

ORIGINAL ARTICLE

AFRICAN JOURNAL OF CLINICAL AND EXPERIMENTAL MICROBIOLOGY SEPTEMBER 2012 ISBN 1595-689X VOL 13 No.3
 AJCEM/201283/1222 <http://www.ajol.info/journals/ajcem>
 COPYRIGHT 2012 <http://dx.doi.org/10.4314/ajcem.v13i3.6>

AFR. J. CLN. EXPER. MICROBIOL. 13(3): 161-169

SOCIO-DEMOGRAPHIC CHARACTERISTICS OF PATIENTS DIAGNOSED WITH HIV IN ACCRA AND KUMASI METROPOLIS

Baidoo¹, I., Boatin², Rose R., Adom², T., Datohe², D., Voure² T., Bansa² D., Brown², C., & Diaba² A.

¹ Biotechnology and Nuclear Agricultural Research Institute (BNARI), Ghana Atomic Energy Commission ²Radiological and Medical Sciences Research Institute (RAMSRI), Ghana Atomic Energy Commission

Correspondence: Isaac Baidoo¹ Email: baidus@yahoo.com

ABSTRACT

Human Immunodeficiency Virus (HIV) is RNA virus that causes Acquired Immune Deficiency Syndrome (AIDS). In Ghana the AIDS epidemic is spreading very fast in densely populated areas with higher numbers of cases occurring in the southern regions especially the densely populated capitals such as Kumasi, Koforidua and Accra as well as mining towns like Obuasi and Tarkwa, and in border towns.

Data was collected from Accra and Kumasi on socio-economic backgrounds such as age, sex, education, marital status, household size, among others with a structured questionnaire and analysed using statistical Package for Social Sciences (SPSS) version 16.0

About 72% females and 28% males were interviewed with close to 74% lying between 22 to 40 age brackets. Also 63% of these completed JHS/Middle school, Seventeen (36.1%) are married people, 15 (31.9%) widowed. Majority of them are Akans who are also Christians with different denominations. Among these people, 20 (42.6%) of them are unemployed, and 3 (6.4%) claimed to be self-employed in various disciplines. Most of them said they use condoms as contraceptives in order to prevent the spread of the disease.

Income level of the respondents predominantly lies between GH¢50.00- GH¢450.00 per annum.

Some of the interventions for preventing the disease include promoting abstinence and faithfulness, promoting reductions in the number of sexual partners, encouraging delays in the onset of sexual activity among others.

INTRODUCTION

Human Immunodeficiency Virus (HIV) is RNA virus that causes Acquired Immune Deficiency Syndrome (AIDS). The virus destroys the T-helper cell which fights opportunistic infections such as pneumonia and tuberculosis (TB). One can contract the virus for a long time without showing any symptoms of the disease, yet during this period, transmission is possible especially through sexual contact with people. An infected woman can also transmit the disease to her infant during pregnancy, delivery and breastfeeding. HIV can also be spread through blood transfusions or blades that have been in contact with

blood of an HIV infected person. AIDS itself is defined in terms of how much deterioration of the immune system has taken place as seen by the presence of opportunistic infections.

Two main transmission mechanisms account for most new HIV infections globally. These are heterosexual contact and mother-to-child (MTC) transmission.

About 80% of infections are transmitted through heterosexual contact (1). Although the probability of transmitting HIV during intercourse can be quite low, a number of factors increase the risk of infection dramatically. One is the presence of a sexually transmitted disease (STD) such as syphilis and gonorrhoea in either partner during unprotected sex.

These diseases form ulcers and sores that facilitate the transfer of the virus.

In Sub-Saharan (SSA) Africa, the toll for the disease on the general population is increasing daily at an exponential rate. It is estimated that about 2 million people were newly infected with HIV in SSA in 2007. This makes the total number of people living with HIV in SSA to hover around 22 million, which is 6% of the global total of 32.9 million, according to (2). The HIV/AIDS epidemics in SSA vary from country to country with most countries in Southern Africa such as Botswana, Lesotho, Namibia, South Africa, Swaziland, Zambia and Zimbabwe having prevalence rate exceeding 15 (2)

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. For example, data from the United States of America (USA) show that among youths aged 20 to 24 years, 64% of reported HIV infections occurred among young men and 36% among young women. While among youths aged 13 to 19 years, 57% of reported HIV infections occurred among women and 43% among young men (3).

