009: 3; UNAIDS, 2010: 16). Prevalence rates vary within SSA with some parts exceeding 15%. However, HIV/AIDS prevalence rates do not exceed 1% in West Africa, China, India, the USA, the Russian Federation and Brazil (Bongaarts *et al.*, 2009: 3).

Tanzania is one of the countries in Sub-Saharan Africa, which have been most hit by the impact of HIV/AIDS. The first HIV/AIDS case in the country was identified in 1983 in the Kagera Region, and in a four year period the problem had already spread all over the country (ILO, 2004: 2). Like in Sub-Saharan Africa, prevalence rates reveal decreasing trends in Tanzania. For instance, in 1995 the prevalence was 8.1%, decreasing to 7% in 2003 and stabilizing at 6% to 7% by 2008 (Somi, 2006: 1; TACAIDS, 2008: 115; UNAIDS, 2008: 4). By 2009, about 1.4 million Tanzanians were living with HIV/AIDS (TACAIDS, 2008: 115; Bongaarts *et al.*, 2009: 3). Empirical evidence reveals that prevalence rate in Tanzania is higher than that in Sub-Saharan Africa. It is also higher among women compared to men in both urban and rural Tanzania (Philemon and Kessy, 2008: 1; Kessy *et al.*, 2010: 1). Existing data shows prevalence rates of 6.6% for women and 4.6% for men (TACAIDS, 2008: 115).

In addition, prevalence rate is higher among the employed and also among urban dwellers though non-employed and rural dwellers are also victims of the pandemic in the country. Prevalence rate also increases with age and is highest for the age group between 35 and 39 years (TACAIDS, 2008: 115). This implies that among other HIV/AIDS impact, the pandemic is a gender issue and it has tremendous impact on the labour force necessary for national development. HIV/AIDS prevalence rates are also higher among married couples living together compared to the never married and those who never had sex. Divorced, separated, and widowed or widowers also reveal higher HIV/AIDS prevalence rates compared to the never married (TACAIDS, 2008: 118). This suggests that in addition to other social groups especially the youth; more efforts to combat the problem need to focus on the married group in particular on improving marital relationships between the couples. This is critical in reducing the chances of exacerbating the spreading of HIV/AIDS through multiple sexual partners.

In estimating HIV/AIDS prevalence rate in Tanzania data are obtained from blood donors; pregnant women attending antenatal care services and from voluntary HIV counselling and testing (VCT) centres. During this era of HIV/AIDS prevalence, screening donated blood before transfusion is imperative because it helps to control transmission of the HIV from one person to another and further, the results of the tests are used as a proxy indicator for HIV/AIDS infection rates. This however, cannot be a good estimate rates for HIV/AIDS infection if blood donors are biased to the relatives of the sick person needing blood transfusion. Similarly, screening pregnant women is indispensable for preventing child to mother transmission though it excludes the male segment of the population. When estimating and projecting HIV/AIDS prevalence rate in Tanzania using antenatal surveillance data, Somi *et al.* (2006: 4) report decreasing of new cases from 250, 000 to 140, 000 between 1995 and 1997 respectively. Nevertheless, the same study projects increasing trend by the year 2010.

Tanzania, like other African countries, is committed to combating HIV/AIDS pandemic. The country declared the disease as one of the national disasters and a development challenge since 1999. In 2001, Tanzania formulated a national policy to guide all issues pertaining to controlling and preventing HIV/AIDS among the Tanzanian population. The government of Tanzania conducted a campaign for HIV voluntary counselling and testing (VCT) during July 2007 to April 2008 across the country and over that period more than 4 million Tanzanians were voluntarily tested for HIV/AIDS (TACAIDS, 2008: 115). However, the trends for testing HIV/AIDS over time in Voluntary Counselling and Testing (VCT) centres are not clearly known since the establishment of the campaign. Understanding these trends is considerably important because VCT is one of the reliable sources of data for estimating HIV/AIDS infection rates in the country. This article addresses two important things. First, it assesses the trend of people who were testing for HIV/AIDS in Voluntary Counselling and Testing (VCT) centres for a five year period between 2007 and 2011. Secondly, the article explores if HIV infections were decreasing or increasing over time using data from VCT centres in the study area.

