

Socio-Demographic Characteristics of Patients Diagnosed with HIV/AIDS in Nasarawa Eggon

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Abstract: The aim of this study is to analyze the demographic and socio-economic characteristics of persons diagnosed with the Human Immunodeficiency Virus (HIV) and the Acquired Immune Deficiency Syndrome (AIDS) in Nasarawa Eggon Local Government Area of Nasarawa State, Nigeria. Data for this paper covering the period 1998 to 2006 were obtained from the records of the Nasarawa Eggon General Hospital. The data were analyzed using SPSS statistical computer package. A total of 340 people were diagnosed with HIV/AIDS during the period under study. The results revealed that 59.4% of the HIV/AIDS positive persons were within the age group 20-34 years (Mean age = 29.9; SD = 10.3). The chi-square (χ^2) test revealed that prevalence of HIV/AIDS varied significantly by age ($\chi^2 = 494.73$, df = 48, p = 0.001). Prevalence rate by sex revealed that more females (51.5%) than males (48.5%) were infected and that majority were married (60.3%). A Box and Whiskers plot revealed that the age distribution of the females appeared uniform than that of the males. The analysis of the data by religion revealed that Muslims and Christians constituted 53.6% and 43.2% of those diagnosed with HIV/AIDS respectively. Farmers (16.8%) were the most infected among males while for females; housewives were the most infected with 23.2%. Given the relatively high prevalence of HIV/AIDS among those in married union, the paper suggested the need to refocus the strategies of curbing with the prevalence rates among those in marital union.

Key words: Acquired immune deficiency syndrome, diagnosed, epidemics, prevalence rate, human immunodeficiency virus, prevalence rate

INTRODUCTION

The jigsaws provided by different studies on Human Immunodeficiency Virus (HIV) and the Acquired Immune Deficiency Syndrome (AIDS) in Africa, built up an alarming picture of the demographic and socio-economic effects of HIV/AIDS in the continent. HIV/AIDS is a household name in Sub-Saharan Africa (SSA) and its toll on the general population is increasing daily. It is estimated that 1.9 million people were newly infected with HIV in Sub-Saharan Africa (SSA) in 2007, bringing the total number of people living with HIV in SSA to 22 million, which is about 67% of the global total of 32.9 million (UNAID, 2008a). The HIV/AIDS epidemics in SSA vary from country to country with most countries in Southern Africa (Botswana, Lesotho, Namibia, Southern Africa, Swaziland, Zambia and Zimbabwe) having a HIV prevalence rate exceeding 15% (UNAID, 2008a).

Although it is generally accepted that the prevalence rate of HIV/AIDS in Nigeria is relatively low (ranges between 3.1 and 4.6%) compared to the rest of sub-Saharan Africa (FMoH, 2008; UNAID, 2008b), Nigeria's large population size means a significantly high number of people are infected. In fact, HIV has been reported among a broad spectrum of the Nigerian population

including healthy persons, blood donors, clients of Sexually Transmitted Diseases (STDs) clinics, tuberculosis patients, long distance truck drivers, pregnant women attending antenatal clinics, Commercial Sex Workers (CSWs) and their clients, clinically ill and healthy persons, infants and youths (FMoH, 2001; Laah, 2003; Mamman, 2003).

Although HIV/AIDS is prevalent in all population groups, data from most countries suggest that it is more pronounced among those who are within the reproductive and productive age group. Data from the United States of America (USA) showed that among youths age 20 to 24 years, 64% of reported HIV infections occurred among young men and 36 per cent among young women. While among youths age 13 to 19 years, 57% of reported HIV infections occurred among women and 43% among young men (CDC, 2002). In Nigeria, as it is in many sub-Saharan African countries, prevalence of HIV/AIDS is predominant in the age group 15-24 years (National Youth Service Corps/UNICEF, 2007).