Giri et al (4) in their study on the socio-demographic characteristics of HIV infection in northern Italia 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 found that over two third of those infected were males (5).

In the last one-decade, the prevalence rates of the HIV/AIDS epidemic have been found to be higher in women than in men (6,7, 8,9 and 10). Since the first clinical evidence of AIDS was reported more than two decades ago, HIV/AIDS has spread to every corner of

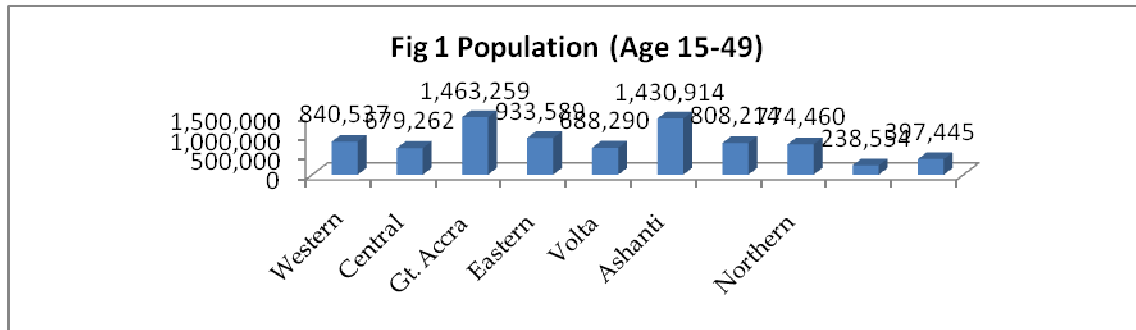
the world. Still growing, the epidemic is reversing development gains, robbing million lives, widening the gap between rich and poor, and undermining social and economic security

The Economy of Ghana and HIV/AIDS

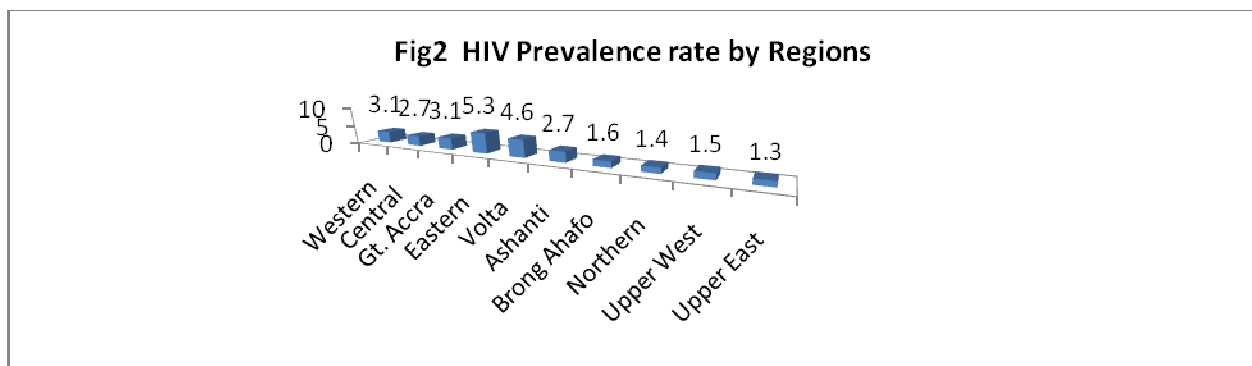
Ghana has a population of about 24 million with growth rate of 2.5% and life expectancy of 57 years. The AIDS epidemic is spreading very fast in densely populated areas. Higher numbers of cases occur in the southern regions especially the densely populated capitals such Kumasi, Koforidua and Accra as well as mining towns like Obuasi and Tarkwa, and in border towns. Poverty level in Ghana by 1999 was estimated to be 29.4% with rural-urban variations. Poverty and other economic pressures on individuals in the cities constitute major factors for the spread of HIV/AIDS. Other factors which contribute to the spread are high youth unemployment, limited job opportunities, rural - urban migration for jobs, market-places, street children, commercial sex workers, itinerant traders, long-distance drivers/truckers as well as Accra - Tema air and sea ports being the gateways for land locked and war-torn countries.

