

# Factors Affecting the Attitude of Young People towards HIV Testing Uptake in Rural Ghana

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Ghana**Tel:** +233244897338**Citation:** Djan D (2018) Factors Affecting the Attitude of Young People towards HIV Testing Uptake in Rural Ghana. J HIV Retrovirus Vol. 4 No.2:13

## Abstract

**Background:** Voluntary Counseling and Testing (VCT) is an integral component of HIV prevention and care strategies worldwide. Attitude of young people towards HIV testing in Techiman Municipality has negative outcome of testing uptake; leading to missed opportunities among this group. Previous studies have confirmed that factors that influence such attitudes include counselors' attitude, level of awareness, perception about people living with HIV/AIDS and respondent's socio-demographics such as age, gender, study level and location of residents.

**Objective:** To determine the factors affecting the willingness of people to be tested for HIV among young people in rural Ghana.

**Design:** Cross-sectional study

- **Setting:** Government owned Senior High Schools of Techiman North district.
- **Participants:** Students in Senior High Schools (15-24 years) were included.
- **Response rate:** Response rate of 386 (76.1%).

**Results:** Analysis showed that the prevalence of use of HCT services was the difference between socio-demographic characteristics, knowledge about HTC centre for testing, knowledge of HIV status and ever visited any HCT centre. Logistic regression analysis showed that variables significantly related with the use of HCT services by providers in Techiman district were perception, attitude and no desire for testing. The results may help health providers to plan for young people's desires for HCT services in Techiman Municipality and Ghana as a whole. Future research should address behaviour change of the young people for testing.

**Methodology:** Self-administered questionnaire was used to assess the factors that affect HIV testing among the representative sample of 386 young students selected by stratified random sampling from September to October, 2015.

**Conclusions:** Participants desire for HIV testing is influenced by knowledge about HIV and own health status, Visit to HCT centre and knowledge about the HCT Centre.

**Keywords:** HCT uptake; HIV testing; Attitude; Senior high school; Students; Ghana

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## Introduction

Evidence shows that HIV/AIDS is one of the most crippling and devastating diseases infecting people throughout the world [1]. According to the UNAIDS, the number of people infected with HIV globally was estimated at 34 million in 2010 of whom 12.5

million are young people aged 15 to 24 years, and accounts for 45% of all new infections among the group. UNAIDS, 2007 [2] report says Sub-Saharan Africa is mostly affected region with HIV/AIDS being the leading cause of deaths [3,4]. The mode of infection in the region is heterosexual infection [4]. That has established a high level of HIV/AIDS awareness and knowledge among young people. However, this level of knowledge has not been translated to positive actions of HIV prevention and control [3]. Although most adolescents know the place where they can get tested for HIV, the proportion of who reported ever having had an HIV test remains low across most countries [5]. There is the need to know why certain populations are not accessing HIV services in order to outline the urgent needs to address their specific needs [6]. The purpose of the study is to examine attitudes towards HIV testing, HIV risk perception, HIV testing behaviours and socio-demographic factors among Senior High Students in the research area between 15 to 24 years.

Taiwo & Osezua with similarities with Ghana AIDS Commission (GAC), found that HIV counseling and testing (HCT) is a cornerstone among preventive strategies and is the gateway to treatment, care, support, and preventive interventions for persons infected with HIV and to provide referral for special care [3,7]. Thus, WHO recommends HIV counseling and testing with linkages to prevention, treatment and care for adolescents from key populations in all settings, (both low and concentrated epidemics) [4,8]. However, counseling and testing of HIV and uptake is not adequately involving the adolescents, despite their significant proportion of the current HIV burden [9].

Previous studies indicate that urban dwellers were found to be more willing than rural villagers to undergo testing for HIV. Established barriers of HIV testing included abandonment and abuse, marital break-up, discrimination, psychological distress, depression, availability and confidentiality [10,11]; compared to factors associated with HIV testing among young people including socio-demographic factors, age, gender, education, wealth and HIV media campaign in other studies. There is still room to improving the low proportion of young people who test for HIV [11]. Therefore, further extensive studies that will explore the reasons for the intentions for not willing to have HIV test are recommended [12]. Urgent need to factor in adolescents' health proportionally in the development of HCT programme is also required.

