Nigerian Journal of Applied Psychology

21

Volume 12/13 Number 2/1 June/Nov. 2011

ISSN 0189-5656

Volumes 12/13 *Number 2/1* *2011*

Nigerian Journal

Of

Applied Psychology

Department of Guidance and Counselling
University of Ibadan

Scope and Editorial Policies

Nigerian Journal of Applied Psychology is primarily meant to publish reports which can make professional as well as laymen utilize psychological principles in making the human organism more mentally and physically healthy. The journal is meant to make it possible for many more people to utilize psychological principles in their day-to-day activities. One of the aims of the journal is therefore to report articles which when read by people may increase their self-understanding, awareness, problem-solving capacities, creativity and improved adaptive and coping behaviour strategies.

The Journal is an Applied Psychology Journal par excellence. The journal publishes reports which may have applications to individuals in the family, educational contexts, health delivery systems, criminal justice systems. Articles which can analyze and help to solve many problems of society are also welcome.

The editorial policy of the journal will use the following order of publication preference.

1. Reports that suggest practical ways of eliminating, reducing or managing certain socially undesirable behaviour patterns.
2. Programmes that can be self-administered to solve psychological and other behavioural problems.
3. Review articles that expose the various strategies of managing certain maladaptive behaviours.
4. Theoretical or speculative reports for heuristic consideration in problem solving.
5. Book reviews especially review of books that contain some do-it-yourself psychology.

Nigerian Journal of Applied Psychology is considered to include psychology which may be utilized in the following ways for alleviating human problems:

- By an individual
- Education
- Health delivery systems
- Counselling
- Criminal justice systems
- Town and urban planning
- Prisons etc.
- Industry
- Organisational settings
- Agriculture
- Hotel organisation
- Parenting
- Family life education.

General Information and Manuscript Preparation
Manuscript Preparation

1. Two copies of manuscript of typed doubled space on one side of A4 paper submitted alone with electronic copy.
2. Each manuscript should contain, Name and address of the author including his institutional affiliation, abstract, introduction, and the body of the paper.
3. Each page should be numbered consecutively in the upper right hand corner beginning with the Title page.
4. Papers should not exceed 20 pages including references.

Manuscripts

1. The title page contain a concise but informative statement which should not be more than 15 words.
2. Below the Title should be written the author's names in order, first name, middle name and family name last with the highest degrees. The department of the author, and his/her institutional affiliation.
3. Abstract - The abstract of the manuscript should not be more than 150 words. It should be on page 2 of the manuscript. Abstract should state concisely the purpose(s) of the paper, basic segments and general principles to be put across to readers.
4. If the paper is the report of the study, it should include background, methodology, analyses and results.
   (a) Background includes introduction, and review of literature central to the study.
   (b) Methodology should include concise explanation of design, sample and sampling procedure, instruments and their psychometric characteristics plus a well-explained procedure.
   (c) Results should be presented in form of tables to which reference is made in brief descriptions.
5. References should be written in alphabetical orders. The reference list should include only the cited works within the body of the paper. Reference should follow the APA system.

The format to be followed in writing the reference is as below:

(a) Family name of the author
(b) The Initials
(c) The year of Publication
(d) The title of the paper.
(e) The journal or book in which paper is published.
(f) If a journal, the volume and pages.
(g) If a book, the city and the publisher.

6. Manuscript Submission.

All manuscript should be submitted to the Editor-in-Chief.

Dr D. A. Adeyemo
Department of Guidance and Counselling,
University of Ibadan, Nigeria.

Contents

Psychosocial Predictors of Acceptance of Voluntary Counselling and Testing Among Women of Childbearing Age in Ibadan Metropolis

By
Asuzu, C. C. and Salawu, O. M
Department of Guidance and Counselling
University of Ibadan, Nigeria
Chiomasuzu20@yahoo.com

Abstract

In order to get an optimal response from people in favour of VCT patronage, or usage, it is necessary to study the psychosocial predictors of acceptance of voluntary counselling and testing. Some of these factors include age, educational qualification and knowledge of VCT. This study examined how some psychosocial factors predict the practice of VCT among women in their childbearing age in Ibadan metropolis. Two hundred respondents participated in the research, 66 of which were market women, 60 were involved in various vocations and 74 were civil servants. Pearson correlation and multiple regression analyses were used in testing hypotheses. It was observed that knowledge of HIV, attitude to VCT, knowledge of VCT, fear of discrimination, respondents' age, occupation, marital status and educational qualification have significant linear relationships with the practice of VCT, $p<0.01$. Also the independent variables accounted for 75% of the variance in respondents' practice of VCT and the most potent contributors to the prediction of VCT practice were the knowledge of HIV ($t = 6.04$; $p<0.01$) followed by knowledge of VCT ($t = 4.04$; $p<0.01$), type of occupation ($t = 3.98$; $p<0.01$) and religion ($t = -2.51$; $p<0.05$). The study also revealed that the practice of VCT was quite low (29.0%). It was concluded that the public enlightenment on HIV and VCT should be intensified in order to enhance the practice of VCT among women.

