GENDER AND AWARENESS PATTERN OF HIV/AIDS IN DELTA STATE, A GEOGRAPHICAL PERSPECTIVE

By

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Abstract
In Nigeria to which Delta State is a part, lack of awareness of HIV/AIDS has been projected as a major factor influencing the spread and pattern of HIV/AIDS prevalence. This research examined the gender and awareness pattern of HIV/AIDS in Delta State from a geographical perspective. The specific objectives are to; identify the level of awareness of HIV/AIDS by gender in Delta State, generate spatial map of the gender and awareness pattern of HIV/AIDS using GIS tool in the form of Arc view 9 and make recommendations. Data were sourced from both primary and secondary sources. Stratified sampling method was used to stratify Delta State into three senatorial zones following the existing strata i.e Delta North, Delta South and Delta Central senatorial districts. Within each Stratum, simple random sampling was employed to select the local government areas from where data were obtained. A total of nine (9) local government areas were selected from the three senatorial districts. 2350 copies of questionnaire were administered and 2169 copies were successfully retrieved. An independent sample t-test statistical technique was used to test the hypothesis of the study. The findings are; that awareness of HIV/AIDS is high in Delta state and that gender is not a factor of awareness variation in Delta state. By these findings, the research has contributed to existing knowledge by proving that ignorance is no longer a factor of HIV/AIDS spread, therefore, researches will now be redirected to other factors perpetuating the spread of HIV/AIDS in Delta state other than ignorance. Behavioural change campaign is recommended in Delta state in addition to the ongoing awareness campaign.

Key words: Nigeria; Gender; Awareness; HIV/AIDS

Introduction

At the core of all geographical researches is the goal of establishing the patterns in the occurrence of both natural and man-made phenomenon. As an expression, pattern is used in diverse field of studies, as a broad-spectrum descriptor for a perceptual structure, placement or arrangement of phenomenon on earth and the space in between those phenomena. Geographic pattern can be physical as in that of spatial pattern. It can be socio-economic, and it can also be demographic as in the age or gender and awareness pattern of occurrence of disease in a given population. Understanding the demographic and socioeconomic patterns in the awareness of the prevalence and incidence of HIV/AIDS in Nigeria is crucial for developing programs and policies to combat the spread of HIV/AIDS. It is based upon this premise that this research intends to examine gender and awareness patterns of HIV/AIDS in Delta State with particular reference to nine local government areas of the State.

The Human Immuno Deficiency Virus (HIV) that causes Acquired Immune Deficiency Syndrome (AIDS), is a virus that lives and proliferates principally in the subset of white blood cells called lymphocytes (CD4+ lymphocytes) which are part of the immune system. HIV causes severe diminution of these cells. An HIV infected person may look healthy for many years and may be oblivious of the infection. However, as the immune system weakens, the individual becomes more susceptible to common illnesses and infections and gradually progresses to develop AIDS, the next stage of the infection. Infected individuals are at risk for severe illnesses that are not usually a threat to anyone, whose immune (defence) system is working properly (Asthana and Asthana, 2006). The major risk factors in the spread of the disease include: ignorance, risky sexual behaviours, multiple

sex partners, lack of awareness of the causes and consequences of HIV infection (Falobi 1999; Oppong 2003;UNAIDS 2002; Guinness and Nagle 2006; FMH 2013; Awofala and Ogundele 2016)

Most HIV prevention literatures portray women as especially vulnerable to HIV infection because of biological susceptibility and men's sexual power and privilege (Molebatsi and Mogobe 1999; UNESCO 2004; NACA 2007; Higgins, Hoffman and Dwokin 2010; UNDP 2012; National Bureau of Statistics 2014). In like manner, Shaibu and Dube (2002) also asserted that the spread of HIV/AIDS affects the health of men and women differently, depending on their age, class, sexual orientation and ethnic background. According to him, Women and girls are more susceptible to the infection relative to men. In addition, National Bureau of Statistics (NBS) (2014) revealed that HIV/AIDS account for about 59.3 percent female death and 40.3 percent male death. However little or no literature border on the disparity in the level of awareness between the genders, hence this research intends to fill this gap in literature.