In the early years of the epidemic prevalence rates were found to be higher among men than among women in many countries of the world where HIV/AIDS was found in the population. Giri *et al.* (1995) in an earlier study of the socio-demographic characteristics of HIV

infection in northern Italia using data obtained from a study of 134 patients testing positive to HIV antibody, revealed that adults male appeared to have the highest HIV rates. A similar study in Kuala Lumpur based on data collected between 1987 and 1995 noted that over two third of those infected were males (Cheong *et al*, 1997). In the last one-decade the prevalence rates of the HIV/AIDS epidemic have been found to be higher in women than in men (Laah, 2003; Mamman, 2003; FMOH, 2008; National Population Commission and ICF Macro, 2009).

Although so much has been written about the epidemiology of the HIV/AIDS and the factors fuelling the epidemic in Nigeria, no much is known of the socio-demographic and economic characteristics of people diagnosed with HIV/AIDS. The main objectives of this study are therefore:

- To analyze the social characteristics of HIV/AIDS infected persons in Nasarawa Eggon Local Government Area of Nasarawa State
- To examine the demographic characteristics of HIV/AIDS infected persons in Nasarawa Eggon Local Government Area of Nasarawa State

Information on the characteristics of people living with HIV/AIDS is important for the evolvement of sustainable and purposeful intervention programs to enable those infected cope with the virus.

Trend In HIV/AIDS prevalence in Nigeria: Since the first case of HIV/AIDS was diagnosed in Nigeria in 1986, the epidemic in the country has since extended beyond the high-risk groups to the general population. Nigeria has a rapidly growing HIV/AIDS epidemic that is characterized by a prevalence rate of 4.6% (UNAIDS, 2009) that is driven largely by heterosexual sex. Although there is a spatial variation in the HIV/AIDS prevalence in Nigeria as some parts of the country are more affected than others, there is no state or community that is not affected.

Young people, especially women 20-24 years old, are increasingly vulnerable. Other affected groups include sex workers and people with tuberculosis. The prevalence of the HIV/AIDS is fuelled by low levels of male and female condom use, high rates of casual and transactional unprotected sex among young people, poverty, low literacy levels, cultural and religious factors, as well as stigma and discrimination (Avert, 2010; National Population Commission and ICF Macro, 2009; Inungu and Karl, 2010).

Fig. 1 shows the trend in HIV/AIDS prevalence in Nigeria. The prevalence rate rose from 1.8% in 1991 to 5.8% in 2001, but between 2001 and 2005 the prevalence rate declined to 4.4% and increased to 4.6% in 2008 (FMOH, 2001, 2005, 2008; Ugwu, 2009; FGN, 2008;



Fig. 1: Trend in HIV prevalence rate in Nigeria 1991-2008

National Population Commission and ICF Macro, 2009). Despite the fact that Nigeria is one of the largest oil producing nations in the world it is ranked 158 out of 177 on the United Nations Development Program (UNDP) 2007/2008 Human Poverty Index (UNDP, 2008). The ranking of Nigeria as one of the poorest in the world means that Nigeria is faced with very daunting task of fighting the HIV/AIDS epidemic (Avert, 2010). Given the current efforts and resources the effects of the HIV/AIDS are likely to be overwhelming in the years ahead.

MATERIALS AND METHODS

Nasarawa Eggon Local Government Area (LGA) is located in Nasarawa State, Nigeria and lies between Latitudes 8°33" and 8°52" North and between Longitudes 8°14" and 8°39" East. Nasarawa Eggon town is the administrative headquarters of Nasarawa Eggon Local Government Area and it is located on the ever-busy Abuja-Makurdi road. The town is now emerging not only as major urban centre in Nasarawa State but also as a major truck stop for the long distance truck drivers that ply the North Central area of Nigeria. Studies have established a strong relationship between HIV/AIDS prevalence and truck stops and junction towns (Obioha, 2008). Ever since Abuja emerged as the Federal Capital Territory (FCT) of Nigeria, towns within a 200-kilometre radius of the FCT have become beehive of activities. Nasarawa Eggon is one of such towns. Data from the HIV/AIDS surveillance survey revealed that Nasarawa State has the third highest prevalence rate of HIV/AIDS in Nigeria with 6.7% (FMOH, 2005).

