ORIGINAL ARTICLE

Seroprevalence Of HIV Among Unemployed Individuals Undergoing Pre-Employment Medical Examination In Port Harcourt, Nigeria

O. A. Ejele MBBS, MSc, DCP, FMCPath, FWACP,
C. A. Nwauche B Med SC, MBBS, MSc, FWACP, **O. Erhabor** AIMLS, AIBMS, BMLS, Msc
Department of Haematology and Blood Transfusion, University of Port Harcourt Teaching Hospital, Port Harcourt, Nigeria.

ABSTRACT

Background: *Human Immunodeficiency virus (HIV) infection is highly endemic in Nigeria, particularly with the prevalence in 2001 at 5.8%. This study was undertaken to determine the prevalence of HIV among unemployed individuals undergoing pre-employment medical examination in Port Harcourt.*

Method: *HIV screening was performed on 868 individuals comprising 373 males and 495 females presenting to the University of Port Harcourt for the purpose of pre-employment medical examination using a double ELISA confirmatory test of Immunocomb and Genscreen HIV 1 & 2 kits.*

Results: *The sero-prevalence rate was 27/868 (3.1%) among the total population. HIV sero-prevalence was relatively higher among females 18/495 (3.6%) compared to males 9/373 (2.4%). The highest prevalence was found in the <19 years age group 7/135 (5.1%) and lowest in the 40-49 years age group 3/130 (2.3%), although the difference was not statistically significant ($\chi^2 = 4.86$, $p = 0.09$). The highest prevalence occurred among separated subjects 2/26 (7.7%) compared to singles 18/460 (3.9%) and married subjects 7/382 (1.8%).*

Conclusions: *This study indicates a 3.1% prevalence of HIV infection among unemployed individuals studied and calls for urgent and concerted efforts aimed at promoting behavioural, cultural and social changes that will reverse the current trend in the prevalence of HIV among Nigerians.*

KEY WORDS: *HIV; Unemployed; Pre-employment; Medical examination.*

Paper accepted for publication 20th June 2005.

INTRODUCTION

Prevalence of HIV/ AIDS in Nigeria has been increasing steadily from 1 .8% in 1991 to 3.8% in 1993, 4.5% in 1996, 5.4% in 1999, 5.8% in 2001 and 5% in 2003[1]. Recent investigations in Port Harcourt have also shown a rising prevalence[2]. HIV/AIDS are often more common in people from poor and low socio -economic communities with high unemployment associated with migration of job-seekers. Women are forced into prostitution to earn precious money for food and other necessities. High crime rate, violence, poor education, low literacy level and poverty have been shown to create conditions and environment, which help spread HIV infection and AIDS[3].

Pre-employment or pre-training HIV screening has continued to be seen as infringement on the fundamental principles of human rights as espoused by the World Health Organization (WHO) and International Labour Organization (ILO)[4]. Such screening has come under various other guises such as pre-placement, periodic, request, pre-retirement, and return to work medical examinations. Trade unions and non-governmental organizations have documented how, many employers of labour have resorted to acts of unfair discrimination by implementing mandatory HIV testing of job applicants, and dismissing workers with AIDS, or only employing those they think have low risk of being infected[5,6].

Employers who refuse to train or employ people with HIV are acting in violation of the international covenant on economic, social and cultural rights because their action will be denying a large number of people the right to work. This includes the right of everyone to the opportunity to gain his living by work which he freely chooses or accepts[7].

In addition to the hazards of the workplace, for example noise, chemicals, etc the worker now has to contend with environmental and social problems like malaria, HIV, etc. Many employers aim at improving their productivity and return on investment and would rather employ healthy staff. A healthy staff is a productive staff. As human resource is the most important factor in any enterprise, many employers provide effective health care programmes for the workforce through a consistent and thorough medical assessment of fitness for work for all employees at various stages of their working life[7]. This ensures that an individual worker will fit his work and the work will fit his health. Prevention is cheaper and more effective than cure. The concept of prevention is the best practice in the control of HIV/AIDS, and is the best practice for managing human capital.

This study was undertaken when employers in Port Harcourt inundated us with pre-employment HIV screening requests. It will help to generate data to estimate and monitor the current prevalence of

Correspondence to: **Mr. O Erhabor**

HIV in a select group of individuals (the unemployed), and therefore in the general population at large.

SUBJECTS AND METHODS

Subjects were unemployed individuals aged 18-49 years, in Port Harcourt, undergoing pre-employment medical examination between January and December 2001. Informed consent was obtained from all participants. The study population consisted of 868 subjects made up of 495 females and 373 males.