### **1.1 The study area**

This study was conducted in Njombe Town Council one of the councils with highest HIV/AIDS prevalence rate in Tanzania. The council is found in Njombe Region, located in the southern highlands of Tanzania; formerly part of the Iringa Region. Njombe Town Council borders Ludewa District and Ruvuma Region on the south; Morogoro Region on the east; Makete District and Njombe District Council on the western and northern parts. Administratively, the Council is divided into two divisions, seven wards and forty four villages. According to the 2002 population and housing census, the human population in Njombe Town Council stood at 126, 586. Out of whom, 53.4% were women. The population grows at 2.1% per annum; fertility rate stands at 4%, while adult mortality rate accounts for 34%. Child mortality and maternal mortality rates are 166 and 116 respectively and dependants account for 72%, which are mainly children below 15 years and old people aged 65 years and above. This suggests that the work force constitutes 28% of the entire population in the council (Njombe Town Council, 2011). It is this small segment of the population which is more stricken by HIV/AIDS infections.

It is reported that 82% of the population in Njombe Town Council lives in rural areas relying on agriculture and livestock for their livelihoods. More than 78% of the work force are employed in agriculture. Though agriculture is essential for peoples' livelihoods in the Njombe Town Council, the council is largely threatened by food insecurity and income poverty. These problems are exacerbated by drought and high HIV/AIDS prevalence rate in the council. By 2008, HIV/AIDS prevalence rate in the Njombe Town Council stood at 16.7% higher than prevalence rate in Iringa Region which stood at 15.7% (TACAIDS, 2008: 116). HIV/AIDS have demographic, social and economic impact for the population in the council. It strikes the work force particularly the youth and thus negatively affecting agriculture which is the mainstay for livelihoods in the council. This implies that HIV/AIDS is a development problem in the Njombe Town Council. The problem is aggravated by inadequate health facilities including health care centres and dispensaries. It is for these reasons the study was conducted in order to analyze trends for HIV/AIDS infections in the Njombe Town Council specifically in the Njombe Urban Ward (Njombe Town Council, 2011).

### **1.2 Source of data**

This article utilized raw data collected from Voluntary Counselling and Testing (VCT) centres in Njombe Town Council specifically in Njombe Urban Ward. The VCT centres involved were (i) Njombe Lutheran Centre; (ii) Njombe Health Centre; and (iii) Kibena Hospital. Although the study was conducted in Njombe Urban Ward, it should be noted that not only the people who were voluntarily tested for HIV/AIDS and who are involved in this article come from Njombe urban, but also from other parts of the Njombe Town Council and outside the council. Data disaggregation by place of residence however, was not possible because it was not done so in the VCT centres' databases or could not be provided for unknown reasons. Data analysis was done by computing percentages of people who were voluntarily tested for HIV/AIDS infections. Computation was also done for percentages of men and women infected with HIV/AIDS over time.

## **2. Findings and Discussion**

### **2.1 Trends for HIV/AIDS voluntary testing**

The number and percentages of people who were voluntarily tested for HIV/AIDS infections over time are presented in Tables 1 to 3. The study intended to analyze trends for the past 5 years from 2007 to 2011 in each Voluntary Counselling and Testing (VCT) centre involved. However, data at Njombe Lutheran VCT centre were not available for the year 2011. Findings at Njombe Lutheran VCT centre revealed that the number of people who were voluntarily tested for HIV/AIDS was increasing over time (Table 1). Overall, the percentage of tested men increased by 6% from 2007 to 2010 higher than 5% increase during the same period for women (Table 1). Despite the fact that the number of tested men increased at a high pace than women, the number of women who were voluntarily tested for HIV/AIDS was high compared to that for men except in the year 2010. This suggests that in a four year period since 2007, there were many women compared to men who were voluntarily tested for HIV/AIDS at Njombe Lutheran VCT centre.

At Njombe Health Centre on the other hand, the general trends for women who were voluntarily tested for HIV/AIDS revealed increasing trend by 1% compared to men who indicated a 1% decreasing trend (Table 2). Results also indicated that in a five year period since 2007 many women compared to men were voluntarily tested for HIV/AIDS. Looking at the trends for women and men it can be seen that the number of women who were voluntarily

tested for HIV/AIDS at Njombe Health Centre was high in each year compared to men (Table 2). These results were similar to what was found at Njombe Lutheran VCT centre.

