

## Stigma, Discrimination and Willingness to Buy Vegetables from People Living With HIV&AIDS (PLWHA) in Rural Nigeria

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**Abstract:** Stigma and discrimination have been identified as key propelling forces that fuel HIV transmission. This study analyzed factors explaining willingness of rural households to buy vegetables from PLWHA. The data were the Nigeria's 2008 Demographic and Health Survey (DHS) and were analyzed with the Multinomial logit regression. The results show that awareness about HIV&AIDS is high (83.60 percent). Misconceptions about HIV&AIDS included belief that HIV can be transmitted by mosquito bites (24.90 percent), sharing of food (18.00 percent) and witchcraft (18.1 percent). Only 29.1 percent of the respondents would buy vegetable from PLWHA and stigmatization is reduced with age, being tested, knowing someone that had died of HIV&AIDS ( $p < 0.01$ ). It was concluded that HIV stigma and discrimination can be reduced by properly educating people on the potential harms of discriminating attitudes, especially by targeting the youth.

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### Introduction

With estimated 3.1 million people living with HIV&AIDS in 2010, Nigeria has the third highest number of people living with HIV&AIDS in the world after South Africa and India. Nigeria is experiencing multiple HIV epidemics which show different features across demographic groups, economic settings and geopolitical zones. The reasons for these differences are difficult to understand although socio-cultural factors may play a key role. The major mode of transmission among adult population in Nigeria is heterosexual intercourse although other forms of transmission like injecting drug users (IDU) and homosexuality cannot be completely eradicated (UNGASS, 2010). Since HIV is mostly transmitted through unprotected sexual intercourse, the most vulnerable are people in their sexually active age. Incidentally, these groups are those in the agriculturally productive age. Food and Agriculture Organization (FAO, 2000) estimated that out of the 27 most affected countries in Africa, 7 million agricultural workers had died of AIDS and more are likely to die in the next few decades.

HIV&AIDS affect economic growth by decreasing availability of human capital (Bell *et al*, 2003). Without good nutrition, health care and medicine that are accessible in developed countries, huge numbers of people suffer and die from AIDS-related problems. They will not only be incapable to work, but will also need substantial medical care. The prediction is that this will most likely cause a collapse of economies and societies in countries with

substantial AIDS population. The outbreak had left behind many orphans that are now looked after by aged and poor grandparents (Greener, 2002). The increased mortality has resulted in a smaller skilled population and labour force. This smaller labour force consists of increasingly younger people, with reduced knowledge and work experience causing decreased productivity. An upsurge in workers' spare time to take care of sick family members or for sick permission decreases productivity. Escalated mortality decreases the means that generate human capital and investment in people, via loss of income and the demise of parents.

According to Mann (1987) the phases of HIV&AIDS epidemic transmission are three vis-à-vis: the epidemic of HIV, the epidemic of AIDS, and the epidemic of stigma, discrimination and denial. However, it was noted that the third phase is "as central to the global AIDS challenge as the disease itself". Stigma refers to processes of devaluing, labelling, and stereotyping that result in loss of status, unfair and unjust treatment and social isolation (Campbell and Deacon, 2006). Discrimination against people with HIV&AIDS (PLWHA) results in oppression or unfair treatments. Within sociology, 'discrimination' is the prejudicial treatment of an individual based on their membership in a certain group or category. Discrimination is the actual behaviour towards members of another group. It involves excluding or restricting members of one group from opportunities that are available to other groups (Giddens *et al*, 2009).

Moral philosophers have defined discrimination as disadvantageous treatment or consideration. This is a comparative definition. An individual need not be actually harmed in order to be discriminated against. He or she just requires to be treated worse than others for some obvious or arbitrary reasons. Discrimination is often equated with stigma although not always so in reality. Some researchers have argued that discrimination is similar to enacted stigma which denotes the 'real experience of discrimination' (Brown *et al*, 2003; Jacoby, 1993). Major and O'Brien (2005) have argued that discrimination is an instrument of stigmatization, while Collymore (2002) stated that stigma and discrimination are two separate entities but closely linked.

