

SHORT COMMUNICATION

Factors affecting HIV counselling and testing among adults in Muheza District, Tanzania

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Abstract: HIV/AIDS is one of the major public health problems affecting people worldwide. Counselling and testing is a process by which an individual undergoes confidential counselling to enable him/her to make an informed choice about his or her HIV status and to take appropriate actions. The objective of this study was to assess factors affecting HIV counselling and testing (HCT) among adults in Muheza district in north-eastern Tanzania. A total of 394 adults were interviewed using a standardized questionnaire. The majority of the study participants were females (N=213; 54.1%). Most of the respondents were either in or have completed secondary education. Almost two thirds of the study population (262) was not married. Seventy one percent of all participants viewed HCT positively. A significant proportion of married (17.7%) and un-married (16.5%) participants judged HCT as not essential as it would not change the test result. Sixty-eight percent of the respondents did not consider themselves at risk and most of them (71%) were married. Importantly, 26% reported being scared of discrimination. In conclusion our study results demonstrate that only half of the study population had adequate knowledge of HCT. Being married was considered as a 'protective' factor in terms HIV risk which indicates a misconception. These findings underscore the importance of proper HIV counselling and testing in this community so as to bridge the knowledge gap. It further demonstrates the need to address in detail misconceptions during HIV counselling and testing.

Keywords: HIV, voluntary, counselling, testing, Tanzania

By the year 2009 approximately, 33.4 million people were living with HIV in the world (UNAIDS, 2009). In Sub Saharan Africa there is a decreasing trend in the number of new infections with an estimated 1.8 million new infections in 2009 as compared to 2.2 million new infections in 2001 (UNAIDS 2010). A number of factors have contributed towards this decreasing trend, including HIV interventions and the natural course of the epidemic (UNAID 2010). Despite this decreasing trend, Sub-Saharan Africa remains the region heavily affected by HIV. For instance, in 2008 alone, Sub-Saharan Africa accounted for 67% of all HIV infections in the world, 68% of new HIV infections among adults and 91% of new HIV infections among children. The region also accounted for 72% of the world's AIDS related death (UNAIDS, 2009).

HIV testing and counselling is one of the strategies used in the management and control of the diseases. Counselling and testing is a process by which an individual undergoes confidential counselling to enable the individual to make an informed choice about learning his or her HIV status and to take appropriate action. For over two decades, client-initiated HIV testing and counselling, also known as voluntary counselling and testing (VCT), has helped millions of people learn their HIV status (<http://www.who.int/hiv/topics/vct/about/en/index.html>). However, statistics indicate that to-date the global coverage of HIV testing and counselling programmes remains low. Efforts are urgently needed to increase the provision of HIV testing through a wider range of

effective and safe options. For this reason, in 2007, WHO and UNAIDS issued guidance on provider-initiated HIV testing and counselling (PITC) in health facilities to support increased uptake and improve access to HIV prevention, treatment and care (WHO/UNAIDS, 2007). Despite this global initiative, the majority of people in Tanzania are still unaware of their HIV status despite the expansion of the HCT services in the country.

In a study in Kagera in north-western Tanzania the acceptability of HCTs was reported to be about 54% while the actual acceptance to testing was about 55% (Killewo *et al.*, 1998). In another study in Zambia, it was found that readiness for testing was higher in younger age group (20-24 years) than in older age group (40-49 years) (Fylkesnes & Siziya, 2004). A study in Guizhou Province in China revealed that the main barriers were attributed by self perception of low risk and fear of stigma and discrimination that would result from taking the test (Ma *et al.*, 2007). In Tanzania, among predictors of HIV completion of counselling and testing included self perceived risk of HIV, prior knowledge of HCT and sex with a high risk partner (Wringe *et al.*, 2008).

Counselling for HCT consists of pre test, post test and follow up counselling. However stigma is one of the barriers towards HCT. Fear of rejection or stigma is the common reason for not wanting to know HIV status. Gender inequalities are another barrier towards HCT. In many countries women are particularly vulnerable and may risk rejection, violence, abandonment or loss of home and children if their status becomes known (UNFPA 2004). Lack of understanding of risk of contracting HIV is another barrier many people particularly in low prevalence areas where knowledge levels about HIV/AIDS may be low may not perceive that they are at risk. In high prevalence areas, people may believe that they are already infected (UNFPA, 2004). This study was therefore, conducted to assess factors affecting HIV counselling and testing among adults in Muheza District in Tanzania.