The above among other factors, lead to worsening of poverty situations in rural areas, break-up of traditional family system and norms, promotion of transactional sex and sexual relations and potentiating the rate of contracting and spreading HIV/AIDS in the communities. In every community, sex workers, truckers, migrant/seasonal workers, young girls, orphans and unemployed youths, constitute the major vulnerable groups to contracting and or spreading HIV/AIDS due to their economic and social activities. However, in the 1990s, HIV became the third after TB and Respiratory Tract Infections (RTI) as the cause of adult death in developing countries.

Youth Population and HIV/AIDS Prevalence in Ghana



Source: (11).



Source: (11)

The figures above show the general population of Ghana at the youth level and the prevalence rate of HIV/AIDS for ages 15-49 years. It is obvious that majority of these youths are in the Ashanti and Greater-Accra regions of Ghana with more than 1.4 million people living in these regions. Because of this activities and youthful exuberances are higher and therefore more prone to AIDS compared to the others though currently, the prevalence rate from fig 2 depicts a contradictory picture. Because of youthful exuberance, studies to ascertain the socioeconomic backgrounds of the regions showing majority of these youth is laudable since one person can more than double the transmission of the virus. Therefore, the objective of this study is to describe the socioeconomic characteristics of some selected patients living with AIDS in Accra and Kumasi metropolis.

METHODOLOGY

This survey formed part of a longitudinal study on nutrition intervention among adults living with HIV. Data was collected from Accra and Kumasi. Accra is

in the Greater Accra Region of Ghana. It is located in the southern part of Ghana along the coast of Atlantic Ocean. It borders Volta to the East, Central to the West and Eastern regions to the North. Two major Health Centres, Achimota and Ridge were consulted for the sample collection in Accra. Kumasi is in the Ashanti region of Ghana and it forms borders with Western, Central, Eastern and Brong-Ahafo region of Ghana. In Kumasi, sample was collected at Young Men Christian Association (YMCA) office near Amakom. Prior to the data collection, a short education was given to these patients on the study.

Information on socio-economic backgrounds such as age, sex, education, marital status, household size, among others was collected from the respondents with structured questionnaire. Data collection started in 2007 and ended in 2009.

Data was analysed using statistical Package for Social Sciences (SPSS) version 16.0 and presented using graphs and descriptive statistics including frequencies, means and percentages.

RESULTS

Age, Sex and Education of Respondents

Out of 47 HIV subjects that fully participated in the project 34 (72.3%) were females, and 13 (27.7%)

males. Also 73.9% were between the ages 22 to 40 but most of them were 33 years of age. The average age of the distribution was 35.8 years (35.8±5.8). Among these people, 29 (63%) completed JHS/Middle school, 7 (15.20%) finished SHS, 2 (4.3%) had no formal education, the others completed vocational/secretarial school, primary and non formal schools

Table 1 Socio Demographic Characteristics

| Factor | Frequency | percentage |
|--------------------|-----------|------------|
| Age (years) | | |
| 20-40 | 35 | 74.5 |
| 41-60 | 12 | 25.5 |
| Sex | | |
| Male | 13 | 27.7 |
| Female | 34 | 72.3 |
| Education | | |
| None | 2 | 4.2 |
| Primary | 3 | 6.4 |
| Middle | 29 | 61.7 |
| SHS | 8 | 17.0 |
| Vocational | 4 | 8.5 |
| Non formal | 1 | 2.1 |

Seventeen (36.1%) of the subjects are married people, 15 (31.9%) widowed, others are single, cohabiting or divorced.