Despite international efforts to tackle HIV&AIDS, stigma and discrimination remain among the most poorly understood aspects of the epidemic. Stigma had been identified as a challenge that prevents concerted action at community, national, and global levels (Piot, 2000). AIDS stigma occurs all over the world in a variety of ways, including ostracism, rejection, discrimination and avoidance of HIV testing without prior consent or protection of confidentiality; violence against HIV infected individuals or people who are alleged to be infected with HIV; and the isolation of HIV infected individuals (UNAIDS, 2006). Stigma-related violence prevents many people from seeking HIV testing, returning for their results, or securing treatment, probably changing what could be a controllable chronic disease into a death sentence and perpetuating the spread of HIV (Ogden and Nyblade, 2005).

Stigma and discrimination are principal factors contributing to HIV epidemic. For example, HIV-related stigma increases vulnerability to HIV infection by reducing access to HIV prevention and testing and presenting barriers to treatment, care and support for PLWHA (Mahajan *et al*, 2008). Morrison (2006) found that stigma and discrimination are recognized as two key factors that need to be tackled to create an effective and sustained response for HIV prevention, care, treatment and impact mitigation.

This paper seeks to assess the extent of stigmatization towards PLWHA in rural Nigeria. Specifically, we identified some misconceptions and knowledge gaps among rural households about HIV&AIDS. The paper also explored the socio-economic factors that influence discrimination against PLWHA by not willing to offer patronage if the person is selling vegetables. In the remaining parts of the paper, the materials and methods, results and discussion and conclusion were presented.

## Materials and Methods

## Area of the Study

Nigeria is in the West African sub-region, on the Gulf of Guinea, lying between latitudes 4°16' and 13°53' north and longitudes 2°40' and 14°41' east. It is bordered by Niger in the north, Chad in the northeast, Cameroon in the east, and Benin in the west. To the south, Nigeria is bordered by approximately 850 kilometres of the Atlantic Ocean, stretching from Badagry in the west to the Rio del Rey in the east. With a total land area of 923,768 square kilometres, Nigeria is the fourteenth largest country in Africa. The 2006 population and housing census put the population at 140,431,790.

## Methods of Data Collection

The study used the 2008 Demographic and Health Survey (DHS). These are survey-based secondary data that were collected with samples selected using stratified two-stage cluster design. There were 888 clusters comprising of 286 in the urban areas and 602 in rural areas. When the number of households was assigned to individual state, the numbers of clusters, which was calculated based on an average sample take of 41 completed interviews, was calculated by dividing the total sample in the state. The data that were used consist of 12766 individuals in the rural areas.

## Methods of Data Analysis

### Estimated model

Multinomial logistic regression analysis was used to determine the factors explaining willingness not to buy vegetables from PLWHA. Multinomial logistic regression method was used because it provides an interpretable linear model for a categorical dependent variable and allows the testing of the significance of a given predictor whilst controlling for all other predictors in the model. The model can be expressed as:

$$Z_i = \ln \frac{P(Y_i=m)}{P(Y_i=n)} = \beta_0 + \sum_{k=1}^K \beta_k x_{ki} + \varepsilon \quad \dots 1$$

Where  $Z_i$  – Discriminatory attitudes of people to PLWHA which are would not buy vegetables from vendor with AIDS,  $P$  is probability,  $Y_i$  is dependent variable for any observation  $i$  with  $m$  being response of 1 if "yes", 2 if "no" and 3 if "don't know".  $\beta_0$  is the baseline constant and  $\beta_k$  are the corresponding vector of estimated regression coefficients.  $x_{ki}$  is an array of  $k$  independent variables which are  $x_1$  for age (years);  $x_2$  is sex of the respondent (female = 1, 0 otherwise);  $x_3$  is educational level (years);  $x_4$  is North East regional dummy (yes = 1, 0 otherwise);  $x_5$  is North West regional dummy (yes = 1, 0 otherwise);  $x_6$  is South East regional dummy (yes = 1, 0 otherwise),  $x_7$  is South West regional dummy (yes = 1, 0 otherwise),  $x_8$  is South South regional dummy (yes = 1, 0