While percentage of women who were voluntarily tested for HIV/AIDS at Njombe Health Centre increased by 1% for a five year period since 2007, it decreased by 1.8% at Kibena Hospital (Table 3). Men on the other hand increased by 2% at Kibena Hospital (Table 3). However, like at Njombe Lutheran and at Njombe Health Centre, more women were voluntarily tested for HIV/AIDS at Kibena Hospital over that period compared to men. Individual years also revealed large number of women who were voluntarily tested for HIV/AIDS infections at Kibena Hospital.

The higher number and percentages for women who were voluntarily tested for HIV/AIDS infections suggests that women had benefited more from Voluntary Counselling and Testing (VCT) centres in the study area compared to men. In other words, women use VCT centres more compared to men. This can largely be explained by the fact that in Tanzania, pregnant women who are attending antenatal care services should be counselled and screened for HIV/AIDS infections to control Mother-to-Child HIV/AIDS Transmission (MTCT). This has inevitably increased the number of women who were voluntarily tested for the HIV/AIDS infections. Secondly, higher number of women who were voluntarily tested can also be due to the fact that women have responded faster compared to men for the campaign to voluntarily test for HIV/AIDS infections. This calls for specific interventions for men to ensure that they visit VCT centres for voluntary counselling and testing for HIV/AIDS infections.

## 2.2 Trends for HIV/AIDS infections

The number and percentages for people who were infected with HIV/AIDS in relation to the total number of people who were voluntarily tested are presented in Tables 4 to 6. For the period of four years since 2007, data from Njombe Lutheran Voluntary Counselling and Testing (VCT) revealed that infections for women were 6.5% almost twice as much as that of men infections which stood at 3.7% (See Table 4). Findings revealed that on average, infections at Njombe Lutheran VCT for both men and women were 5.1% (Table 4). Each year there were higher infections among women who were voluntarily tested for HIV/AIDS compared to infections among the men. Although the trend for infections was decreasing for both men and women, it decreased a little bit slowly among the women (See Table 4). This implies that women were more hit by the problem compared to men. Table 4 also shows that overall, infections for men decreased slightly faster by 1.4% compared to infections among the women, which decreased by 1.2% since 2007.

Findings at Njombe Health Centre depicted that for the five year period since 2007, overall infections for the women were 7.2% higher than 4.6% infections for the men (See Table 5). Infections for both men and women were 6.5% higher than that at Njombe Lutheran VCT Centre, which stood at 5.1%. Like at Njombe Lutheran VCT Centre, each year there were higher infections among the women who were voluntarily tested for HIV/AIDS compared to infections among the men. Table 5 also indicates that infections for both men and women were decreasing as it was at Njombe Lutheran VCT Centre. While infections among the women decreased by 2.4% in a five year period since 2007, infections among the men decreased by 2.5 (See Table 5).

Further, findings at Kibena Hospital revealed that like at Njombe Lutheran VCT and Njombe Health Centre, each year there were higher infections among the women who were voluntarily tested for HIV/AIDS infections compared to infections among the men; in a five year period since 2007. The overall infection for both men and women was 5.1 at Kibena Hospital. Women had an overall infection of 5.9% compared to 4.3% for men during the period under study (See Table 6). Like at Njombe Lutheran VCT and Njombe Health Centre, infections at Kibena Hospital revealed an overall decreasing trend by 5.1% in a five year period since 2007. Over the same period infections decreased by 6.9% among women higher than a decrease of 5.1% among the men (See Table 6).

Tables 4 to 6 suggest that while Njombe Lutheran VCT and Kibena Hospital showed similar infections of 5.1% on average, infections were higher at Njombe Hospital, which recorded an average of 6.5% for a five year period since 2007. As expected, infections were higher among women compared to men in all of the VCT centres involved in the study. Nonetheless, there was one common feature for all centres under the study that infections revealed decreasing trend across the centres. The decreasing trend for the infections across the centres from which data were collected is interesting. Yet, more people particularly women were living with HIV/AIDS in the study area compared to the men. As reported by UNAIDS (2010: 23), the higher HIV/AIDS infection rate among women can largely be explained by gender inequality and socio-cultural factors, which put women at risk of being infected with HIV/AIDS in study

society. Higher infections for women can also be attributed to physiological factors that lead them to contract the infection more easily compared to men.