## Materials and Methods

**Study area and period:** The study was conducted in the Tuobodom Municipality in the Brong Ahafo Region of Ghana. Based on the data from the Municipal education office, currently in the Tuobodom Municipality, there are four government and one private Senior High Schools providing education on a regular basis and during the study period, September to December, 2015.

**Study design:** A descriptive cross-sectional study was used in this study.

**Source population:** All Senior High youth students of government owned institutions in the Tuobodom Municipality enrolled in the academic year of 2013/2014.

**Study population:** All day time youth students in the Senior High School enrolled in the academic year of 2013/2014 in the selected schools.

**Sample size:** The sample size was determined by using single population proportion formula with the following assumptions: 67.6% prevalence (p) of VCT uptake, a study conducted by Ghana Demographic Health Survey in 2008 (GDHS, 2008), 5% marginal error (d) and 95% confidence interval of certainty ( $\alpha=0.05$ ). A total of 386 respondents were employed in this study.

**Sampling technique:** A homogeneous group of 15-24 year senior high school students were selected for this study. To get a representative sample population for the survey, a multi-stage sampling technique was employed in order to select the study units probability proportionate sample size (PPS) was used to determine the sample proportion. Since there was more than one school, four governments owned schools were selected randomly from each of the schools. After identifying the specific schools, list of students' names in the respective schools and class were taken from the register and assigned accordingly.

## Study variables

The dependant variable of the study was HIV testing uptake. Independent variables included Socio-demographic variables, (age, gender, religion, ethnicity, place of residence, and year of study). Sexual behaviours, HIV risk perception, Knowledge and attitude towards HIV/AIDS and HCT.

## Data collection

A total of 386 students were included in the study. The students were selected proportionally considering all government schools and both sexes in a random way. A structured self-administered questionnaire adopted from existing survey was developed to be filled by the students. The questionnaire was prepared in English. The questionnaire was pre-tested among a similar target group among Aworowa Senior High School students. Respondents who were involved in the pre-test did not participate in the actual study.

**Data quality assurance:** Properly designed and pre-tested questionnaire was used. The questionnaire was pre-tested to improve on clarity. The main correspondent administering the questionnaire was adequately trained and supervised during data collection and entry; and double data entry was used to ensure data quality. To reduce acquiescence bias, where respondents tend to agree with statements as presented, questions on Likert scale were balanced to have some positively phrased and others negatively phrased.

**Data analysis:** The data were entered into a pre-drafted coding sheet on excel before transferring to SPSS version 21 by two different data clerks. Binary logistic analysis with conditional method calculating odds ratios (OR) and 95% confidence intervals (CI) was used to estimate the association between the dependent variable and independent variables. Statistical significance was set at  $\alpha \leq 0.05$ . In an attempt to identify the relative effects of explanatory variables on the outcome variable, multivariable

analyses was applied. Explanatory variables with P-value<0.2 were entered into the final regression model based on the likelihood ratio for further analyses to identify factors that predict the service uptake.

### Ethical approval

The ethical approval and clearance for this research study was obtained from Hanyang University Institutional Research Ethics Review Committee. At all levels, officials were contacted and permission from the Municipal education office and the headmasters of the respective schools. All the necessary explanation about the purpose of the study and its procedures was explained with the assurance of confidentiality. Both written and verbal consent from the study and participants were also secured.

### Study limitations

The study relied on self-reported testing; there were no independent means of verifying it and the study did not factor in the time elapse since testing. Respondents who were not sexually active were included in the study.

## Socio-demographic Characteristics

### Age and sex distribution

The respondents were aged 14 to 24 years with an overall mean age of 18.25 years. The median age was 20 years. Respondent's aged 18 years were majority accounting for 35.0% followed by 17 years accounting for 33.7%. Respondent's aged 15 years was the least at 0.3%. **Table 1** below summarizes age and sex distribution. Majority of the participants were Bonos 214 (55.4%) and others 63 (63.3). Christianity formed 297 (76.9), with 89 (23) being other religions or faiths. Respondents who lived in school dormitory

**Table 1:** Demographic characteristics of young people in Tuobodom district, 2015.

Demographic Characteristics	Number	Percentage
<b>Age (in years)</b>		
15-24	325	84.2
20-24	21	5.4
<b>Gender</b>		
Female	201	52.1
Male	185	47.9
<b>Ethnicity</b>		
Bono	214	55.4
Others	172	44.6
<b>Religion</b>		
Christianity	297	76.9
Other faiths	89	23
<b>Place of residence</b>		
School dormitory	208	53.9
Private dormitory	178	46.1

were 208 (53.9) and others lived in private and family residence 178 (46.1).