otherwise);  $x_9$  – Ever heard of AIDS (yes = 1, 0 otherwise);  $x_{10}$  is ever been tested for AIDS (yes = 1, 0 otherwise);  $x_{11}$  is know someone who has or died of AIDS (yes = 1, 0 otherwise);  $x_{12}$  is reduce the chances of AIDS by having only one sex partner (yes = 1, 0 otherwise);  $x_{13}$  is get AIDS from mosquito bites (yes = 1, 0 otherwise);  $x_{14}$  is reduce chances of AIDS by always using condoms during sex (yes = 1, 0 otherwise);  $x_{15}$  is get AIDS by sharing food with person who has AIDS (yes = 1, 0 otherwise);  $x_{16}$  is reduce risk of getting AIDS by not having sex at all (yes = 1, 0 otherwise);  $x_{17}$  is can get AIDS by witchcraft or supernatural means (yes = 1, 0 otherwise);  $x_{18}$  is can a healthy person have AIDS (yes = 1, 0 otherwise);  $x_{19}$  is can AIDS be transmitted during pregnancy (yes = 1, 0 otherwise);  $x_{20}$  is can AIDS be transmitted during delivery (yes = 1, 0 otherwise);  $x_{21}$  is can AIDS be transmitted during breastfeeding (yes = 1, 0 otherwise); and  $\epsilon$  is the error term.

The  $\beta_s$  are typically estimated by the maximum likelihood (ML) method, which is preferred over the weighted least squares approach (Schlesselman, 1982). The ML method is designed to maximize the likelihood of reproducing the data given the parameter estimates. Data are entered into the analysis as 0 or 1 coding for the dichotomous outcome, continuous values for continuous predictors, and dummy coding (e.g., 0 or 1) for categorical predictors. The value of the coefficient  $\beta$  reveals the direction of the relationship between  $x$  and logits of  $Z$ . When  $\beta$  is greater than 0, larger (or smaller)  $x$  values are associated with larger (or smaller) logits of  $Z$ , and the curve will resemble an increasing sigmoid (or S-shape). Conversely, if  $\beta$  is less than 0, larger (or smaller)  $x$  values are associated with smaller (or larger) logits of  $Z$ . Such a relationship is shown in data in the form of a reverse sigmoid curve. In other words, an increase in  $x$  is associated with a decrease in logits of  $Z$  and vice versa.

The dependent variable categories are ‘yes’, ‘no’ and ‘don’t know’ with ‘no’ being the reference point. One regression was run for each category (yes and don’t know) to predict the probability of  $Y_i$  (dependent variable for any observation  $i$ ) being in that category. Then the probability of  $Y_i$  being in category 0 is given by the adding up constraint that the sum of the probability of  $Y_i$  being in the various categories equals 1.

**Results and Discussion**  
**Respondents’**

**Socio-Economic Characteristics**

The age group of the respondents were presented in table 1. This shows that the highest

percentage of respondents interviewed were in the age group of 25 – 29 years with 17.7% followed by age group of 30 – 34 with 16.9%, 16.1% were aged 35 – 39 years, 12.9% were aged 40 – 44 years, 11.1% were aged 20 – 24 years, 10.3% were aged 45 – 49 years, 5.5% were aged 15 – 19 & 50 – 54 years, and 3.9% were aged 55 – 59 years. However, respondents in the age group of 50 – 54 and 55 – 59 years were only male. This shows that that only female respondents between 15 and 49 years were interviewed. The median age of the respondents is 34 years. It also showed that respondents of 30 years of age were the ones that were mostly interviewed.