Ethnic Group and Religious Affiliation

The ethnic groups of the respondents are as follows; Twenty-eight (59.5%) are Akans mainly of Ashante,

Akyem and the Akuapim tribes, only a handful of them are of different tribe such as Frafra, Brong, Fanti, Ga, Ewe, Hausa and Dagarti. In terms of religion, 43(91.4%) are Christians of different denominations such as Apostolic Church, Assemblies of God, Baptist, Methodist, Jehovah Witness, Pentecost, Seventh Day Adventist (SDA) and Presbyterian Church while 4 (8.6%) are Moslem.

Table 4: Religious Denomination

| Religion | No | % |
|--------------|----|------|
| Christianity | 43 | 91.4 |
| Moslem | 4 | 8.6 |
| Total | 47 | 100 |

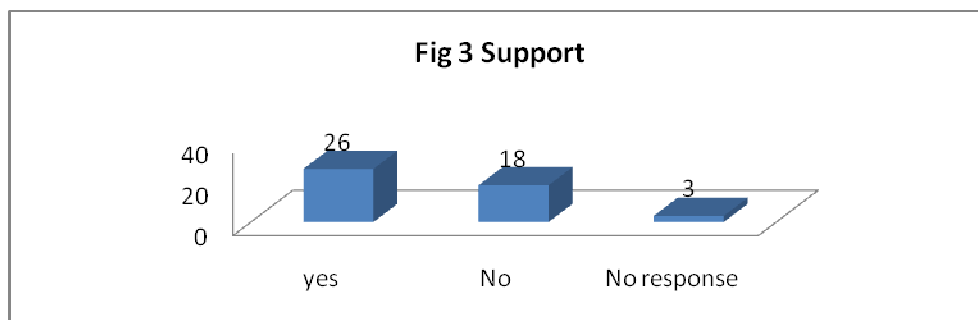
Household size and Occupation

Thirty-one (66%) of the respondents have total household size of 1-5 and the others have more than six people living in the house together. Among these people, 20 (42.6%) of them are unemployed, 15 (31.9%) are traders, 3 (6.4%) claimed to be self-employed in various disciplines mostly artisans and craftsmen. Others are in various outfits such as food processing, sewing, welding, hairdressing, and farming with a handful working in the government institutions.

Support from somebody

Twenty six (59.1%) said they receive support from their close relatives and 18 (40.9%) depend solely on their own efforts. As to the nature of support, 21(44.7%) said they receive financial support, others receive support such as food, clothing, medication and shelter from philanthropists and NGOs. See fig 3.

