

COMPARATIVE ANALYSIS OF YOUTHS' PARTICIPATION IN HIV/AIDS COUNSELING AND TESTING (HCT) SERVICES IN ABIA STATE, NIGERIA

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ABSTRACT

The study compared youth's participation in HIV/AIDS Counselling and Testing (HCT) Programme in Urban and Rural Communities of Abia State, Nigeria. The objectives specifically described the socio-economic characteristics of the respondents in the study area and compared the level of participation in HIV/AIDS Counselling and Testing among the rural and urban respondents. A five-staged sampling technique was employed for data collection and statistical tools such as frequencies, percentages, charts and Z-statistic were used in generating the desired results. From the study, level of educational attainment was higher in the urban areas of Aba North and South Local Government Areas than the rural communities of Ohafia and Arochukwu Local Government Areas. Majority of the respondents were unmarried youths and students by occupation with a mean age of 22.95. On participation level, the result shows a general low level of participation. Risk perception, level of knowledge and occupation were significant at 5%, 10% and 1% respectively and negatively related to participation, while educational attainment of the respondents, distance to HCT centre, household sizes, level of awareness and occupation were significant at 5%, 10%, 5%, and 5% respectively and positively related to participation in HCT. There was significant difference in the levels of participation between the urban and rural respondents. The study therefore recommended an increase in the number of HCT centres in the State, especially at the rural areas, to increase access of this intervention to a larger population of youth. There should also be increased rural awareness campaign in the rural communities of Abia State, which must be followed by free HIV/AIDS Counselling and Testing sessions.

Keywords: HIV/AIDS; Youth; Participation; Counselling; Testing.

1. INTRODUCTION

The Human Immunodeficiency Virus (HIV) and Acquired Immune Deficiency Syndrome (AIDS) epidemic in Africa is described as a generalized HIV epidemic, reflecting the high prevalence in the general population. Women are disproportionately affected in comparison with men, with stark differences between the sexes among young people (Odoemelam, 2010).

The severe consequences of HIV/AIDS could be viewed from the point that the disease is not just a public health problem but it also has far-reaching Consequences for all social sectors and for development. According to Nwachukwu (2014), people's participation is a popular concern amidst academics, development partners, United Nation agencies and subsequently most of the Third World governments over the last three decades. Though the mushrooming growth of its offshoots is evident in every specialized branch of development studies such as economics, political science, sociology and lately public administration and public policy analysis, yet participation as a concept still lacked a systemic theoretical ground and empirical basis of judgment in the social sciences. Currently, people's participation has emerged as an umbrella term for a new approach in development intervention (Mohammad, 2010).

Conceptualizing participation is not a simple task. The term participation is generally operationalized differently depending on the context and field in which it is studied. In this work, participation refers to active or meaningful involvement of young people in HIV/AIDS Counseling and Testing Programme in Abia State, Nigeria. To be more precise, only those activities or involvements on the part of the young people, which have influenced the decision-making in safer sexual behavior, uptake of HCT and other prevention intervention, have been considered as Participation in this study.

In literature, two broad clusters of factors shape a particular individual's interest in being tested (readiness) and the ultimate use of HIV/AIDS Counseling and Testing (HCT) services (acceptability). These include "demand"-related factors on the one hand and "supply"-related factors on the other. Demand-related factors describe a range of determinants that operate within the control of the individual. These include: Socio-demographic factors, such as age, sex, education, religion and marital status (Jereni and Muula 2008; Iyaniwura and Oloyede 2006; Bwambale *et al* 2008). HIV-related knowledge, perception and practices: These include general HIV and AIDS knowledge, knowledge and perceptions of HIV test services, low perceived risk of HIV infection and fear of stigma and discrimination (Bwambale *et al* 2008).

As a health problem, HIV/AIDS has led to increase in morbidity and mortality which subsequently has created a development problem due to a massive fall in productivity of individuals and the countries affected, increase in the cost of health care services, decline in savings and capital formation (since funds needed for such are diverted to the treatment and care of the victims), decline in spending on education, higher expenditure on caring for orphans left behind by those killed by the disease, high level of poverty, food insecurity and malnutrition (Odoemelam, 2010).

Abia State has a burden of a young population (ages 0-14 years), which accounts for 36.8% of the population. Over 59% of the population lives below the poverty line (one US dollar a day). HIV and AIDS prevalent rate stood at 4.0% in 2005 but over the last five years increased to 7.3% placing the State on the number eight position in the prevalence rate in Nigeria. However, States like Cross River, Nassarawa and FCT experienced a decrease despite the efforts of the Abia State Agency for the Control of Aids (ABSACA) in providing coordination for the state response which suggests that something must be wrong with the activities of this control agency in awareness, control and mitigation of HIV/AIDS in Abia State (GARPR, 2012).