Table 1: Frequency distribution of respondents by their age group

Age group	Frequency	Percent
15 – 19	707	5.5
20 – 24	1417	11.1
25 – 29	2262	17.7
30 – 34	2160	16.9
35 – 39	2058	16.1
40 – 44	1650	12.9
45 – 49	1319	10.3
50 – 54	701	5.5
55 – 59	492	3.9
Total	12766	100.0

Source: NDHS, 2008

Respondents with no education constitute majority of the sample population (table 2). The distribution indicated that 53.3% were not educated, 23.8% had primary education, and 17.9% had secondary education while the least were those with higher with 5.0%. Lack of education ultimately brings about misconception about the disease and the unwillingness to take care of PLWHA which made them to be treated as a plague.

Table 2: Frequency distribution of respondents by their educational level

Education Level	Frequency	Percent
No education	6806	53.3
Primary	3041	23.8
Secondary	2281	17.9
Higher	638	5.0
Total	12766	100.0

Source: NDHS, 2008

With respect to the region (table .3), respondents in the North West part of the country were the most interviewed with 33.6%, followed by North East with 24.9%, North Central with 18.9%, South West with 9.4%, South South and South East with 8.0% and 5.2% respectively. This indicated that greater part of the sample population interviewed came from the northern part of the country.

Table 3: Frequency distribution of respondents by their region

Region	Frequency	Percent
North Central	2410	18.9
North East	3178	24.9
North West	4290	33.6
South East	664	5.2
South West	1200	9.4
South South	1024	8.0
Total	12766	100.0

Source: NDHS, 2008

Muslims constituted over half of the sample population. This could most likely be due to the fact that a high population of the respondents were in the northern part of the country. The distribution (table 4) indicated that 63.1% were Muslims and 2.3% were adherent to traditional faiths. Christianity was further divided into two groups: Catholics and other Christians (which can be referred to as the Protestants). The Protestants constituted the majority (27.4%) of the Christian respondents, while the rests were Catholics (7.1%). However, the last group was others with 0.1% of the respondents. This could be those who did not have a major belief.

Table 4: Frequency distribution of respondents by their religion

Religion	Frequency	Percent
Catholic	899	7.1
Islam	8012	63.1
Other Christians	3473	27.4
Traditionalist	296	2.3
Others	18	0.1
Total	12698	100.0

Source: NDHS, 2008

As regards wealth index, table 5 indicated 35.8% of the respondents were in the poorest category, which accounted for the majority of the respondents interviewed, followed by those in the poorer category with 29.2%, the middle category with 19.2%, the richer category with 11.1%. This revealed that majority of the rural population interviewed were living in poverty.

Table 5: Frequency distribution of respondents by their wealth index

Wealth Index	Frequency	Percent
Poorest	4570	35.8
Poorer	3722	29.2
Middle	2454	19.2
Richer	1412	11.1
Richest	608	4.8
Total	12766	100.0

Source: NDHS, 2008

### Levels of Knowledge and Misconceptions

The levels of knowledge and misconceptions were indicated in table 6. It showed that 16.4% of the respondents had not heard of the disease while 83.6% had heard about it. This indicated that a large

proportion of the population were conscious of the presence of the disease. However, 90.2% of these respondents had not been tested for the disease while 9.8% had been tested. This could arise due to the fear of discrimination if eventually they had the disease.

Likewise, 64.5% of the respondents did not know anyone with the disease or anyone that died of the disease, 33.3% knew someone with the disease while 2.2% did not know whether they knew anyone or not. 83.9% believed that someone can reduce the chances of getting AIDS by having only one sex partner who has no other partner, 7.2% did not believe it can be reduced, while 8.9% did not know whether it can be reduced or not by having just one sex partner. Furthermore, 24.9% indicated that a person can get AIDS from mosquito bites, 56.9% showed that one cannot get the disease from mosquito bites while 18.3% did not know whether it can be transferred through this method or not.