The data for this research were obtained in June 2008 from the records of the Nasarawa Eggon General Hospital located at Nasarawa Eggon town. The Nasarawa Eggon General Hospital is state government wholly owned providing secondary level health care to the people of Nasarawa Eggon LGA. The data of HIV positive persons were either for those who were on routine treatments at the general hospital or who were screened and found to be HIV positive for the period 1998 to 2006. The data were

categorized into three; (i) those who went to the hospital for confirmatory test, (ii) those who went to the hospital to donate blood to sick relations and (iii) those who were suspected to have been HIV positive due to the presence of certain opportunistic infections. The data were analyzed using SPSS version 17.0 and presented using descriptive statistical analysis. To assess for normality in data, the population pyramid and the Boxplot (or the box and whiskers) for one variable were plotted to measure the degree of dispersion and skewness in the data.

RESULTS AND DISCUSSION

Distribution by age, sex and marital status: Table 1 shows the distribution of HIV/AIDS positive people by age. A total of 83.5% (n = 340) were within the age group 20-44 years. A further breakdown revealed that 59.4% were in the age group 20-34 while 24.1% were in the age group 35-44 years. Those who were less than 20 years of age constituted 8.8% while those in the age group 45 years and above made up the remaining 7.8% (Mean age = 29.9; SD = 10.3). The χ^2 test showed that prevalence of HIV/AIDS varied significantly by age ($\chi^2 = 494.73$, df = 48, $p = 0.001$). The mean ages by sex were found to be 32.8 for males and 27.1 for females. These findings were consistent with other findings in Nigeria where most of the people infected with the HIV were young people within the productive and reproductive age groups (Laah, 2003; NYSC/UNICEF, 2007; National Population Commission and ICF Macro, 2009). The relatively higher proportion of younger women with HIV/AIDS is attributable to early age at first sex and the fact that adolescent girls tend to have older men as sex partners. Also, a higher proportion of young men (30%) than young women (19%) in less developed countries have comprehensive knowledge of HIV and how to avoid transmission (Bremner *et al.*, 2009).

The 2006 Sentinel Survey showed that a greater percentage of Nigerians infected with HIV were between the ages of 20-34 years, while nearly half of all reported new cases of HIV infection were in the age group of 15-29 years (FMoH, 2006; NYSC/UNICEF, 2007). This age group is also characterized by social vices such as, teenage pregnancy, unsafe abortions, drug use and sexually transmitted infections (FMoH, 2007; Mamman, 2003; Laah, 2003).

The distribution by sex revealed that relatively more females (51.5%) than males (48.5%) were infected in Nasarawa Eggon LGA (Table 1). Although high risk sexual behavior is much more common among young men (Bremner *et al.*, 2009), data from other sources have indicated that females are disproportionately affected by HIV. In many countries like in Nigeria young women are between two to five times more likely to be infected than young men (Laah, 2003; Mamman, 2003, 2006;

Table 1: Distribution by age, sex and marital status

Age*	No.	Percentage
<20	30	8.8
20-34	202	59.4
35-44	82	24.1
45-54	19	5.6
55 and above	7	2.1
Total	340	100.0
Sex		
Male	165	48.5
Female	175	51.5
Total	340	100.0
Marital Status		
Single	108	31.8
Married	205	60.3
Divorced	10	2.9
Widow	17	5.0
Separated	0	0.0
Total	340	100.0

*: Mean age is 29.9, SD = 10.2

Panchabadeswaran *et al.*, 2006; Rosen *et al.*, 2008; Bremner *et al.*, 2009; National Population Commission and ICF Macro, 2009; Hedden *et al.*, 2009; Adebayo *et al.*, 2009). A few studies have however, documented higher prevalence of HIV/AIDS among males than among females (Celikbas *et al.*, 2008; Avert, 2010). Women in Nigeria accounted for 58% of adults 15 years and above, living with HIV in 2007 (UNAIDS, 2008b).