This study was conducted in Muheza district in north-eastern Tanzania. Muheza has a population of 279,423, with almost equal male: female distribution (139,673 vs. 139,750). Slightly over half (51.4%) of the population is under 19 years, which makes it a very young population. The overall estimated HIV prevalence in Muheza in 2008 was 6.7% as per the annual District Report. This was a descriptive cross sectional survey conducted among 394 adults in September 2008. Data were collected through a pre-tested standardized questionnaire. A multistage random sampling of wards, villages/streets was conducted. Selected household households were visited. All adults found in the household were interviewed separately each with a separate questionnaire. Participants were assured of confidentiality of information between the interviewer and the interviewee.

Frequency distribution and summary statistics was calculated for the variables under consideration. To test for association, Chi-square test and or Fisher exact test was used. Standardized deviance residual was then calculated for those significant associations to investigate the nature of association. Data were analyzed using SPSS 13.0 for Windows software. Permission to conduct the study was granted from all local authorities at the district. All participants gave a verbal consent before interview. Ethical clearance was obtained from Muhimbili University of Health and Allied Sciences Ethics Committee.

A total of 394 individuals were involved in the study. Majority of participants were females 213 (54.1%). About 212 (54%) of all participants were in or had acquired secondary school education. Those with primary school education accounted for 27.4% of the respondents. A small proportion (6.9%) had never been to school whereas 11.9% had post-secondary school education. Almost two thirds of this study population was not married. Majority (42.4%) of participants were 23-27 years old followed by those in 18-22 years old

(35.8%). Among the respondents 222 (56.3%) knew HCT as a process of making an informed decision. However 16% of females knew that HCT is a test that must be undertaken by pregnant women attending ante-natal care clinic (ANC). Fifteen (3.8%) of the respondents were ready to test without counselling (Table 1). About 8.2% of the participants thought that HCT was a health education programme on how one can prevent HIV infection. There was no significant difference in marital status on their perception of HCT ($P = 0.0647$).

Table 1: Proportion of adults on their understanding of HCT

Sex	"Pregnant women must test at antenatal clinic"	"After HIV counselling test is a Must"	"Process to make an informed decision"	"You can test without counselling"	Others	Total
Male	13 (7.2%) -2.895*	50 (27.6%) -0.017*	114 (63.0%) 2.403*	4 (2.2%) -1.658*	0 -1.305*	181 (100%)
Female	34 (16.0%) 2.546*	59 (27.7%) 0.017*	108 (50.7%) -2.492*	11 (5.2%) 1.448*	1 (0.5%) 0.824*	213 (100%)
Total	47 (11.9%)	109 (27.7%)	222 (56.3%)	15 (3.8%)	1 (0.3%)	394

P-value = 0.0171; *Standardize deviance residual

With regard to awareness of components of HCT, 89 (49.2%) of the males and 101 (47.5%) of females thought HCT as a health education programme focusing on how one can prevent from HIV. The difference was not statistically significant ($P > 0.05$). Only 164 (41.6%) of the respondents knew that HCT consists of pre testing, post testing and follow up counselling (Table 2).

Table 2: Awareness of components of HIV counselling and testing by sex of respondent

Sex	Pre test only	Lecture on how to prevent HIV	on Pre, Post and follow counselling	During up counselling you are given ARV	Others	Total
Male	18 (9.9%)	89 (49.2%)	73 (40.3%)	0 (0%)	1 (0.6%)	181 (100%)
Female	19 (8.9%)	101 (47.4%)	91 (42.7%)	2 (0.9%)	0 (0%)	213 (100%)
Total	37 (9.4%)	190 (48.2%)	164 (41.6%)	2 (0.5%)	1 (0.3%)	394

Fisher exact P-value = 0.6732

There was no association between sex and awareness of components of HIV counselling and testing ($P = 0.6732$).

