Full Length Research Paper

Analysis of the socio-demographic characteristics of HIV/AIDS patients in Adamawa State, Nigeria

Nakama David Falu¹, Yohanna Peter¹ and Jacob James Vasumu²

¹Department of Geography, Adamawa State University, Mubi, Nigeria.
²Department of Internal Medicine, Specialist Hospital, Yola, Adamawa State, Nigeria.

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The aim of this study is to analyze the socio-demographic characteristics of persons diagnosed with the Human Immunodeficiency Virus (HIV) and the Acquired Immune Deficiency Syndrome (AIDS) in Adamawa State, Nigeria. Data for this research covering the period January, 2013-January, 2014 were obtained from the records of the General Hospitals in Michika, Mubi, Yola, Garkida, and Numan. The data were analyzed using ARC GIS 9.3a GIS package. A total of two thousand, eight hundred and thirteen (2813) people were diagnosed with HIV/AIDS during the period understudy. The results revealed that 55% of the HIV/AIDS positive persons were within the age group 20-34 years. HIV/AIDS varied significantly by age. Prevalence rate by sex revealed that more females (68%) than males (32%) were infected and that majority were married (70%). The analysis of the data by occupation revealed that the unemployed constituted 83%. Given the relatively high prevalence of HIV/AIDS among those in marital union and unemployed, the research suggested the need to refocus the strategies of curbing the menace with the prevalence rates among those in marital union, the unemployed and the illiterates.

Key words: Demographic, HIV/AIDS, patients, age, sex.

INTRODUCTION

HIV was first diagnosed more than twenty years ago and up till now there is no known cure for the disease. The jigsaws provided by different studies on AIDS in Africa, built up an alarming picture of the demographic and socio-economic effects of HIV/AIDS in the continent (Laah, 2010). HIV/AIDS is a household name in Sub-Saharan Africa (SSA) and its toll on the general population is increasing daily.

The socio-demographic characteristics of HIV/AIDS patients reveal the age, sex, marital status and the occupation of the diagnosed patients. Although HIV/AIDS is prevalent in all population groups. However, data from most countries show 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 the youths age 20 to 24 are the most infected. 64% of the reported HIV infections occurred among young men and 36 percent among the young women, while 46% out of the 64%, among the youths age 13 to 19, 57% of the reported HIV infections occurred among women and 43% among young men (CDC, 2002).

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 the study of the socio-demographic characteristics of HIV patients by UNAID (2006), the most important contrast that emerges with the progression of different patterns of HIV is visible in the age-sex pattern of HIV and AIDS prevalence. The rate at which HIV is spreading in sub-Saharan Africa is so high that the future generation is threatened with extinction.

Although 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 characteristics of the people diagnosed with HIV/AIDS. This is despite its significant impact on the
economies in a number of ways as well as the demography of the countries affected. The extent of this impact has therefore been of interest to investigators but research has been quite scarce on the public domain this could be attributed to data problems, hence, this study exploring the demographic characteristics.

The present study is designed to use GIS for analysis of the socio-demographic characteristics of HIV/AIDS patients diagnosed in Adamawa State.

**Location and extent**

Adamawa State is located in the North Eastern part of Nigeria. It lies between latitude 7° and 11° North of the equator, and longitude 11° and 14°E of the Greenwich Meridian. It shares common boundaries with Taraba State in the South and the West, Gombe State in its Northwest, and Borno to the North. Adamawa State has an international boundary with the Cameroun Republic along its eastern border (Figure 1). The state covers a land area of about 38,741 km² with a population of 2,102,053 people, according to the 1991 population census of Nigeria. The State is divided into 21 local government areas (Adebayo, 1999).

**MATERIALS AND METHODS**

**Types of data**

The research work requires two types of data for analysis of the socio-demographic characteristics of HIV/AIDS patients in Adamawa State. These included the primary data and the secondary data.

**Sources of data**

The sources of data are described as follows:

**Primary data**

The primary data sources that were used for this study were the data on HIV/AIDS Patients obtained from five anti retroviral therapy Service Centers which comprises of the General Hopitals of Michika, Mubi, Garkida, Yola, and Numan record book.

**Secondary data**

The concept, idea, empirical issues for this research was obtained from the text books, related research projects, journals internet, documentations, Topographical and Administrative maps of Adamawa state on the scale 1: 25,000 was used as a base map for this research. The map was used to ascertain the location of the study area, location of patients and their attributes. The idea sourced out from these data was applied in literature review, data interpretation and analysis.

**Equipment and materials**

The following hardware and software components of the GIS were used in this study.

The hardware components comprises of a Laptop computer and A4 Scanner while the software used were Arcgis 9.3 which was used in the processing of data and display of final results in form of maps and graphs and the Corel draw software was used to capture the scanned administrative map of Adamawa state, Nigeria.

**Data processing**

**Data input**

Data encoding for this research involved geo-referencing, digitizing and layering the final map product. It was done using a laptop and GIS software (Arcgis 9.3). The administrative map of Adamawa State was scanned into the CorelDraw software and converted into the Tagged Image File Format (TIFF) then exported into the GIS software for geo-referencing, resampling, digitizing, analysis and presentation of results, respectively.