Factors fuelling the relatively high prevalence of the HIV/AIDS epidemic among women in Nigeria include; early age of sexual debut, practice of wife inheritance especially in the rural areas, feminization of poverty, lack of political will, labor migration, early age at first marriage, marriage of adolescent girls to older men, low contraceptives use (especially condom), stigma and discrimination, low illiteracy level, practice of Female Genital Mutilation (FGM) and other harmful cultural practices (Laah, 2003; National Population Commission and ICF Macro, 2009). Although the average age at first marriage in Nigeria varies from one geo-political zone to another, more than two third of the girls in northern part of Nigeria marry before the age of 18 (National Population Commission and ICF Macro, 2009). Not only do some of these married 'girls' lack the complete physiological ability to reproduce (as evident by the high prevalence of Vesico-Vaginal Fistula (VVF)), they also lack adequate knowledge and skills required to insist on or negotiate condom use during sex. In a study of HIV-positive mother-child pairs in Ile Ife, Nigeria, Adejuyigbe *et al.* (2004) observed that the HIV-positive mothers were younger, unemployed, married to polygamous spouses and had lower education.

Table 1 also revealed that 60.3% of those diagnosed with HIV/AIDS were married. This is worrisome because the high prevalence among those married has significant implication in the transmission of HIV/AIDS. The general attitude of the people is that HIV/AIDS is the product of

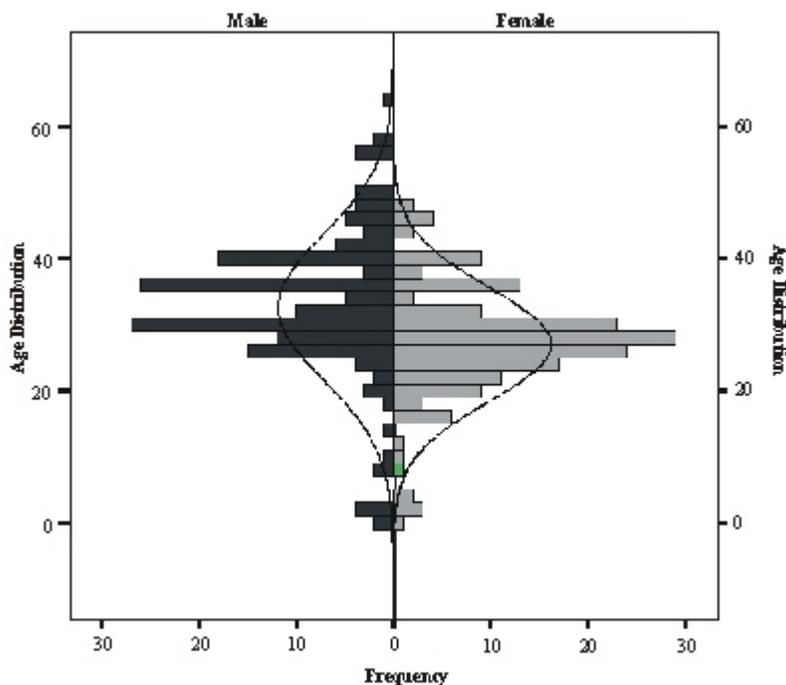


Fig. 2: Pyramidal age and sex distribution of HIV/AIDS positive persons

extra-marital and premarital promiscuous sex life. Very often married couples tended to be seen as relatively free from the virus but with the high proportion of the virus among the married people, the chances of Mother-To-Child Transmission (MTCT) are higher. This could also be the reason why despite the various programs of government the prevalence rate seems to be rising as evident by the significant increase from 4.4% in 2005 to 4.6% in 2008 (FMoH, 2008).

Studies of the HIV/AIDS epidemic in Africa revealed that prevalence rate is higher among women than among men. In some scenarios where the prevalence rates are higher in men than in women as may be found in some countries, the HIV impact is particularly more on women as the burden of care falls on them. In most cases young girls are withdrawn from schools to cater for siblings and when the breadwinner dies women take up the responsibility of providing for the needs of children orphaned by AIDS.

Figure 2 revealed the distribution of HIV/AIDS infected persons by age and by sex. For males and females, the age range 20-40 years had the highest proportion of people diagnosed with HIV. The distribution by age appeared normal for females than for males.

Figure 3 is a Boxplot (Box and Whisker) that compares the value of the spread of two similar variables (in this case male and female). The Boxplot indicated that the female distribution appeared uniform while the male

distribution was irregular. This means that the female distribution is normal while that of the males is skewed. The outliers were confirmed not to be due to errors in the entry of the data but on the presence of very extreme cases of age for both males and females.