Also, 63.7% of the respondents knew that chances of getting HIV/AIDS can be reduced by using condoms during sex, 13.9% said no while 22.4% said they did not know. 67.8% indicated that they would not get AIDS by sharing food with PLWHA, 18.0% said they would get AIDS by sharing meals with PLWHA while 14.2% said they did not know. With respect to the knowledge about reducing the risk of getting AIDS by not having sex at all, 82.1% said it can be reduced, 10.9% of the respondents said it cannot be reduced, while 7.0% said they did not know. Fascinatingly, 60.6% of the respondents believed that a person cannot get AIDS by witchcraft or supernatural means, 18.1% said a person can get AIDS by witchcraft or other supernatural means while 21.3% said they did not know.

Furthermore, 74.5% of the respondents believed that a healthy looking person can have AIDS, 15.1% believed otherwise, while 10.4% did not know. 51.7% reported that AIDS can be transmitted from a mother to her unborn child while in the course of pregnancy, 19.8% and 28.5% said that no and don't know respectively. About 46.4% of the respondents indicated that AIDS can be transmitted during childbirth, 23.4% showed that AIDS cannot be transferred from mother to child at birth while 30.2% said they did not know. Likewise, 55.7% of the respondents believed that AIDS can be transmitted during breastfeeding, 16.2% believed otherwise, while 28% said they did not know anything about it.

The findings revealed that majority of the respondents in this study had heard of the disease and an encouraging percentage also had good knowledge about its mode of transmission.

Table 6: Frequency distribution of respondents by their knowledge and misconceptions about HIV transmission

Characteristics	Frequency	Percent
Have you ever heard of AIDS?		
No	2087	16.4
Yes	10676	83.6
Total	12763	100.0
Have you ever been tested for AIDS?		
No	10743	90.2
Yes	1171	9.8
Total	11914	100.0
Did you know someone who has or died of AIDS?		
No	6853	64.5
Yes	3538	33.3
Don't know	234	2.2
Total	10625	100.0
Can a person reduce HIV/AIDS infection by having one partner?		
No	771	7.2
Yes	8920	83.9
Don't know	944	8.9
Total	10635	100.0
Can a person get AIDS from mosquito bite?		
No	6060	56.9
Yes	2649	24.9
Don't know	1947	18.3
Total	10656	100.0
Can condom reduce contracting HIV/AIDS infection?		
No	1478	13.9
Yes	6777	63.7
Don't know	2383	22.4
Total	10638	100.0
Can a person get HIV infection by sharing meal with PLWHA?		
No	1921	18.0
Yes	1508	14.2
Don't know	10652	100.0
Total	1159	10.9
Total	8732	82.1
Can a person reduce of getting AIDS by not having sex at all?		
No	745	7.0
Yes	10636	100.0
Don't know		
Total	6450	60.6
Total	1925	18.1
Total	2260	21.3
Can a person get AIDS through witchcraft or other supernatural means?		
No	10635	100.0
Yes		
Don't know		
Total	1606	15.1
Total	7913	74.5
Total	1102	10.4
Total	10621	100.0
Can a healthy looking person be infected with AIDS?		
No	2112	19.8
Yes	5518	51.7
Don't know	3034	28.5
Total	10664	100.0
Can HIV/AIDS be transmitted during pregnancy?		
No	2498	23.4
Yes	4945	46.4
Don't know	3218	30.2
Total	10661	100.0
Can HIV/AIDS be transmitted during child birth?		
No	1732	16.2
Yes	5941	55.7
Don't know	2991	28.0
Total	10664	100.0
Can HIV/AIDS be transmitted during breastfeeding?		
No		
Yes		
Don't know		
Total		

Source: NDHS, 2008.

### Stigma and Discriminatory Attitudes

Table 7 shows that a high proportion of the respondents (68%) would not buy vegetables from vendors with AIDS indicating farmers with AIDS that sell their produce are at a loss as people would not from them after knowing their AIDS status.

Table 7: Percentage distribution of people that would buy vegetables from PLWHA

Characteristics	Frequency	Percent
No	7243	68.0
Yes	3105	29.1
Don't know	311	2.9

Source: NDHS, 2008.