The Abia State HIV/AIDS prevention plan further reveals a population subgroup that is considered vulnerable with respect to HIV infection; these include youth (aged 20 - 39 years, especially females). Also, in 2005, the State recorded 1.0% urban prevalence among female youth, but rose to 5.9% in 2008. However, in 2010 prevalence in both urban and rural areas in the State almost doubled to 9.4% and 4.3% respectively (FMOH, 2010; ABSACA, 2012).

According to the National AIDS Response Health Survey (FMOH, 2010) reports, the prevalence of high risk sex among the youth in the south east zone was high, and was higher among the male (98.8%) than the female (70.0%). A report from the National Population Commission reveals that although the South east boasts of having the highest level of uptake of HCT (HIV/AIDS Counselling and Testing) services, yet a lot still needs to be done if the target of universal access (80%) must be attained.

It is not known whether factors that influence participation in HIV/AIDS prevention activities in the general population are also operational among the youth. Also it will be necessary to know if there are differences in level of participation between urban and rural youth population in Abia State. This is the nucleus of this study.

The study objectives specifically described the socio-economic characteristics of the respondents; determined the level of participation in HCT services among the respondents, determined factors affecting Youths participation in HCT services.

1.1 Hypotheses:

H₀₁ There is no significant difference between the urban and rural youth level of participation in HCT services.

H₀₂ There is no significant relationship between socioeconomic characteristics of respondents and participation in HIV/AIDS Counselling and Testing,

2. Methodology

The study was carried out in Abia State comprising of 3 Agricultural Zones of Aba, Umuahia and Ohafia and 17 Local Government Areas. The major urban LGAs are Aba South, Aba North, and Umuahia North, while the others are mostly rural. The study therefore focused on four out of these 17 Local Government Areas. Arochukwu and Ohafia both from Ohafia Agricultural Zone represented the rural population, while Aba North and Aba South both from Aba Agricultural Zone represented the urban population for this study. The population for this study included all youths in Abia State.

A multistage random sampling technique was employed in selecting communities for the study. The first stage was the selection of two out of the three Agricultural Zones in Abia State. (Aba and Ohafia Agricultural Zones). Four Local Governments, Aba North and Aba South representing the urban communities, and Ohafia and Arochukwu representing the rural communities were selected in the second stage for this study.

The next was the random selection of a community each from these four Local Government Areas, Umuosi in Aba South LGA, Umungasi in Aba North LGA, Asaga in Ohafia LGA and Abam in Arochukwu LGA, giving a total of four communities. Out of these four communities, 50 young

persons were randomly selected comprising 25 males and 25 females to give a total of 200 respondents. Data were collected from primary and secondary sources. For the primary data, a well-structured, pre-tested and validated questionnaire was administered to the respondents.

2.1 Data Analyses

Simple descriptive statistics such as means, percentages, frequency distribution, and inferential statistics were used in analyzing the data. To determine the respondents (youth) level of participation in HIV/AIDS Counselling and Testing, participation index was used to assess the extent of participation of the respondent as adapted from Badalet *al* (2006)

Participation Index of each youth was calculated using formula (1):

$$P_i = \frac{\sum_{j=1}^N Y_{ij}}{N} \times 100 \dots\dots\dots (1)$$

where,

P_i = Participation Index for the *i*th youth

Y_j = 1, if the youth has participated in the *j*th activity; = 0, if the youth has not participated in the *j*th activity

N = Total number of activities

Furthermore, the level of participation of the respondents was presented as follows;

0 – 25 = Very low participation level

26 – 50 = Low participation level

51 – 75 = High participation level

76 – 100 = Very high participation level

To compare the level of participation in HIV/AIDS Counseling and Testing among the rural and urban respondents, a frequency and percentage table was used and participation index as stated earlier.

Also, from the index, respondents were further aggregated into participating group (51 – 100) and not participating group (0 – 50) which were further scored as follows;

1 = participating (51 – 100)

0 = not participating (0 – 50)

The dummy (1 and 0), was employed in the Logit regression in objective 3 and the hypothesis testing.