**Geo-referencing**

The LATLON (Latitude and longitude) of the base map of the study area was transformed to Universal Transverse Mercator (UTM) coordinate System. The ‘x’ and ‘y’ minimum and maximum values of the coordinates were used to create map boundary. Then the LATLON of the tie-points were inserted one after the other to ensure the true coordinates of these points. After geo-referencing, the image was resampled.

**Data analysis**

The descriptive statistics were applied using ARC GIS 9.3 so as to produce bar charts which were used to describe the level of occurrences of the HIV/AIDS patients for each of the sex, age group, marital status and occupation.

**RESULTS AND DISCUSSION**

Figure 2, reveals that relatively, more females (68%) than males (32%) were infected in Adamawa State. This result confirms other findings by Laah (2003) which indicates that females are disproportionately affected by HIV. In many countries such as Nigeria, young women are between two to five times more likely to be infected than young men Few studies have, however, documented
Figure 1. The study area.
higher prevalence of HIV/AIDS among males than among females (Celikbas et al., 2008). 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 includes 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 literacy level, practice of Female Genital Mutilation (FGM) and other harmful cultural practices (Laah, 2003).

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. Adejuyigbe et al. (2004) observed that the HIV-positive mothers were younger, unemployed, married to polygamous spouses and had lower education.

Distribution HIV/AIDS by occupation in Adamawa state

In this research an attempt was made to verify the occupation of the patients and findings are presented in Figure 3. Figure 3 revealed that the most infected people were the unemployed (82%), while the few the employed constitutes (15%). In this research, business people, nomads, commercial Sex Workers(CSW), farmers, students, house wives, pupils, drivers, were all classified as unemployed while the employed, here, are taken to mean Civil servants, those employed by the government, whether as teachers, uniform men, or staff of various ministries and parastatals and the Clergy(these classification was from the data source). The remaining 4% constitutes of the retired and under care patients.
Saharan Africa consistently indicate that the HIV/AIDS prevalence rates are higher among the women than the men (UNAIDS, 2008a), the number of people diagnosed with HIV/AIDS that are housewives is worrisome as this has significant implication on 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%2005 in to 4.6% in 2008 (Federal Ministry of Health, 2008). Also many women in Nigeria, especially housewives, lack the knowledge of the explicit sexual behaviors that transmit the epidemic. This contributes to the high number of the unemployed patients in Adamawa State.

Figure 4 reveals that 71% of those diagnosed with HIV/AIDS are married. This is worrisome, because the high prevalence among those married has significant implication on the transmission of HIV/AIDS. The general attitude of the people is that, HIV/AIDS is the product of 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 evidenced by the significant increase from 4.4% in 2005, to 4.6% in 2008 ((Federal Ministry of Health, 2008).

Studies of the HIV/AIDS epidemic in Africa revealed that prevalence rate is higher among the 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 carter for the siblings and when the breadwinner dies, women take up the responsibility of providing for the needs of the children orphaned by the HIV/ AIDS virus.

Summary, conclusion and recommendations

The purpose of the study is to analyze the demographic characteristics of HIV/AIDS patients in Adamawa state, Nigeria. Data for this research was obtained from five
The greater percentage of females (85%) and males (15%) infected with the HIV/AIDS in Adamawa State are in the age group of 15 - 19 and 0 - 4, respectively. There are more females (68%) than males (32%) infected with HIV/AIDS in Adamawa State. Majority (82%) of the people infected with the HIV/AIDS in Adamawa State are unemployed, while very few (15%) of those employed are infected. Most (71%) of the HIV/AIDS Patients in Adamawa State are married, while only 29% of unmarried are infected with the virus.

From the findings thus, it can be concluded that:

This study has addressed the challenges of exploring other strategies that can be used alongside the laid down strategies in fighting the problems associated with the HIV/AIDS epidemic in Adamawa State. The result of the study is crucial. The demographic characteristics of the patients have been revealed to show which age group, sex marital status, and occupation has the highest number of infected patients for proper punctual preventive measures to mitigate the spread of the epidemic, because it seems that most intervention programs for the young people and the adolescents are school based, not many programs and coping strategies are tailored towards the out-of-school youths.

Although, this study did not analyze educational attainment, as such information is not routinely obtained in most records. However, the researcher’s familiarity with the area suggested that lack of education and low literacy rates as well as high rate of unemployment of the people in Adamawa State are the major factors to the spread of the HIV/AIDS virus in the State. Based on the research findings and conclusion, the following recommendations are made to help in solving the problems identified in this study:

There is the need to redirect efforts to tackle the rising infection rate among those in stable unions because it has been observed that for a long time, no much emphasis has been 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 the stable unions.

Anti-retroviral therapy centres should be opened in at least all the local government areas of Adamawa state.

Education should be made compulsory for all the people and employment opportunities should be opened for them.

REFERENCES


AIDS care: Psychological and Socio-Medical Aspects of AIDS/HIV, 16 (3).