The crux of the problem that informed this research is that in Nigerian to which Delta State is a part, lack of awareness of HIV/AIDS has been projected as a major factor influencing the spread and the level of HIV/AIDS prevalence (FGN 2003). It has also been established from literatures that there is gender disparity in the prevalence of HIV/AIDS in the country (NACA 2007). There is therefore the fear that the level of awareness of prevalence of HIV/AIDS might also vary with gender which might lead to higher prevalent rate among the gender group with less awareness. Hence this paper intends to find out the level of HIV/AIDS awareness by gender in Delta State, generate spatial map of the gender and awareness pattern of HIV/AIDS using GIS tool in the form of Arc view 9 and make recommendations. This objective is hypothesized as; there is no significant difference in the respondents' level of awareness based on gender.

Conceptual Framework

Diffusion Model

Spatial diffusion is the spread of some phenomena over space through time from a limited number of origin or sources, information about HIV/AIDS diffusion inclusive. Diffusion occurs either as a process of expansion or of relocation (Dickson, 2010). In expansion diffusion, a phenomena spread through a population from one region to another. When this occurs by direct contact, as in the spread of epidemic disease like HIV/AIDS, it is known as "contagious" diffusion. More frequently, this kind of transfer takes place in stepwise fashion along existing geographic hierarchies, for examples from a metropolis to its hinterland along it transport network or through existing social structure, say from the elite to the middle classes. This kind of transfer through expansion is known cascade diffusion (Dickson, 2010).

In relocation diffusion, ideas or material culture traits disappears in their source region even as they spread into their new location. Relocation diffusion takes place between centres of high cultural innovation and the regions of cultural receptivity. It also occurs in the course of human migration and colonization (Dickson, 2010).

However, in relation to this empirical article on gender and awareness pattern of HIV/AIDS in Delta State, it suffice to say that the contagious diffusion which is a feature of expansion diffusion is more relevant. This is because HIV/AIDS is carried in human body. As humans move and relocate from one geographical region to the other, there is the tendency to spread the disease as there is a strong association between human mobility and the spread of epidemics (Anarfi, 1993). In like manner, information about the existence of this epidemic also starts from a source and diffuses to other region through various means of enlightenment processes in line with the principle of expansion diffusion model. Hence this research article rest on the expansion diffusion model.

Research Methods

Delta State is the study area while the local government areas constituted the units of analysis. The numerous data required were generated from two main sources viz; the primary and secondary sources. The primary data were obtained by administering questionnaires in the nine local government areas selected for study. The Clinical data on HIV/AIDS were obtained from health facilities owned by the Delta state government. The secondary data were obtained from Text books, journals and internet materials. Other documents relevant to the study were also accessed

Stratified Sampling method was used to stratify Delta state into three zones following the existing strata which is the three senatorial districts, that is: Delta North, Delta Central and Delta South. Within each Stratum, simple random sampling was employed to select the local government areas from where data were obtained. A total of nine (9) local government areas were selected from the three senatorial Districts. Two thousand three hundred and fifty (2350) copies of questionnaire were administered to adult male and female of age 15 years and above in the study area. These 2350 copies of questionnaires were administered unevenly based on the urbanizing status of the communities in terms of population figure.

Data analysis was carried out using Statistical techniques , precisely T-test , in the testing of the stated hypotheses. The results generated were presented in tables, charts and spatially through the use of GIS tool in the form of Arc GIS 9.

Results and Findings

Level of Awareness of HIV/AIDS Occurrence by LGA

In a bid to achieve the first specific objective of this research article, the responses on the level of awareness as indicated in Table 1 shows that the level of awareness vary spatially with Ika-South having 99.6% positive response on awareness. This is followed by Ughelli-south (98.2%), Oshimili (93.5%), Sapele (92.7%) Ethiope-East (91.2%), Isoko- North (86.7%), Burutu (81.4%) and Warri-South (70.4%). The very high level of awareness in Ika-South LGA can be attributed to the presence of Health Institutions such as the Central Hospital Agbor, Government hospital Agbor-Alidinma, numerous primary Health Care units, Private hospitals and the State School of Nursing Agbor. The presence of these Health institutions is capable of raising high consciousness about health issues as more technical and expertise information about medical health matters are easily and readily available to the people domiciled in that geographical unit.