It is important that an individual understand his or her own status regarding to HIV/AIDS infections in order to avoid further spread of the infection and therefore curbing new cases of the disease. In other words, efforts to control further HIV/AIDS infections will need to focus on Voluntary Counselling and Testing (VCT) and also on strengthening facilities for voluntary testing. Controlling new cases for HIV/AIDS can help to reduce resources directed to combating the disease and instead directing the resources to other development purposes including improving access to clean and safe water, access to improved housing and health services, access to electricity and access to good quality education.

As reported earlier in this article, the decreasing trends for HIV/AIDS infections seemed to be good news, yet infection rates established by this study out of total number of people who were voluntarily tested for HIV/AIDS in the VCT centres are absolutely high. Clearly, the infection rate is substantially high if the analysis is scaled up to more than 40 million people in Tanzania. Njombe Lutheran Centre and Kibena Hospital which revealed infections of 5.1% is almost similar to data presented by TACAIDS (2008: 115-118) for prevalence rate of 5% in Sub-Saharan Africa (SSA), but lower than percentages of infections at Njombe Town Council and at the national level which stood at 16.7% and 6.5% respectively by 2008 (Njombe Town Council, 2011; TACAIDS, 2008: 115). The difference between data at Njombe Town Council and at the national level can be explained by the fact that only three VCT centres are considered in this article, which translates into few people who voluntarily tested for HIV/AIDS infections. Njombe Health Centre had infections trends comparable to national level but higher infection trends compared with data for SSA. This suggests that HIV/AIDS infections were high in the study area particularly if the analysis is scaled up to the Njombe Town Council level and at the national level.

### **3. Conclusions and Policy Implication**

This article has analyzed trends for people who were voluntarily tested for HIV/AIDS infections in Njombe Town Council particularly in Njombe Urban Ward. The Voluntary Counselling and Testing (VCT) centres involved in the study were: Njombe Lutheran VCT; Njombe Health Centre and Kibena Hospital. The article draws the following conclusions: first, the number of people who were voluntarily tested for HIV/AIDS infections in the study area increased consecutively year after year during 2007 to 2011. Secondly, although the number of people who were voluntarily tested for HIV/AIDS infections was increasing, the infections among the tested people were decreasing. Third, as expected, infections among women were higher compared to men in the five year period since 2007 in all of the VCT centres involved in the study. This can largely be explained by the fact that many women visited VCT centres for voluntary testing compared to men, but also this can be attributed to gender inequality and physiological factors, which aggravate HIV/AIDS infections among women. Despite decreasing trend regarding HIV/AIDS infections in the study area, a considerable number of people are living with HIV/AIDS.

Therefore, concerted efforts are needed to control further infections. Such efforts from national to local governments should include among others the following: (i) vigorously promoting and creating awareness among the people to voluntarily test for HIV/AIDS; (ii) establishing more VCT centres both in urban and rural areas with all of the facilities required for a VCT centre; (iii) Although it is important to involve all social groups particularly women, men and the youth in every interventions pertaining to controlling new HIV/AIDS cases, there should be specific interventions to ensure that men do visit VCT centres to voluntarily test for HIV/AIDS infections. In other words, health care centres and hospitals in urban and rural areas should conduct VCT services not only for women attending antenatal care services but also for men, boys and girls. In addition, men should be mobilized to use VCT centres, because currently only few voluntarily tested for HIV/AIDS infections compared to women. Mobilization among the men will open an opportunity for this segment of the population to understand their status with regard to HIV/AIDS infections, which in turn can help to reduce further infections and so re-directing resources meant for HIV/AIDS mitigation measures to other development endeavours.