The Logit model for **objective 3** and **hypothesis 2** is specified as follows (Pindyck and Rubinfeld, 1981);

$$P_i = f(\alpha - \beta X_i) = \frac{1}{1 + e^{-(\alpha - \beta X_i)}} \dots\dots\dots (1)$$

Where:

e = natural logarithm (= 2.718), P_i = Probability of participation (occurrence)

1 - P_i = Probability of non-participation (non-occurrence)

Equation (1) is transformed into equation (2) and (3) (Pindyck and Rubinfeld, 1981)

$$\text{Log} \frac{P_i}{1 - P_i} = \alpha - \beta x_i \dots\dots\dots (2)$$

$$\text{Log} \left\{ \frac{P(\text{Participation})}{1 - P(\text{non-Participation})} \right\} = \beta_0 - \beta_1 x_1 + \beta_2 x_2 \dots + \beta_n x_n$$

Where:

X_1 = HIV risk perception (dummy yes = 1; no = 0)

X_2 = Education in years

X_3 = Distance to HCT site (km)

X_4 = Level of awareness of HCT (number of items a respondent is aware of)

X_5 = knowledge of HCT (number of items a respondent has knowledge of)

X_6 = Sex (male = 1; female = 0)

X_7 = Age in years

X_8 = Household size (number of persons in respondent's household)

X_9 = Occupation (type of economic activity engaged in)

X_{10} = Marital status (married = 1; others = 0)

For hypothesis 1, the Z –test was used. The formula for Z –test is given as follows;

$$Z = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{\text{Var}_1}{n_1} + \frac{\text{Var}_2}{n_2}}}$$

Where:

Z = Z statistic

\bar{X}_1 = Sample mean for rural youth.

\bar{X}_2 = Sample mean for urban youth.

Var_1 = Sample variance for rural youth.

Var_2 = Sample variance for urban youth.

n_1 = Sample size for rural youth.

n_2 = Sample size for urban youth.

3. Result and Discussion

3.1 Socio-economic characteristics of the respondents

The result of the data analysis from Table 1 showed that 9.0% of the respondents were married in the urban area as against 11.0% recorded in the rural communities. Furthermore, 2.0% were widowed in both the urban and rural communities. In the urban area, 5.0% were living with but not yet married as against 3.0% recorded for the rural areas. From both areas, 84.0% of the respondents were those who were never married. The respondents were also distributed according to their household sizes and the study showed that 33.0% and 47.0% of the respondents from the urban and rural areas respectively had 1 – 4 persons living with them and this result shows that a greater percentage of the respondents were from homes with large household sizes typical of an African rural community where fecundity is encouraged, celebrated and rewarded (Ekong, 2010). Altogether, the higher percentage of the respondents were students and this is due to the target audience for this study, the youth who by the National Youth Policy of Nigeria are citizens aged 18 – 35 who are majorly students and dependent (NYP, 2009). The result shows that 34.0% and 20.0% had tertiary education in both urban and rural areas respectively. Also, 65.0% and 73.0% had secondary level education from both urban and rural communities respectively. In the rural area, 7.0% had no formal education while none was recorded in the urban area. However, Jereni and Muula (2008) predicts higher uptake of HIV/AIDS Counselling and Testing with higher levels of education. This is predicated on the fact that the more enlightened an individual is the more his/her knowledge of events around him/her increases which is in agreement with Nwachukwu

(2003), that education widens information horizon of an individual. The higher percentage of younger people according to Bwambale, *et al* (2008) seems to predict a positive attitude to testing. Also, Fylkesnes and Siziya (2008) argued that readiness for HCT was higher in age group 20 – 24 years where our mean age of 22.95 from the study falls in, as compared to age group 40 – 49 in a study in Zambia.

3.2 Respondents' level of participation in HCT Services

Respondents' level of participation is presented in Table 2 using the participation index. The Table shows a 71.5% low level of participation (with 32.5% representing 65 respondents having 'very low' level of participation and 39.0% representing 78 respondents having 'low' level of participation). Only 17.0% (representing 34 respondents) and 11.5% (representing 23 respondents) of the total respondents had 'high' and 'very high' levels of participation respectively.

The outcome of this result shows a very low level of participation among the youth population in HIV/AIDS Counselling and Testing in Abia State, which according to Bunnell *et al* (2006) in a similar study in Uganda, has been widely accepted as key to HIV/AIDS prevention.

Consequent upon this finding, there may be no possibility of having universal treatment coverage in sight in Abia State as stipulated in the Abia State Strategic Prevention Plan (2012), given the low level of participation among the youth population.