### Multivariate Analysis of Discriminatory Attitudes towards PLWHA

The multinomial regression analysis carried out in this study had dependent variables with three categories which were ordered (i.e. yes, no, don't know). These were the responses with the answer "no" as the reference category. Table 8 shows the relationship between the respondents' willingness to buy vegetables from vendor living with HIV/AIDS and selected characteristics. The model specification was statistically significant ( $\chi^2 = 11154.53$ ;  $p < 0.00001$ ).

The two equations in the table were labelled by the group they contrast to the reference group. The first equation was labelled "Yes", and the second equation was labelled "Don't know". The variables that had a statistically significant relationship to distinguish respondents that answered yes from those that answered no; at 1% were age, education level, North West region, South South region, ever heard of AIDS, ever been tested for AIDS, knows someone who has or died of AIDS, a healthy looking person can be infected with AIDS and HIV/AIDS can be transmitted during child birth; at 5% was sex and at 10% was a person can get AIDS through witchcraft/other supernatural means. The variables that had a statistically significant relationship to distinguish respondents that answered don't know from those that answered no; at 1% was ever heard of AIDS: at 5% were sex, North East region, South East region, ever been tested for AIDS and a person can reduce risk of getting AIDS by not having sex at all; and at 10% were a person can reduce HIV/AIDS infection by having one partner, a person can get HIV infection by sharing meal with PLWHA, a person can get AIDS through witchcraft/other supernatural means and HIV/AIDS can be transmitted during child birth.

Respondents that answered yes revealed that older people show more willingness to buy vegetable from vendors with HIV/AIDS than younger people. Male respondents also showed more willingness than their female counterparts, indicating that female respondents were not willing to buy vegetables from

vendors with AIDS. Educated populations with presumably greater knowledge of the disease were expected to be less hostile to PLWHA i.e. discriminatory attitudes towards vendors with AIDS reduces with increasing levels of education.

Furthermore, the findings indicated that population in the North Western part of the country would be willing to buy vegetables from vendors living with AIDS than their counterparts from the North Central region while the South South region showed discriminatory attitudes. Respondents who had heard of AIDS are less likely to buy vegetables from vendors with AIDS showing a misconception about the disease. Also, respondents who had been tested for AIDS were willing to buy vegetables from vendors with AIDS indicating that they had enough knowledge of the disease. Respondents that knew people who had AIDS or died of AIDS would be willing to buy vegetables from vendors with AIDS.

Interestingly, respondents who believed that a person can get AIDS from witchcraft or other supernatural means would show discriminatory attitudes towards vegetable vendors with AIDS. This means that they had misconception about the disease which is due to their cultural beliefs. A statistically significant proportion of the population who believed that a healthy looking person could be infected with AIDS were more likely, than those who believed

otherwise, to buy vegetables from vendors with AIDS. Also, respondents who had the knowledge that AIDS can be transmitted through breastfeeding would be willing to buy vegetables from vendors with AIDS. Although this did not apply to those that believed that AIDS can be transferred during pregnancy or at childbirth as these were insignificant.

For respondents that answered 'don't know', it was revealed that male respondents do not know whether to buy vegetables from vendors with AIDS or not, while female respondents would show discriminatory attitudes. Respondents in the South East were more likely not to know whether to buy vegetables from vendors with AIDS than those in the North Central region while respondents from the North East would show discriminatory attitude than those of North Central.

Furthermore, respondents that had ever heard of AIDS, been tested for AIDS, that believed that AIDS can be reduced by having sex with only one partner, that believed that AIDS can be transmitted by sharing meals with PLWHA, that confirmed that AIDS can be reduced by having no sex at all, that believed that a person can get AIDS from witchcraft or other supernatural means and those that believed that AIDS can be transferred at childbirth would not buy vegetables from vendors with AIDS. This showed that exhibit discriminatory attitude.