Table 1: Percentage Distribution of Level of Awareness of HIV/AIDS Occurrence by LGA

LGA	Level of Awareness			
	Aware	Not Aware	No Response	Total
Isoko North	86.7	10.8	2.6	100.0
Ukwuani	92.7	1.7	5.6	100.0
Oshimili South	93.5	5.0	1.5	100.0
Sapele	93.1	5.3	1.6	100.0
Burutu	81.4	17.2	1.4	100.0
Ika South	99.6	0.4	0.0	100.0
Ethiope East	91.2	8.3	0.5	100.0
Ughelli South	98.2	0.4	1.4	100.0
Warri South	70.4	27.7	1.9	100.0

Source: Fieldwork, 2014

Summary of Awareness Level in Delta State

The summary as it affects the nine LGAs studied and as a basis for generalizing about level of awareness of HIV/AIDS in Delta State is that awareness is high in the State. On the whole, A total of (88.9%) indicated that they are aware of the occurrence of the infection in the Delta state.

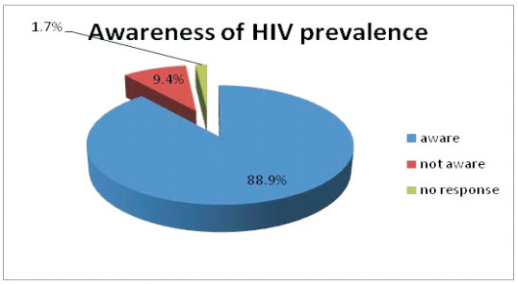

Figure 1: A Pie Chart showing Awareness of HIV Prevalence

Source: Fieldwork 2014

Gender and Awareness by Local Government Area

A cross tabulation of gender and the level of awareness as it relates to the individual LGA was carried out. Table 2 revealed that eighty three point nine percent (83.9%) of the male respondents in Isoko North have awareness of HIV prevalence compared with Eighty eight point nine percent (88.9%) of female respondents from the same local government. In Ukwuani, 95.3% of the males have awareness of HIV prevalence compared with 88.7% of the females. In Oshimili South, 88% of the male respondents are aware of HIV prevalence compared to 97.4% of their female counterparts in the LGA. For Sapele LGA, it is 89.4% males and 95.8% of the females that are aware. In Burutu, 79.8 % males and 92.3% females are aware. In Ika-south, 99.1% males and 100% females are aware. In Ethiope-East, 88.2% males and 94.4% females have awareness of HIV/AIDS. As for Ughelli-South LGA, 98.4% of the males and 98.1% of the females are aware, while in Warri-South, 68.2% and 72% of the males and the females have awareness respectively.

Table 2 Percentage Distribution of Gender And Awareness BY LGA

Sex of respondents	Awareness of HIV prevalence			
	Aware (%)	Not ware (%)	No response (%)	Total (%)
ISOKO NORTH				
Male	73 (83.9)	12 (13.8)	2 (2.3)	87 (100.0)
Female	96 (88.9)	9 (8.3)	3 (2.8)	108 (100.0)
Total	169 (86.7)	21 (10.8)	5 (2.5)	195 (100.0)
UKWUANI				
Male	101 (95.3)	1 (0.9)	4 (3.8)	106 (100.0)
Female	63 (88.7)	2 (2.8)	6 (8.5)	71 (100.0)
Total	164 (92.7)	3 (1.7)	10 (5.6)	177 (100.0)
OSHIMILI SOUTH				
Male	73 (88.0)	9 (10.8)	1 (1.2)	83 (100.0)
Female	113 (97.4)	1 (0.9)	2 (1.7)	116 (100.0)
Total	186 (93.5)	10 (5.0)	3 (1.5)	199 (100.0)
SAPELE				
Male	93 (89.4)	9 (8.7)	2 (1.9)	104 (100.0)
Female	136 (95.8)	4 (2.8)	2 (1.4)	142 (100.0)
Total	229 (93.1)	13 (5.3)	4 (1.6)	246 (100.0)
BURUTU				
Male	201 (79.8)	47 (18.7)	4 (1.5)	252 (100.0)
Female	36 (92.3)	3 (7.7)	0 (0.0)	39 (100.0)
Total	237 (81.4)	50 (17.2)	4 (1.4)	291 (100.0)