Ten (10) millilitres of blood was collected from the antecubital vein of each subject into plain tubes without anticoagulants. Serum samples were separated and tested using a double ELISA confirmatory test of Abbot HIV 1&2 kit a qualitative enzyme immunoassay test and Immunocomb HIV 1& 2 kit a qualitative and differential enzyme immunoassay test for the detection of antibodies to HIV in human serum. Manufacturer's standard operating procedures were strictly followed.

RESULTS

Of the 868 subjects tested, 27 (3. 1 %) were positive, 25 for HIV-1(92.6%) and 2 for HIV-2 (7.4%). Nine of the 373 male subjects tested were positive (2.4%) while 18 of the 498 females tested were positive (3.6%), although this difference was not statistically significant ($\chi^2 = 2.48$, $p = 0.48$). The highest prevalence of HIV was found among the <19 years age group 7/135 (5.1%) while the lowest prevalence was in the 40 - 49 years age group 3/130 (2.3%).

Table I shows the distribution of HIV positivity among the various age groups.

HIV prevalence in relation to marital status is illustrated in Fig. 1. The highest HIV prevalence occurred among separated subjects 2/26 (7.7%) followed by those who were single 18/460 (3.9%) while the lowest prevalence occurred among those who were married 7/382 (1.8%). However, this difference was not statistically significant ($\chi^2 = 4.86$, $p = 0.09$).

Table I. Distribution Of HIV Positivity Among Various Age Groups

Age Group (years)	Number Screened	Number HIV positive	% HIV positive
<19	135	7	5.1
20 - 29	403	12	3.0
30 - 39	200	5	2.5
40 - 49	130	3	2.3
Total	868	27	3.1

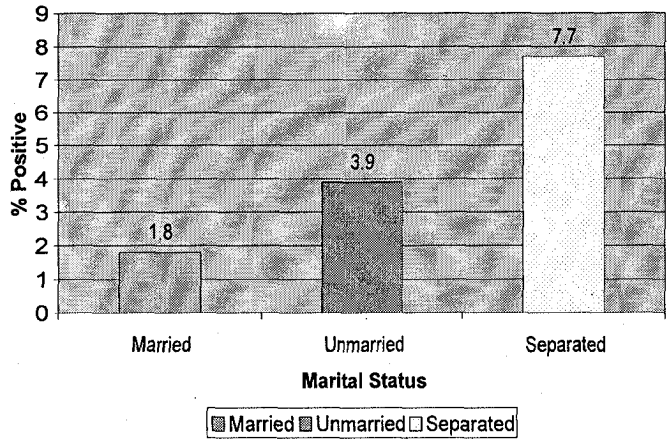

Fig. 1. Distribution of HIV positivity based on marital status of subjects

DISCUSSION

In this 12 months prospective study of individuals undergoing pre-employment medical examination in Port Harcourt, the prevalence of HIV infection was found to be 3.I %. Although the prevalence obtained in this study is lower than the national prevalence of 5.8% obtained from the 2001 sentinel sero-prevalence survey and 5% in 2003 survey [1], it is however higher than the 1% prevalence observed among employed blood donors in our centre [8]. The higher prevalence rate seen amongst the unemployed seems to have been accounted for by the influence of poverty and low socio-economic condition associated with chronic unemployment. The unemployed are prone to alcoholism, smoking marijuana or using drugs to escape the everyday hardship [9]. Sexual promiscuity is also common in this group [10]. The higher prevalence of HIV among unemployed individuals in the < 19 years age group paints a gloomy picture for the future of this country as they constitute the economically productive age group in the workforce. These are youths the Nigerian nation has invested so much on, and at a time they are expected to take up the role of parenthood and active manpower responsibilities, they come up with HIV infection, thus destabilizing the manpower base of the economy and indeed the social and moral fabric of the society.

The study also shows an almost 2:1 female to male ratio of HIV infection. This higher female gender vulnerability may be due to the fact that women of all ages are more likely than men to become infected with HIV during unprotected vaginal intercourse [11]. Women often have a lower status in society and in sexual relationship. This gender vulnerability is particularly acute for young women, who are more likely to be coerced, raped or

enticed into sexual intercourse by someone older, stronger, or richer. The growing violence against women makes them vulnerable to HIV. Domestic violence reduces their control over their exposure to HIV. Obviously, in a setting where violence is regarded as a man's prerogative, women are in a poor position to question their husband or lovers about extramarital affairs and infidelity, negotiate condom use, or refuse to have sex [12]. Also an increasing number of unemployed girls are involved in women trafficking abroad only to return, voluntarily or repatriated, with HIV infection.