On average, 9.4% (married=9.1%; not married=9.5%) knew that HCT is composed of pre-test only. More married (51.5%) than not married (46.6%) of the respondents were aware that HCT is about education on how to prevent HIV. HCT is made up of Pre, post and follow up counselling was mentioned by 41.6% (married=39.4%; not married=42.7%) of the respondents. Two (0.5%) unmarried individuals were of the opinion that during counselling one is given anti-retroviral therapy. There was no significant difference in marital status on the awareness of components of HCT ($P = 0.8358$).

Table 3: Proportion of adults on their perception of HCT

Marital status	“Should be done to high risk group”	“Benefit those infected only”	“No need as it doesn’t change results”	“Help to understand results for both infected and uninfected”	Total
Not married	14 (5.4%)	9 (3.4%)	43 (16.5%)	195 (74.7%)	261 (100%)
Married	15 (11.5%)	8 (6.2%)	23 (17.7%)	84 (64.6%)	130 (100%)
Total	29 (7.4%)	17 (4.3%)	66 (16.9%)	279 (71.4%)	391

P-value = 0.0647

A total of 279 (71%) respondents perceived HCT as a procedure that helps to understand if one is infected or not. Twenty three (17.7%) of the married respondents thought there was no need of HCT as it doesn’t change the results, with the percentage of 16.5% among those not married (Table 3). Among those who had never undertaken HIV test, 90 (68.2%) reported that the reason for not testing was because they didn’t consider themselves at risk. More males (73%) than females (62.1%) thought they were not at risk. On average, 35 (26.5%) of the respondents did not want to test because of stigmatization. Among the respondents, males 19 (25.7%) and females 16 (27.6%) reported of being scared of stigmatisation. Lack of confidentiality was reported by 2.3% (males=1.4%; females=3.4%) respondents. About 70% of married participants reported that they didn’t think they are at risk of being infected. Having multiple sexual partners was a reason for not having tested by a total of 4 (3%) respondents, and all were females.

This study reveals that about half of adult population in Muheza District had correct understanding of HCT as a process of making an informed decision. It further showed that about two thirds of the adult population ever had HIV test done by the time this study was conducted. In a recent study in China, a much lower proportion (23%) of participants was of the opinion that there was no benefit of being tested (Ma *et al.* 2007). The higher proportion of individuals who had correct understanding of HCT in our study is likely to have been contributed by a higher level of education among them. This is similar to the findings in the China study which showed that HCT related knowledge was closely associated with education level. Like in our study, in Zambia, Fylkesnes & Siziya (2004) observed that readiness to test was significantly higher in age group 20-24 years than in other age groups. In our study, the proportion of those who ever tested was high. This study was conducted after a national wide campaign on HCT which could explain the high observed percentage of ever had test by the time of the study.

With regard to willingness of HCT uptake, the majority of our study population were willing to take HCT. Similar to our findings, in Uganda it was reported that the majority of a study population was willing to HCT (Matovu *et al.*, 2005). Some authors have already shown that HCT attendance was higher among men with secondary education and among those who had previously undergone HCT (Wringe *et al.*, 2008; Vermeer *et al.*, 2009) who reported that about half of Tanzanian medical students to have had undergone HCT.

A number of barriers to HCT were identified in this study. Most importantly, about two thirds of the respondents reported that they didn’t consider themselves at risk and most of them were married. These findings concur with those reported from the study in China (Ma *et al.* 2007) elsewhere in Tanzania (Maman *et al.*, 2001). The later observed that fear of partners’ reaction, decision-making and communication patterns between partners, and

partners' attitudes towards HIV-1 testing were among the most important challenges to undertake HCT.

In conclusion our study results demonstrate that only half of the study population had adequate knowledge of HCT. Nevertheless, the larger part of study participants would be willing to undertake HCT. Being married was considered as a 'protective' factor in terms HIV risk which indicates a misconception. These findings underscore the importance of proper HIV counselling and testing in this community so as to bridge the gap of knowledge pointed out. It further demonstrates the need to address in detail misconceptions during HIV counselling and testing.

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