## Results

Relationship between socio-demographic and basic health behavioural factors and HIV testing are shown in **Table 2**. In order to establish association between socio-demographics and HIV testing, chi-square test was done. Considering the p-value less than or equal to 0.005 as significant level, there is significant association between testing and place of location of the respondents, ( $\chi^2=7.999$ ,  $p=0.005$ ). People in the urban areas are more likely to go for HIV testing than the people in the rural areas (77.4% to 22.6%). However, there were no significant association between other socio-demographic factor which includes age, gender and ethnicity.

### HCT uptake

All variables that were statistically significant ( $p<0.05$ ) in the chi-square test were included in the logistic regression analysis to determine factors associated with HIV service utilization among respondents. The results in (**Table 3**) below revealed that

**Table 2:** Socio-demographic characteristics associated with HIV testing service utilization in Techiman North district, 2015.

Variables	HIV Testing				$\chi^2$	p-value
	Tested		Not tested			
	n	%	n	%		
<b>Age group (in years)</b>						
15-19	27	87.1	298	83.9	0.213	0.644
20-24	4	12.9	57	16.1		
<b>Gender</b>					0.17	0.41
Male	16	51.6	170	47.8		
Female	15	48.4	186	52.2		
<b>Ethnicity</b>					0.005	0.944
Bono	17	54.8	197	55.5		
Others	14	45.2	158	44.5		
<b>Marital status</b>					0.055	0.815
Marriage experience	29	93.5	328	92.4		
Single	29	93.5	328	92.4		
<b>Religion</b>					0.004	0.948
Christianity	24	77.4	273	76.9		
Others	7	22.6	82	23.1		
<b>Level of study</b>					3.65	0.056
<Grade 2	24	77.4	213	60		
>Grade 3	7	22.6	142	40		
<b>Income status</b>					2.384	0.304
<GH ₵199.00	16	51.6	167	47		
GH ₵200.00 to 299.00	9	29	75	21.1		
>GH ₵ 300.00	6	19.4	113	31.8		
<b>Place of residence</b>					0.012	0.912
School dormitory	17	54.8	191	53.8		
Private dormitory	14	45.2	164	46.2		
<b>Location</b>					7.999	0.005
Rural	7	22.6	174	49		
Urban	24	77.4	181	51		

respondents who had knowledge about their own HIV status were more than sixty-seven times likely to utilize HCT service. In addition, respondents who knew the places of testing were almost twice likely to utilize HCT services. Regarding location of residence, respondents who live in urban areas were three times more likely to use HCT services compared to residents who live in rural areas.

### Self-reported attitude of HIV testing and service utilization

Self-reported attitude of the respondents is shown in 5.9, and there is significant association between HIV testing and knowledge level ( $\chi^2=174.167$ ,  $p=0.000$ ), knowledge about HCT centre ( $\chi^2=15.491$ ,  $p=0.000$ ) and ever visited any HCT centre ( $\chi^2=174.167$ ,  $p=0.000$ ). People who have adequate knowledge and positive attitude are more likely to go for HIV testing (knowledge level of status 71.0% to 29.0%, knowledge level of HCT centre 90.3% to 9.7% positive action 71.0% to 29.0%; while other variables willingness for HIV testing had no significance (80.6% to 19.4%) who were unwilling (Table 4).

### Discussion

This study reports the recent trends of access of HCT by young people (15-24 years). The results of the study show low

prevalence of utilization of HCT service by 8.0% of participants. This is consistent with previous studies [6]. However, this finding is higher when compared to the national prevalence of 0.36% among people aged 15 to 24 years [4,7]; leading to late diagnosis, treatment and prevention of on-going HIV transmission. These findings are consistent with several studies [4,8,13]. Additionally, similar to previous studies, most of the participants did not know their HIV status, the age group that is sexually active may continue to spread the disease inadvertently [13,14].