Figure 4 Support from somebody



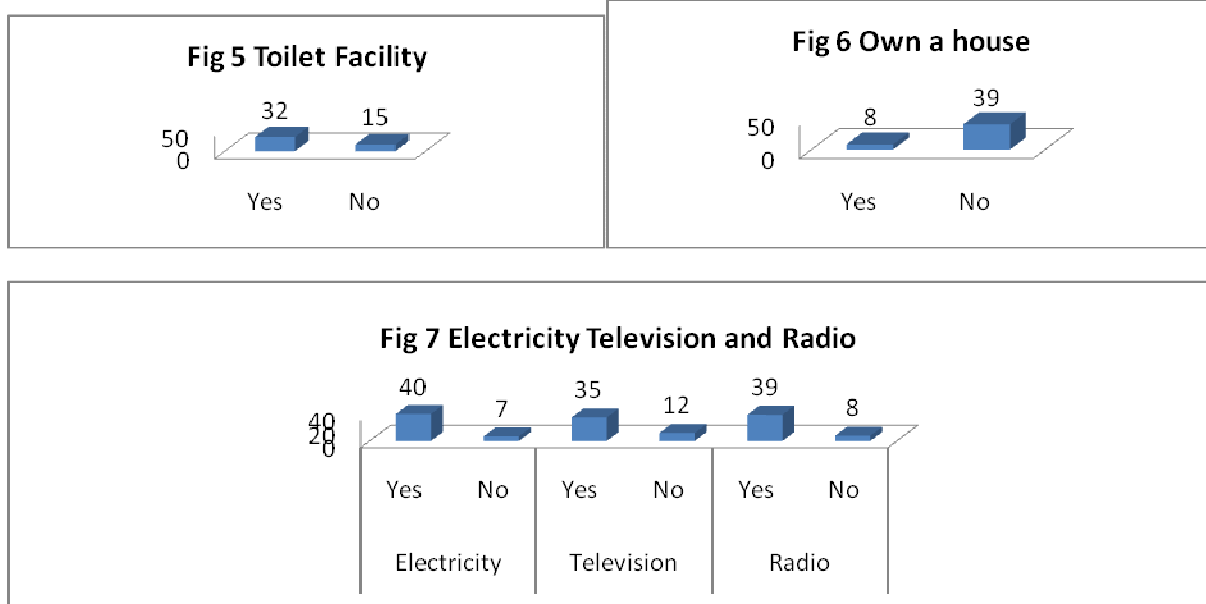
Housing Status

Eight (17%) own houses while 39 (83%) do not own any house. Among those who do not own house, 23(43.9%) rent room and 16(34%) lodge with their friends, others did not disclose their housing status.

(85%) of the respondents with only 7 (14%) having no access to electricity. Thirty-two (68.1%) said they have access to potable drinking water (pipe-borne) and 15 (31.9%) do not have access to pipe-borne water.

Those who rent or lodge with friends said they are connected to the electricity which was disclosed by 40

FIGURES 5, 6 AND 7 HOUSING STATUS

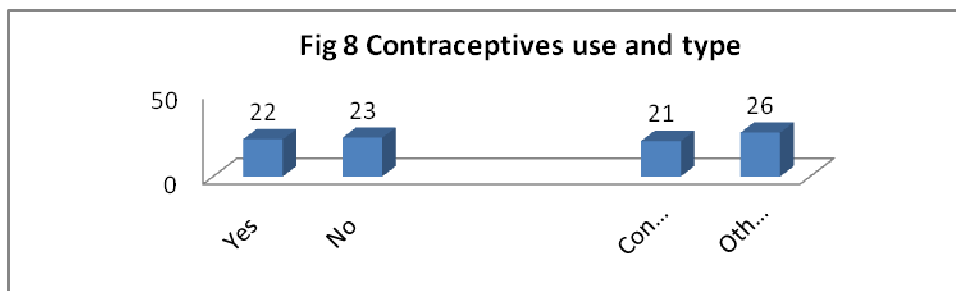


Thirty-nine (83%) have set of radio, 8(17%) do not. Also, 35(74.5%) have a set of television, 12 (25.5%) do not. Thirty-two (68.1%) have access to toilet facility, 15(31.9%) have no access to toilet facility.

Income Status and contraceptive Use

Income level of the respondents predominantly lies between GH¢50.00- GH¢450 per annum, 23 (48.9%) receive income of less than GH¢50.00 annually, 6(12.8%) GH¢50.00- GH¢100.00. Very few receive more than GH¢450.00 per annum.

Twenty-two (46.8%) said they use contraceptives and 23(46.9%) said they do not use any contraceptive, while 2 did not disclose their contraceptive use. Among those interviewed, 12 (22.5%) are not in any relationship 5(10.6%) do not engage in sexual activities, some have lost their partners while others have different views. Twenty-one (44.7%) said they use condom as contraceptive, 26(55.3%) did not reveal the type of contraceptive they use.



DISCUSSION

The educational levels from the fore discussion indicate that most of these HIV patients are enlightened and have, to some extent, knowledge about the disease. This means that there is some negligence or people refusal to adopt the ABC rules regarding the prevention of the HIV which contradicts the findings by (12) who found out that individuals with primary and below level of education are mostly affected with the disease due to lack of higher education, which according them, enhances easy assimilation and understanding of information disseminated.