IKA SOUTH				
Male	114 (99.1)	1 (0.9)	0 (0.0)	115 (100.0)
Female	135 (100.0)	0 (0.0)	0 (0.0)	135 (100.0)
Total	249 (99.6)	1 (0.4)	0 (0.0)	250 (100.0)
ETHIOPE EAST				
Male	97 (88.2)	12 (10.9)	1 (0.9)	110 (100.0)
Female	96 (88.9)	9 (8.3)	3 (2.8)	108 (100.0)
Total	169 (86.7)	21 (10.8)	5 (2.5)	195 (100.0)
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Total	249 (99.6)	1 (0.4)	0 (0.0)	250 (100.0)
ETHIOPE EAST				
Male	97 (88.2)	12 (10.9)	1 (0.9)	110 (100.0)
Female	101 (94.4)	6 (5.6)	0 (0.0)	107 (100.0)
Total	198 (91.2)	18 (8.3)	1 (0.5)	217 (100.0)
UGHELLI SOUTH				
male	122 (98.4)	0 (0.0)	2 (1.6)	124 (100.0)
female	156 (98.1)	1 (0.6)	2 (1.3)	159 (100.0)
Total	278 (98.2)	1 (0.4)	4 (1.4)	283 (100.0)
WARRI SOUTH				
Male	88 (68.2)	41 (31.8)	0 (0.0)	129 (100.0)
Female	131 (72.0)	45 (24.7)	6 (3.3)	182 (100.0)
Total	219 (70.4)	86 (27.7)	6 (1.9)	311 (100.0)

Source: Fieldwork 2014

Test of Hypothesis

In a bid to test the hypothesis of the study which states that:

There is no significant difference in the respondents' level of awareness based on gender. An independent sample t-test was done for only the males and the females that are aware.

Table 3. Differences in level of awareness based on gender

LGA	MALE	FEMALE
Isoko North	73	96
Ukwuani	101	63
Oshimili South	73	113
Sapele	92	136
Burutu	201	36
Ika south	114	135
Ethiope East	97	101
Ughelli South	122	156
Warri South	88	131

Table 4 Independent Samples Test

	Levene's Test for Equality of Variance	t-test for Equality of means							
	F	Sig.	t	Df	p-value	Mean Difference	Std.Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal Variances assumed	.0403	.535	.131	16	.898	2.44444	18.69013	-37.17686	42.06575
Equal Variances not assumed			.131	15.979	.898	2.44444	18.69013	-37.18118	42.07007

p-value<0.05(significant level)

With t-test value of 0.131 and a p value of 0.898, which is greater than 0.05 level of significance, the null hypothesis which stated that there is no significant difference in the level of awareness of respondents based on gender is accepted .

Figure 2 presents spatial map of gender and awareness pattern of HIV/AIDS in Delta State using GIS tool.