The results of this study imply that poor attitude towards HCT services by the young people may contribute to low testing prevalence among the age group. This finding is similar to the previous studies [7,10,15]. HIV Alert School Model needs to cover behaviour change to correct this attitude to go for HCT.

Like several studies, likely predictors of HCT included socio-demographic factors such as study level, location of residence and other factors such desire for testing, knowledge of places of testing, visit to HCT centers and people who had experienced sexual intercourse [11,16,17].

Unlike other studies, poverty, stigma, illiteracy and negative attitude towards PLWH did not influence uptake.

Tested participants were more likely to be residents in the urban areas than the rural residents. The results imply that this may

**Table 3:** Factors affecting perception and knowledge about HIV testing in Tuobodom North district, 2015.

Variables	B	OR	p-value	95% CI
<b>Testing (reference)</b>				
Knowledge of own HIV status	4.205	67.03	0	(21.385-210.1040)
Knowledge about HCT centre for testing	0.595	1.812	0.407	(0.444-7.396)
Location of residence	1.218	3.38	0.034	(1.098-10.404)

**Table 4:** Self-reported attitude associated with HIV testing service utilization (N=386).

Variables	HIV Testing				$\chi^2$	p-value
	Tested		Not tested			
	n	%	n	%		
<b>Knowledge of own HIV status</b>						
Yes	22	71	10	2.8	174.167	0
No	9	29	345	97.2		
<b>Willing to go for HIV testing</b>						
Yes	25	80.6	256	72.1	1.048	0.306
No	6	19.4	99	27.9		
<b>Knowledge about HCT centre for testing</b>						
Yes	28	90.3	191	53.8	15.491	0
No	3	9.7	164	46.2		
<b>Ever visited any VCT centre</b>						
Yes	22	71	10	2.8	174.167	0
No	9	29	345	97.2		
<b>Ever had sexual intercourse</b>						
Yes	17	54.8	184	51.8	0.103	0.748
No	14	45.2	171	48.2		

contribute to high rate of HIV and low rate of testing in the developing countries where higher percentage of the population are likely to live in the rural communities; a trend similarly reported in others studies by Taiwo and Osezua [3], Shintaye et al., [10], Peltzer and Matseke [11]. In these studies participants SHS 2 or less was more likely to be tested.

## Conclusion

This study showed that the prevalence of testing among young people was lower than the targeted universal testing rate of 8.0%, though higher than that recorded by GDHS in 2008. In this study, HIV testing was influenced by access, willingness for HIV testing and knowledge about HCT centre.

The findings from the study have been analyzed to find out if the study hypotheses have been affirmed or negated. Perception has not been shown to affect testing; age has not been shown to influence testing. Gender has not been shown to affect testing. Religion and education level did not influence testing uptake, Hypothesis that socio-demographic characteristics and social stigma affect testing: location of residence has been shown to affect testing. More urban residents are more likely to be tested than rural residents. Ethnicity did not influence testing uptake.

## Study Limitations

High postage cost, bureaucracy and poor road network made this study difficult to carry out.

## Recommendations

We recommend that HIV programmes should target correcting the drawbacks related to myths and misunderstanding of HIV key messages. Refresher programmes should be organized

for counselors to motivate and update their skills and improve quality of work at the HCT centers. The results indicated that there is still less number of students utilized VCT service: therefore there is a need for further information, education and communication program with regard to increase VCT service uptake and expanding youth targeted VCT service. HIV Alert School model should be re-structured to incorporate the young people's interest in the model. National Health Insurance should include anti-retroviral drug on the drug list.

We recommend that HIV programmes should target correcting demystifying the drawbacks related to myths and misunderstanding of HIV key messages. Refresher programmes should be organized for counselors to motivate and update their skills and improve quality of work at the HCT centres. Finally, programme involving the youth must involve them to increase their interest to translate it into action.

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## Competing interest

The authors expressed no competing interest about the topic

## Ethical Approval

Institution Ethical Review Board, Hanyang University, Seoul, South Korea.

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