3.3 Determinants of youth Participation in HCT Services

The result on the Logit regression (Table 3), shows that risk perception was significant at 10% and negatively related to participation in HIV/AIDS Counselling and Testing. Educational attainment of the respondents was significant at 5% and positively related to participation in HIV/AIDS Counselling and Testing in the State. Distance to HCT centre was significant at 10% and positively related to participation in HIV/AIDS Counselling and Testing. Level of awareness of HIV/AIDS prevention intervention was significant at 5% and positively related to the participation in HCT in the State. Level of knowledge was significant at 5% and negatively related to participation of respondents in HIV/AIDS Counselling and Testing. Household sizes of the respondents were significant at 5% and positively related to participation in HIV/AIDS Counselling and Testing in the State. Occupation of the respondents was also significant at 1% and negatively related to youth participation in HIV/AIDS Counselling and Testing. It may be argued that at higher perception of risk of HIV/AIDS, young people shy away from testing for fear of the possible outcome of embarking on such activity. This result disagrees with De Souza (2008), that individuals' perception of how susceptible they are to a disease will more likely help them act in a responsible manner to prevent a disease but in agreement with Mmbaga *et al* (2009) that recent risk taking behaviour was implicated in non-completion of HIV/AIDS testing. The result also indicates that as Youth's level of education increases, so will their participation in HIV/AIDS Counselling and Testing and is in consonance with Jereni and Muula (2008), Sherret *et al* (2007) as well as Iliyasuet *al*(2006) that higher levels of education promotes uptake of HCT. The work of Jereni and Muula (2008) agrees with this finding that awareness of HIV/AIDS prevention intervention predicts higher HIV/AIDS testing uptake. Therefore, any attempt to raise the awareness of young people (youth) in the state of HCT will be a productive effort towards preventing the spread of HIV/AIDS among the young population of Abia State. This result shows that as the knowledge of HCT of an individual increases, their response to HIV/AIDS Counselling and Testing decreases. It may be

argued that at higher knowledge of HIV/AIDS Counselling and Testing, young people shy away from testing for fear of the possible outcome of embarking on such activity. This result disagrees with Mmbaga *et al.*, (2009) who observed knowledge as a significant predictor of a positive attitude toward HCT.

Hypothesis 2

To test for significant relationship of socioeconomic characteristics of respondents and participation in HIV/AIDS Counselling and Testing, the logistic regression table in Table 3 was used. From the result of the socioeconomic variables considered (Age, Sex, Education, Household size, Occupation and Marital Status), the Pearson Goodness of fit chi-square was significant at 1% and 188 degree of freedom indicating that all variables included in the model were fit. This result is in consonance with Jereni and Muula (2008), Sherret *al* (2007) that higher education promotes participation in HIV/AIDS Counselling and Testing.

Education had a positive significant relationship with Y (participation in HIV/AIDS prevention intervention which is a dummy: participating = 1, not participating = 0). This implies that education enhances ones willingness to go for HIV/AIDS Counselling and Testing.

Household size had a positive significant relationship with Y, which suggests that the more the number of persons within one's household the more she/he is likely to use HCT services. According to Denison *et al* (2008), where there is a display of positive attitudes by family members to HCT, such may shape HCT uptake and participation in HIV/AIDS Counselling and Testing by young people, as young persons seem to also disclose their HIV status to family and friends.

Occupation had a negative significant relationship with Y, implying that the nature of one's occupation had no influence on whether an individual will subscribe for HIV/AIDS Counselling and Testing or not.

3.4 Comparing levels of participation among urban and rural youth respondents

Table 4 shows the participation index of the respondents for levels of participation in HIV/AIDS Counselling and Testing Programme between the urban and rural respondents. The Table shows 29% of the urban youth and 36% of the rural youth having a very low level of participation, with 10% urban and 13% rural respondents recording a very high level of participation. This result indicates that the level of participation was higher among the urban respondents than their rural counterparts and may be as a result of the high knowledge level which according to Mmbaga (2009) is a significant predictor of a positive attitude toward HCT.

The differences in level of participation were further compared using the Z-test to know if there is a significant difference between the urban and rural participation in HIV/AIDS Counselling and Testing in the state. Table 4 shows that the participation of the urban respondents (30) was higher than those of the rural respondents (27). Furthermore, the Z-cal 1.750 significant at 10% is greater than Z-tab 1.645 at 5% significant level implying the rejection of the null hypothesis and acceptance of the alternative hypothesis that there is a significant difference between the levels of participation of the urban respondents to that of the rural respondents.