Table 8: Factors explaining willingness to buy vegetables from vendor living with HIV/AIDS

Explanatory Variables	Yes		Don't know	
	Coefficients	Standard errors	Coefficients	Standard errors
Age	0.008***	0.003	-0.003	0.007
Sex	-0.113**	0.052	-0.299**	0.144
Education level	0.075***	0.005	-0.025	0.017
Region				
North East	0.103	0.074	-0.549**	0.241
North West	0.484***	0.071	0.253	0.201
South East	0.025	0.105	0.560**	0.304
South West	-0.137	0.090	0.424	0.262
South South	-0.382***	0.091	0.083	0.283
Ever heard of AIDS	-1.199***	0.145	-25.782***	0.365
Ever been tested for AIDS	0.433***	0.071	-0.869**	0.374
Known someone who has or died of AIDS	0.414***	0.060	-0.002	0.212
A person can reduce HIV/AIDS infection by having one partner				
A person can get AIDS from mosquito bite	-0.067	0.0073	-0.291*	0.159
Condom can reduce contracting HIV/AIDS infection	-0.300	0.056	-0.137	0.161
A person can get HIV infection by sharing meal with PLWHA	0.379	0.055	-0.093	0.144
A person can reduce risk of getting AIDS by not having sex at all				
A person can get AIDS through witchcraft/other supernatural means	-0.529	0.067	-0.343*	0.182
A healthy looking person can be infected with AIDS				
HIV/AIDS can be transmitted during pregnancy	-0.012	0.068	-0.388**	0.154
HIV/AIDS can be transmitted during child birth				
HIV/AIDS can be transmitted during breastfeeding	-0.105*	0.063	-0.358*	0.198
Constant				
	0.830***	0.062	0.051	0.139
	-0.061	0.066	-0.214	0.207
	0.217***		-0.416*	
	-0.005	0.067	0.119	0.216
	-1.087	0.060	23.804	0.187

Significance level: \*\*\* p<0.01, \*\* p<0.05, \*p<0.1

Chi-square (42) = 11154.53; p<0.00001; -2 log likelihood = -7220.2724; Pseudo R<sup>2</sup> = 0.4358.

## Conclusion

AIDS poses serious threat to agricultural production in Nigeria. Stigma and discriminatory attitudes towards people living with HIV/AIDS in rural Nigeria reduces their productivity as well as having serious economic implications on the part of the producers, the sellers and the nation at large. A vegetable seller with AIDS (in most cases could be farmer) who could not sell his/her products and whose family are not willing to take care of him/her because of the discriminatory attitudes they have against him would be financially and economically unbalanced.

There is need for programmes to educate the general public that while AIDS remains incurable, it is possible for people living with the virus to live functional and economically viable lives with adequate nutritional and psychosocial support, rest, treatment of opportunistic infections and antiretroviral therapy. Traditionally, women are the primary care givers in the African community (Nigeria inclusive); hence the greater burden of providing care falls on them. Their increased domestic work load and insufficient psychological and social support may lead to resentment that involuntarily reinforces stigmatizing behaviour. Efforts need to be made to ensure that gender inequalities are not heightened while designing care and support programmes. Further qualitative research is needed to give better understanding of the reasons why females appear to have more stigmatizing attitudes.

Public education must play a key role in the success of prevention programmes and increase in the uptake of HIV testing. Behavioural change programmes must encourage individuals to reduce their risk of HIV acquisition. The stigmatization and discrimination that have typified societal responses must be dealt with promptly, as they compromise the effectiveness of prevention programmes. The early involvement and support of the government in the HIV/AIDS campaign can set the necessary groundwork for a continuing strong leadership that will be critical for initiating and sustaining an effective nationwide prevention programme. Stigmatization and discrimination against PLWHA are common in Nigeria. Often both Christian and Muslim religious leaders view immoral behaviour as the cause of the HIV/AIDS epidemic. PLWHA often lose their jobs or are denied health care services because of the ignorance and fear surrounding the disease. There is need for increased national campaigns and more visible and vocal societies and support groups for people infected with or affected by HIV as well as education of the public about HIV/AIDS in a bid to dispelling myths and giving the disease a human face.

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