Because a good number of them are married it may implies most of the transmission of the virus is by heterosexual contacts and not dominated by any means such as use of infested tools, blood transfusion and others. This augments the study by (13) who found from the data gathered from Nasarawa State of Nigeria that 60.3% of the patients diagnosed with HIV/AIDS are married people. Akanni et al (14) confirmed it from a study on socio-demographic characteristics of young adults screened for HIV in a Tertiary Health Centre in Southern Nigeria. This may also show that most of them are unfaithful and or refuse to use protective devices such as condom to prevent the spread of the disease.

Though the data was collected in Kumasi and Accra which are the two main cities in Ghana, majority of them are mainly Akans probably because they form the dominant tribe in Ghana. Also most of them are Christians because of the predominance of the Christian religion in Ghana, more especially in the Southern Ghana where the subjects were drawn from.

Majority being in the unemployed zone contributes immensely towards the spread of the disease since some of these people adopt immoral means by practicing prostitution in order to make ends meet. This agrees with (13) research showing that most of the people who are housewives and the unemployed contract the virus.

Also most of them receive support from friends and relatives which correlates positively to the level of unemployment to some extent since those who do not

work have to rely on their relatives and friends for some support. Others receive support from some NGOs and government agencies.

In Ghana tenancy is common and most average Ghanaians rent flat to live in which is also connected to the national grid. Those who don't enjoy everyday supply of power may be as a result of failure to pay bills or are not connected at all. But there are few of such situations in Ghana, especially in Accra and Kumasi. . In terms of water, most of them drink pipe-borne water. Those without access to this treated water depend on water from other sources such as well, river, stream and others. Though pipe-borne water is known to be the best, water from deep well are equally good for drinking and for other household chores.

Lack of access to toilet facility is a very crucial issue since it is common in some parts of the country where people queue to attend to places of convenience such as the public toilets. People join long queues and spend a long time to attend to nature's call. This is uncalled for and should be avoided completely.

Due to very low income level which was displayed by these people, it clearly shows that the disease is dominant in the so called poor people who are mostly unemployed and have to depend on their relatives and others means for support.

CONCLUSION AND RECOMMENDATIONS

The results show that a greater number of the subjects are females with a good number of them lying below the age 40 years with at least 10 years of education but surprisingly low levels of income because of lack of jobs. It can therefore be inferred that the number of the people that contract the disease will probably reduce should there be an avenue for employment and other in-built structures put in place for the youths in these regions

Based on the above, the following suggestions and recommendations are made:

Promoting abstinence and faithfulness, promoting reductions in the number of sexual partners, encouraging delays in the onset of sexual activity among adolescents, promoting the correct use and consistent availability of condoms; strengthening

programmes for STD control and encouraging voluntary counselling and testing.

One set of intervention focuses on encouraging people to abstain from sex before marriage and remain faithful to a single partner. This could be promoted through a combination of mass media, counselling, and education programmes. Delays in the onset of sexual activity among adolescents can have a significant impact on the spread of HIV. Information, education, and interventions to limit sexual transmission, encouraging voluntary counselling and testing communication and other programmes that address adolescents and the needs of young people.

The reduction in the number of men who have unprotected sexual contact with prostitutes and bar attendants would contribute immensely in bringing the epidemic under control.

Also promotion of condom use through mass media, counselling and education and to increase the availability of condoms through expanded public distribution, social marketing programmes, and programmes in the workplace. Special initiatives to promote condom use among high-risk populations such as commercial sex workers and long-distance truck drivers have proven effective in some countries. Recent efforts to increase risk perception especially among young people are, however, yielding some results as can be seen from the increased sales of condoms since the launch of the "STOP AIDS LOVE LIFE" in 2000 campaign.

Another intervention focuses on controlling the spread of STDs such as syphilis, gonorrhoea and chancroid because of the high positive correlation between HIV and sexually transmitted infections (STIs). Most individuals with STIs do not seek appropriate care for example a recent study in Mwanza, Tanzania, found that an improved STD prevention and treatment programme was associated with a reduction of 42% in the number of new HIV infections (1).

One of the critical areas for the reduction of HIV infection is through programmes targeted at the prevention of mother-to-child transmission (MTCT). Various approaches can be used to reduce the number

of children who are infected. Interventions such as counselling, medical management, counselling on feeding options and the provision of (an anti-retroviral drug) Nevirapine.