3.5 CONCLUSION AND RECOMMENDATIONS

This study concludes that the level of participation of youth in Abia State in HIV/AIDS Counselling and Testing is higher in the urban area than the rural. Moreso, level of participation of youth in Abia State in HIV/AIDS Counselling and Testing was low generally. On factors affecting youth participation in HIV/AIDS Counselling and Testing, Risk perception, Educational attainment of the respondents, Distance to HCT centre, level of awareness of HIV/AIDS Counselling and Testing, level of knowledge, household sizes of the respondents, and occupation of the respondents had significant relationship with participation in HCT.

There is urgent need to increase the number of HCT centres in the state, especially at the rural areas to increase access of this intervention to a larger population of youth in the state. Coupled with increased campaign in both the urban and rural communities of Abia state, Agencies involved in campaign should ensure at all times that such campaigns are followed by free HIV/AIDS Counselling and Testing sessions. All agencies involved in the campaign against the spread of HIV/AIDS need to strategize and come up with better communication strategies to achieve behavioural change as the level of awareness already created seemed not to have resulted in desired behavioural change.

Table 1: Distribution of respondents according to socio-economic characteristics.

Variables	Urban area		Rural area		Total
	Freq.	%	Freq.	%	
Marital status					
Single	89	89	87	87	176
Married	9	9.0	11	11.0	20
Widowed	2	2.0	2	2.0	4
Sex					
Female	50	50	50	50	100
Male	50	50	50	50	100
Age					
18 – 23	51	51	67	67	118
24 – 29	28	28	24	24	52
30 – 35	21	21	9	9	30
Mean	23.84		22.05		22.95
Household size					
1 – 4	33	33	47	47	80
5 – 8	64	64	44	44	108
9 – 12	3	3	9	9	12
Mean	4.99		5.19		5.09
Education					
Tertiary	34	34	20	20	54
Secondary	65	65	73	73	138
Primary	1	1	0	0	1
No Formal Education	0	0	7	7	7
Religion					
Islam	0	0	0	0	0
Christianity	98	98	100	100	198
Others	2	2.0	0	0	2
Occupation					
Farmers	0	0	4	4	4
Students	65	65	67	67	132
No Particular Job	0	0	5	5	5
Artisanal	2	2	5	5	7
Civil Servant	12	12	11	11	23
Trading/Business	21	21	8	8	29
Total	200	100	200	100	

Table 2: Distribution of respondents according to their levels of participation in HIV/AIDS counselling and testing in the State.

Level of Participation (Participation Index)	Freq.	(% of Youth)	Cummulative
0 – 25 (Very Low)	65	32.5	32.5
26 – 50 (Low)	78	39.0	71.5
51 – 75 (High)	34	17.0	88.5
76 – 100 (Very High)	23	11.5	100.0

Table 3: Determinants of Youth's participation in HIV/AIDS counselling and testing in Abia State.

Parameters	Estimates	Standard Error	Z-value
Risk Perception	-.657	.377	-1.743*
Education	.130	.061	2.109**
Distance to HCT	.095	.028	3.346*
Level of Awareness	1.136	.414	2.742**
Level of Knowledge	-.843	.337	-2.501**
Sex	-.005	.323	-.017
Age	-.016	.024	-.665
Household Size	.137	.062	2.218**
Occupation	-.413	.108	-3.813***
Marital Status	-.102	.087	-1.168
Intercept	-6.661	1.319	-5.051***
Chi Square (χ^2)	269.662***	188	

*** Significant at 1%, ** Significant at 5%, * Significant at 10%

Table 4: Distribution of respondents according to levels of participation in HCT programme among the urban and the rural youth in Abia State.

Level of participation (Participation index)	Urban Youth		Rural Youth	
	(%)	Cummulative	(%)	Cummulative
0 – 25 (Very Low)	29.0	29.0	36.0	36.0
26 – 50 (Low)	41.0	70.0	37.0	73.0
51 – 75 (High)	20.0	90.0	14.0	87.0
76 – 100 (Very High)	10.0	100.0	13.0	100.0

Test of hypothesis 1**Table 5: Test of significant difference between Urban and Rural Youth participation in HIV/AIDS Counselling and Testing in Abia State.**

Variables	Individual Mean(\bar{X})	Pooled Mean	Standard Deviation	d.f.	Z-tab (5%)	Z-value	Decision rule
Urban Participation	0.3000						
		0.03000	0.17145	99	1.645	1.750*	Reject null hypothesis and accept alternative
Rural Participation	0.2700						

* Significant at 10%

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