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Table 1: HIV/AIDS Testing at Njombe Lutheran VCT (% in brackets)

Year	Male	Female	Total	Males % change per annum	Females % change per annum
2007	837(47)	928(53)	1765	-	-
2008	2527(48)	2737(52)	5264	+1	-1
2009	2229(44.5)	2784(55.5)	5013	-3.5	+3.5
2010	1392(53)	1256(47)	2648	+8.5	-7.5
Total	6985(47.5)	7725(52.5)	14690	+6	+5

Table 2: HIV/AIDS Testing at Njombe Health Centre VCT (% in brackets)

Year	Male	Female	Total	Males % change per annum	Females % change per annum
2007	954(49)	1012(51)	1966	-	-
2008	2155(42.7)	2891(57.3)	5046	-6.3	+6
2009	5735(41)	8182(59)	13917	-1.7	+2
2010	5356(42)	7426(58)	12782	+1	-1
2011	10117(48)	10973(52)	21090	+6	-6
Total	24317(44.3)	30484(55.7)	54801	-1	+1

Table 3: HIV/AIDS Testing at Kibena Hospital VCT (% in brackets)

Year	Male	Female	Total	Males % change per annum	Females % change per annum
2007	1001(47)	1120(53)	2121	-	-
2008	2294(47)	2572(53)	4866	0	0
2009	4741(44.8)	5832(55.2)	10573	-2.2	+2.2
2010	6914(46)	8257(54)	15171	+1.2	-1
2011	9853(49)	10273(51)	20126	+3	-3
Total	24803	28054	52807	+2	-1.8

Table 4: HIV/AIDS Infection at Njombe Lutheran VCT (% in brackets)

Year	Infected with HIV/AIDS				Not infected with HIV/AIDS		Total
	Male	Male % change	Female	Female % change	Male	Female	
2007	69(3.9)	-	114(6.5)	-	768(43.5)	814(46.1)	1765
2008	201(3.8)	-0.1	377(7.2)	+0.7	2326(44.2)	2360(44.8)	5264
2009	208(4.1)	+0.3	322(6.4)	-0.8	2021(40.3)	2462(49.1)	5013
2010	67(2.5)	-1.6	141(5.3)	-1.1	1325(50)	1115(42.2)	2648
Total	545(3.7)	-1.4	954(6.5)	-1.2	6440(43.8)	6751(45.9)	14690

Average of infection is 5.1 Male % decrease is -1.4; female % decrease is -1.2

Table 5: HIV/AIDS Infection at Njombe Health Centre VCT (% in brackets)

Year	Infected with HIV/AIDS				Not infected with HIV/AIDS		Total
	Male	Male % change	Female	Female % change	Male	Female	
2007	154(7.8)	-	198(10.1)	-	800(40.7)	814(41.4)	1966
2008	263(5.2)	-2.6	431(8.5)	-1.6	1892(37.5)	2460(48.7)	5046
2009	504(3.6)	-1.6	996(7.2)	-1.3	5231(37.6)	7186(51.6)	13917
2010	493(4.6)	+1.0	713(6.7)	-0.5	4863(45.4)	4643(43.3)	10712
2011	1121(5.3)	+0.7	1623(7.7)	+1.0	8996(42.6)	9350(44.3)	21090
Total	2535(4.6)	-2.5	3961(7.2)	-2.4	21782(39.6)	24453(44.6)	54801

Average of infection is 6.5 Male % decrease is -2.5; female % decrease is -2.4

Table 6: HIV/AIDS Infection at Kibena Hospital VCT (% in brackets)

Year	Infected with HIV/AIDS				Not infected with HIV/AIDS		Total
	Male	Male % change	Female	Female % change	Male	Female	
2007	192(9)	-	253(11.9)	-	809(38.1)	867(40.8)	2121
2008	270(5.5)	-4.0	341(7)	-4.9	202(4.2)	2231(45.8)	4866
2009	406(3.8)	-1.7	674(6.4)	-0.6	4335(41)	5158(48.8)	10573
2010	507(3.3)	-0.5	819(5.4)	-1.0	6407(42.2)	7438(49)	15171
2011	894(4.4)	+1.1	1012(5)	-0.4	8959(44.5)	9261(46)	20126
Total	2269(4.3)	-5.1	3099(5.9)	-6.9	22534(42.6)	24955(47.2)	52807

Average of infection is 5.1% Male % decrease is -5.1; female % decrease is -6.9