Health officials need to continue efforts to avoid infection through blood transfusion by keeping the blood supply to patients as safe as possible. This can be done by screening blood through laboratory tests and screening potential blood donors through interviews to reject as donors those who have a high probability of infection.

Each of the measures described above can make an important contribution to the reduction of HIV. Adoption of these measures in isolation is not likely to solve the problem completely; some people will respond to or be affected by one type of intervention while others will respond to or be affected by another. Computer simulations suggest that a much larger effect can be achieved by implementing all the interventions together in a broad attack on the epidemic. An effective blood-screening programme, represented by the second line from the top reduces prevalence only modestly. However, an effective STD control programme brings expected prevalence down by about 12%, and condom promotion and partner reduction interventions reduce HIV prevalence even more. Most importantly, when all four interventions are implemented simultaneously, the projected prevalence is reduced.

ACKNOWLEDGEMENT

The authors of this paper wish to acknowledge International Atomic energy Agency (IAEA) for the financial support and Ghana Atomic Energy Commission for that matter RAMSRI and (BNARI) staff for their immense contribution especially during the collection of sample and processing of data from the subjects in Kumasi and Accra.

Also sincere thanks go to all the subjects who made themselves available for the research.

Finally many thanks to Young Men Christian Association (YMCA), Kumasi and Ridge Hospital, Accra for the provision of the venue for the sample and data collections.

REFERENCES

1. National AIDS/STI Control Programme, Disease Control Unit Ministry of Health. (2001) Data File
2. UNAIDS, (2008a). Sub Saharan Africa. Retrieved from: www.unaids.org/en/countryresponses. (Accessed date: September 24, 2009)
3. CDC. (2002) Centers for Disease Control (CDC) and prevention. HIV/AIDS Surveillance Report, 13(2): 1-44.
4. Giri, T.K., J.P. Wali, H.S. Meena, I. Pande, S. Uppal and S. Kailashi, (1995). Socio demographic characteristics of HIV infection in Northern India. *J. Comm. Dis.*, 27(1): 1-9.
5. Cheong, I., A. Lim, C. Lee, Z. Ibrahim and K. Sarvanathan (1997). Epidemiology and clinical characteristics of HIV-infected patients in Kuala Lumpur. *Med. J. Malays.*, 52: 313-317.
6. Laah, J.G. (2003). The prevalence of HIV/AIDS in Zaria, Kaduna State. *J. Popul. Assoc. Nigeria*. 3(1): 95-101.
7. Mamman, M., (2003) Gender HIV-infection and AIDS - Related deaths in sub-Saharan Africa. *J. Popul. Assoc. Nigeria*, 3(1): 79-94.
8. Federal Ministry of Health (FMoH), 2001/2005. HIV/syphilis sentinel seroprevalence survey in Nigeria. NACA/FMoH, Abuja.
9. Mamman, M. (2006) Factors fuelling HIV/AIDS in sub-Saharan Africa. Being a paper presented at a HIV/AIDS workshop with long distance truck drivers in the North West Zone of Nigeria, Organized by Partnership for Life, 12 September 2004 at Local Government Service Commission, Muhammadu Buhari Road, Kaduna.
10. National Population Commission and ICF Macro, (2009). Nigeria Demographic and Health Survey 2008. Abuja.
11. Ghana Statistical Service. (2000) *Population Census of Ghana: Preliminary Report*. Accra.
12. Odimayo, M. S, Adediran, S.O. and M.A. Araoye. (2010) Socio-Demographic Characteristics of Adults Screened for HIV/AIDS in a Rural Community in Benue State, Nigeria
13. Laah, J.G. and E. Ayiwulu. (2010) Socio-Demographic Characteristics of Patients Diagnosed with HIV/AIDS in Nasarawa Eggon
14. Akanni CI, O Erhabor. (2005) Socio-demographic Characteristics of young adults screened for HIV in a Tertiary Health Centre in Southern Nigeria. *Highland Medical Research Journal.*; 3(1): 24-30.