The higher prevalence of HIV- I over HIV-2 tallies with the relative distribution of the strains in this region [1].

The observation of HIV prevalence of 3% among unemployed individuals undergoing pre-employment medical examination in this study should provide an opportunity to re-examine the issue of discrimination against HIV-infected persons in the workplace environment. Many have lost their jobs and so, self - esteem for being HIV positive. The workplace should provide an opportunity conducive for caring and promoting the health of all workers, including concern for individual behavior as well as collective responsibility for safety. Such practices should promote human rights and dignity; ensure freedom from discrimination and stigmatization [6].

HIV/AIDS has become a trade union issue, as many workers are affected and need protection by their unions. Even though the infection cannot be spread by casual contact, there may be prejudice, both at work and outside the workplace. Infected workers may face discriminatory attitudes and practices from both employers and co-workers. But the duty of an infected worker does not necessarily pose a risk of infection with HIV. So the infected worker ought to remain at work as long as he/she is physically fit. It seems some employers would rather dissociate themselves *"ab initio"* from infected prospective employees by demanding a pre-employment HIV screening, or using screening result to determine promotion of staff or in determining if such staff should be paid lower salary. Such screening should be voluntary with informed consent and counselling and kept confidential [13-15]. Employers, unions and co - workers, should provide education and information to prevent prejudice against the infected worker. Provision of safety gadgets and periodic training programmes would help those workers who perform duties that place them at risk of exposure to HIV- infected materials [16].

The impact of HIV/AIDS in the workplace will therefore be reduced by collaborative planning and programming as well as promulgation of supportive legislation to project the dignity and social well being of those afflicted.

This study indicates a 3.1% prevalence of HIV infection among unemployed individuals studied and calls for urgent and concerted efforts aimed at promoting behavioral, cultural and social changes that will reverse the current trend in the prevalence of HIV among Nigerians.

REFERENCES

1. Federal Ministry of Health. Summary finding from the 2003 HIV/syphilis sentinel sero-prevalence survey in Nigeria. Information for policy makers 2003: 30 - 50.
2. Erhabor O. The geometrically increasing prevalence of HIV in Port Harcourt municipality. Laboratory News Journal 2001; 4 (3): 2 7-29.
3 WHO/UNAIDS. Report on the global HIV/AIDS epidemic. Geneva: WHO, 1998.
4 Heywood M. Human right violations of people with HIV/ AIDS. The implication for equitable development. A research paper for UNDP human development report (1998), South Africa.
5 UNDP. HIV/AIDS and human development (1988), South Africa.
6 Leonard A. AIDS in the workplace. In: Dalton HL, Burris S (eds). AIDS and the Law. New Haven: Yale University press 1987: 109 -125.
7 WHO /ILO. Consensus statement on AIDS and the workplace in global programme on AIDS. Report of consultation on AIDS and workplace. WHO /ILO Report on AIDS and the work place. June 1988.
8. Ejele OA, Erhabor O, Nwauche CA. Trends in the prevalence of some transfusion-transmissible infections among blood donors in Port Harcourt Nigeria. Haema 2005;8(2): 273-277.
9. Asindi AA, Ibia EO, Young MU. Acquired Immune-deficiency Syndrome education, knowledge and attitude of Nigerian Adolescents in Calabar. Ann Tropical Paed 1992; 40(12): 397-402.
10. Asuzu MC. Sexual beliefs, attitude and knowledge of adolescent youths in Ibadan concerning AIDS. West Afr J Med 1994; 13(4): 245-251.
11. Geeta RG. How men's power over women fuel the HIV epidemic. Br Med J 2002; 324: 181-183.
12. Cynthia AG, Barbara VM. Gender, culture and power: Barriers to HIV-prevention strategies for women. Journal of Sex Research 1996; 33 (4): 355-362.
13. Dickens B. Legal limits of AIDS confidentiality. JAMA 1988; 259: 3449- 3451.
14. Field M. Testing for AIDS: uses and abuses. Am J Law Med 1990; 16:34-36.
15. Gostin L, Curren W. AIDS screening, confidentiality and the duty to warn. Am J Public Health 1987; 77:361-365.
16. Centers for Disease Control Recommendations for preventing transmission of HIV -1 and hepatitis B virus to patients during exposure-prone invasive procedures. Morbidity and Mortality Weekly Report 1991; 40:1-9.