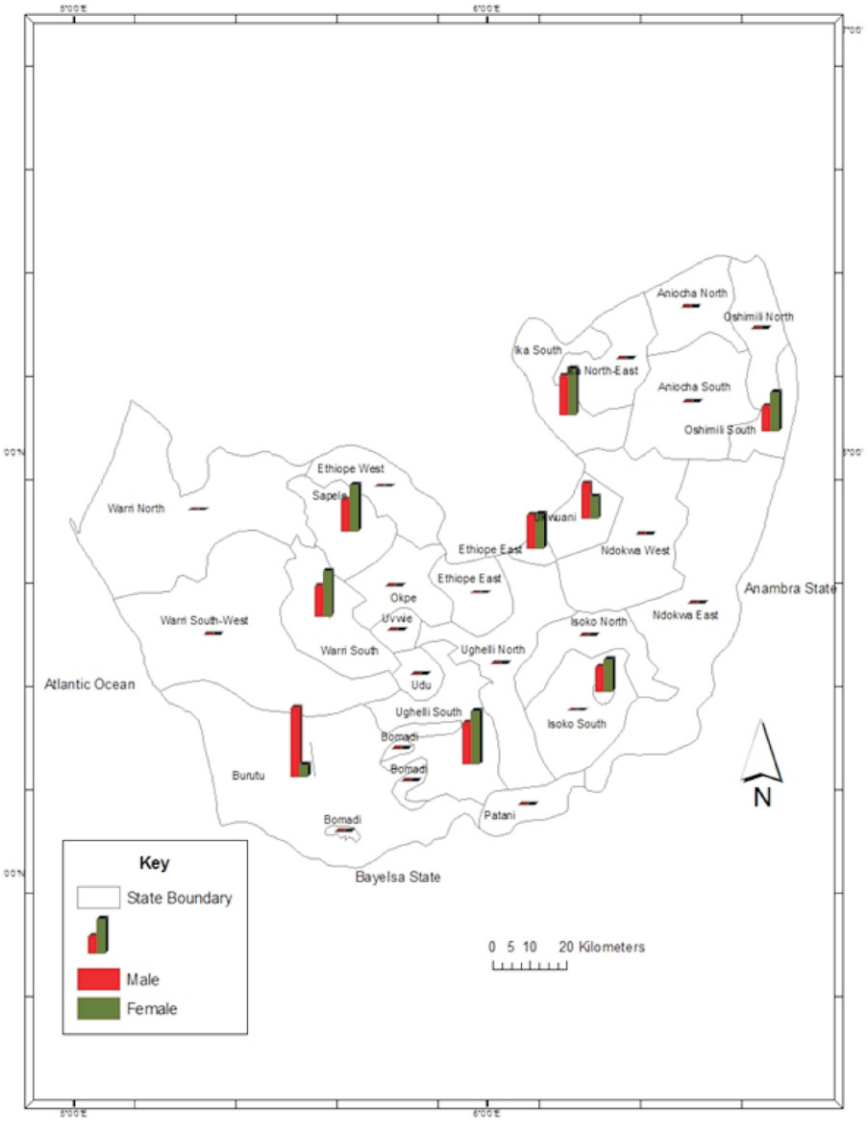

Figure 2: Spatial map of Gender and awareness pattern of HIV/AIDS in Delta State

Discussion

From the results presented above, the basic objectives of this have been fully realized generally, there is high level of HIV/AIDS awareness in every LGA studied. This implies **that ignorance is not a major factor in the spread of HIV/AIDS in the study area.** This can be used to appraise the success of all the awareness campaign by various agencies and stake holders in HIV/AIDS prevention and care. **This finding is at variance with that of FGN (2003) which projected ignorance as a factor in the spread of HIV/AIDS in Nigeria. Hence there is the** need to **explore other variables perpetuating the spread of the infection. The** result also presented the gender and awareness pattern of HIV/AIDS in the study area. With t-test value of 0.131 and a p value of 0.898, which is greater than 0.05 level of significance, the null hypothesis which stated that there is no significant difference in the level of awareness of respondents based on

gender is accepted . This implies that gender is not a factor of awareness variation on HIV prevalence in Delta state. The spatial maps which is geographical tool for presenting patterns however indicated that although awareness is high, it somewhat higher among the females than in males (figure 2), this can be attributed to the fact that females have widely varied way of receiving information on HIV/AIDS which include their regular visits to anti-natal clinics

Conclusion

Although information-based campaigns are still very necessary in the fight against HIV/AIDS, It can however be concluded based on the findings of this research article, that generally, the level of HIV/AIDS awareness is high in the Delta State with a total response of 1929 (88.9%). This finding rules out ignorance as a factor in sharpening the current HIV pattern in the Delta state. However, the research also concluded that gender is not a factor of awareness variation in Delta state With t-test value of 0.131 and a P- value of 0.898, which is greater than 0.05 level of significance. Also, from merely viewing the spatial map drawn on gender and awareness pattern (figure 2), at a glance, it can be concluded that awareness is higher among the female gender. This higher awareness among the females can be attributed to the fact that women have better health seeking behaviours than men. For instance, the women attend anti-natal clinic when pregnant where they are given health talks but men do not have such privilege.

Recommendation

This research, having established that awareness level is high in the state, it is hereby recommended that the campaign programmes and seminars that will be organized in the Local Government Areas in the state should be geared towards behavioural changes rather than just creating awareness about existence of the infection. This will be in line with the thrust of the National HIV/AIDS Strategic Plan 2010-15 which include Behavior Change and prevention of new infections while sustaining the momentum in HIV/AIDS treatment, care and support for adults and children infected and affected by the epidemic.

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