Distribution by religion: Religion plays significant role in Northern Nigeria where the study area is located. The impact of religion is felt in attitude towards sex and safe sexual practices. Figure 4 showed the distribution of respondents by religion. Muslims constituted more than half (55.6%) of those who are positive. Christian and Traditionalist/Pagans made up 43.2 and 1.2% respectively. There are several reasons for the relatively high proportion of positive Muslims. Nasarawa Eggon town is a foodstuff collection centre and a truck stop for long distance truck drivers and truck driving is a profession in Northern Nigeria that is dominated by the Hausas who are mainly Muslims. These commodities such as yam, cassava and oranges are transported by trucks to major cities like Abuja, Lagos, Port Harcourt, Kaduna and Ibadan. Since the collapse of the railway system in the late 1980s, long distance truck haulage has assumed a position of importance in Nigeria.

The relatively very low proportion of traditionalist (1.2%) is to be expected as the study area is a semi-urban centre and most traditionalists in Nigeria are found in tribal heartlands (that is, in core rural areas). It is important to note however, that most people feel very

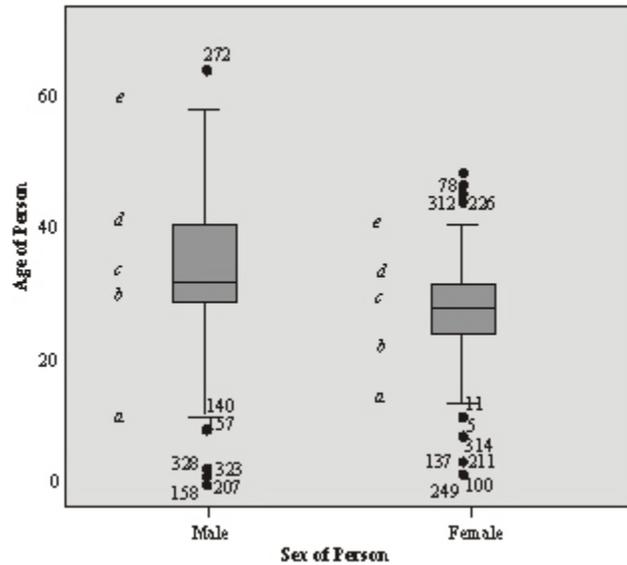


Fig. 3: Box and whiskers split by gender

Note

a-b = Is the lowermost quartile (0-25%)

b-c = Second lowest quartile (25-50%)

c = Mean

c-d = Second highest quartile (50-75%)

d-e = Highest quartile (75-100%)

f = The outliers (cases above or below the maximum and minimum quartiles)

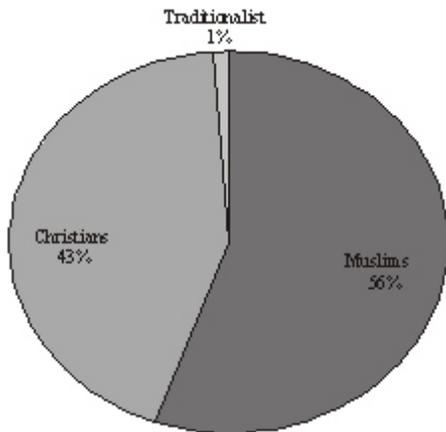


Fig. 4: Percentage distribution by religion

comfortable combining the traditional religion with their practice of Islam or Christianity and when reporting, the traditional religion is always underreported.

Distribution by occupation: The distribution of people living with HIV/AIDS by occupation revealed that the most infected people were housewives (23.2%) followed closely by farmers (21.2%). Business people and civil servants had equally higher proportions of 20 and 18.2%

Table 2: Distribution by occupation and by sex

Occupation,	Males N (%)	Females N (%)	Total N (%)
Civil Servant	41(12.0)	21(6.2)	62(18.2)
Nomads	7(7.1)	0(0.0)	7(2.1)
CSW/MSM	0(0.0)	3(0.3)	3(0.9)
Farmer	57(16.8)	15(4.4)	72(21.2)
Business	37(10.9)	31(9.1)	68(20.0)
Clergy	1(0.3)	0(0.0)	1(0.3)
Student	12(3.5)	17(5.0)	29(8.5)
House wife,	NA	79(23.2)	79(23.2)
Pupil	4(1.2)	3(0.9)	7(2.1)
Driver	1(0.3)	0(0.0)	1(0.3)
None	5(1.5)	6(1.7)	11(3.2)
Total	165(48.5)	175(51.5)	340(100.0)

NA = not applicable

respectively (Table 2). Civil servants here are taken to mean those employed by government whether as teachers, uniformed men or staff of various ministries and parastatals. Although Nasarawa Eggon is a semi urban area, farming is still the main occupation of the people. The General Hospital is also the only referral hospital for most of the people of the LGA, which is largely rural.

Although data of the HIV/AIDS epidemic in Sub-Saharan Africa consistently indicate that the HIV/AIDS prevalence rates are higher among women than men (UNAIDS, 2008a), the number of people diagnosed with HIV/AIDS that are housewives is worrisome as this has significant implication in the various programs to reduce the transmission of HIV/AIDS. Since the prevalence of

HIV/AIDS is often blamed on promiscuous life style, increase prevalence among those in marital union could hide the true pattern of the HIV/AIDS. This is against the backdrop of the fact that most of the intervention programs of government and international agencies are tailored towards the youth and adolescents, often ignoring those considered to be in stable unions. This is probably responsible for the relative increase in the prevalence of the HIV/AIDS from 4.4% in to 4.6% in 2008 (FMOH, 2008). Also many women in Nigeria, especially housewives lack the knowledge of the explicit sexual behaviors that transmit the HIV virus.

A look at the occupational distribution by sex revealed that farmers had the highest proportion of 16.8% for males followed by civil servants with 12.0%. Interestingly, drivers and the clergy had the least proportions of those infected with 0.3% each. This is rather curious given the fact that Nasarawa Eggon is a truck stop and studies in north and central part of Nigeria have established high prevalence of HIV/AIDS in border towns, truck/bus stops and motor parks. In the case of females, housewives were the most infected (23.2%) followed by women in business with 9.1%. Commercial Sex Workers (CSW) constituted 0.3% of the PLWAs. It is necessary to state that women who are Commercial Sex Workers (CSWs) tend to cite business as occupation. Nasarawa Eggon as a truck stop has very high proportion of 'eating' and 'resting' places that also serve as places to meet new and old sexual partners. Recent nationwide surveys of HIV in Nigeria indicate that Female Sex Workers (FSW) is the population subgroup that is worst affected by HIV/AIDS (FMOH, 2007; National Population Commission and ICF Macro, 2009). The high prevalence of HIV and AIDS among farmers and housewives underscores the need for intervention strategies that are focused, gender sensitive and culturally appropriate. Women and mobile population are particularly very vulnerable to HIV/AIDS because of isolation and lack of support network.

CONCLUSION

The major conclusion from this analysis is that the pattern of HIV/AIDS transmission in Nasarawa Eggon is similar to the pattern observed in most cities of sub-Saharan Africa. But that while government and international agencies need to use multifaceted approach in dealing with the HIV/AIDS scourge, there is the need to redirect efforts to tackle the rising infection rate among those in stable unions. For a long time not much emphasis was placed on tackling the transmission of HIV/AIDS in stable unions because of the tendency to see the epidemic as more of a problem of adolescents and those not in stable unions. This is against the backdrop of the fact that result from the 2008 NDHS revealed that couple who are

married are the least likely to know that using condom or limiting intercourse to one uninfected partner reduces HIV transmission (National Population Commission and ICF Macro, 2009).

It would seem also that most intervention programs for young people and adolescents are school-based, not much programs and coping strategies are tailored towards the out-of-school youths. Although this study did not analyzed educational attainment, as such information is not routinely obtained in most records, the author's familiarity with the area suggested that lack of education and low literacy rates of the people in Nasarawa Eggon LGA are major developmental problems. While suggesting the strengthening of coordination, monitoring and evaluation systems for HIV response activities, a proper course of intervention depends on understanding the socio-economic and demographic characteristics of those infected.

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