Keywords: Voluntary counselling testing, age, educational qualification and knowledge.

Introduction

Voluntary counselling and testing (VCT) is an essential component of comprehensive Human Immunodeficiency Virus (HIV) and Acquired Immune Deficiency Syndrome (AIDS) prevention and treatment programs. VCT enables people to learn their HIV status in the most informed and supportive way possible: with counselling both before the test to educate them about HIV infection, and afterward to help them respond appropriately to the results. VCT thus serves as an entry point to services that promote health and risk reduction, with those who test negative receiving prevention counselling and those who test positive receiving referrals to prevention, care, support and treatment programmes. Also, it encourages and provides support for disclosing one's HIV status to sexual partners (FHI, 2004). HIV/AIDS counselling and testing has become a necessity for people in Sub Saharan Africa where HIV/AIDS has a high prevalence. It is estimated that more than 70% of HIV/AIDS cases in the world are in Sub-Saharan Africa (German Development Service, 2004). In Nigeria, the 2005 sentinel survey conducted by Nigeria's National Agency for AIDS Control (NACA) gave a national prevalence of 4.4% (NACA, 2005). Idris (2006) expressed that from the first case recorded in Nigeria in 1986, HIV has gradually spread to infect millions of people. Also, in recognition of HIV/AIDS increasing spread in Nigeria, Idris (2006) stated that it has crossed the critical epidemiological threshold of five per cent in 2002 giving credence to the results of the periodic national HIV/Syphills sero-prevalence surveillance showing that HIV prevalence in Nigeria has increased progressively among the general population using ante-natal clinic attendees as proxy, from 1.8 percent in 1991 to 5.4 percent in 1999 (FMIH, 2001). Statistics indicated that at the end of 2007, an estimated 22 million adults and children in the sub-Saharan Africa were living with HIV. Also, an estimated 1.5 million Africans died from AIDS while 11.6 million African children became orphans as a result of HIV/AIDS. As at the end of 2007, Nigeria had 2.6 million people living with HIV/AIDS, 170,000 died of

AIDS and 1.2 million were orphaned (AVERT, 2009). The implications of the current rate of HIV prevalence are grave as Nigeria has entered into a critical phase of HIV epidemic thus significantly increasing the possibility of sexual contact with an infected person. Even though the rate has fallen below the critical 5% in 2005 and has remained so in 2007, 2009 and 4.1%. 2010, these rates have not fallen low enough for any relaxation for needed preventive services.

According to Mishra (2005), young people are highly vulnerable to HIV and other STDs. He asserted that in many countries 60% of all new HIV infections are among the age group 15-24 years and stressed that the highest rates of STDs are usually found among the youths of ages 20 - 24 years followed by 15-19 years. It was estimated that in Nigeria 3.1% of people living with HIV and AIDS are between the ages of 15 and 19 years (UNAIDS, 2008). Data from the 2007 Kenya AIDS Indicator Survey (KAIS) indicated that nationally, HIV testing rates were highest among females aged 20-24 years. In this age group, 66% of females who are sexually experienced have had an HIV test. Comparative figures for sexually experienced females aged 15-19 years, males 15-19 years, and males 20-24 years are 46%, 15%, and 32% respectively. Although these numbers reflect a significant increase in testing rates, the uptake of HIV testing remains below the government's 2010 goal of 80% coverage (NASCOP; 2009).

Throughout sub-Saharan Africa, HIV prevalence rates are generally higher among female adolescents and young adults (Alan Guttmacher Institute, 2004, 2005; Peltzer, Nzewi & Mohan, 2004; Fako, 2006). One factor contributing to the vulnerability of women to HIV/AIDS is little or no economic empowerment of the girl child, who eventually develops into a woman. Thus, in a climate of deprivation and poverty, female adolescents are at risk. Giving credence to this assertion, Kiragu and Zabin, (1993) reported that in Kenya, majority of female adolescents and women from poor and unstable family environments have had sexual abuse experience. Similarly, Macph and Campbell (2001) reported that in South Africa, many young women have sexual relationships in exchange for favours, gifts and cash.

In Nigeria, HIV/AIDS is aggravated by inadequate sexual health education, inadequate voluntary HIV testing and counselling,

unhealthy cultural practices and poor health care system (Jimoh, 2003; Alao, 2004). USAIDS (2001) reported that the proportion of people who are unaware that they are HIV positive is highest in the countries worst affected by the epidemic. As a result, most persons living with HIV in these countries are less likely, to adopt behaviours, which would prevent further transmission of HIV. Thus, it is of extreme importance that people learn their HIV status through VCT so that both prevention education and care services may be effectively utilized.

Several authors (Alao, 2004; Pignatelli et al., 2006; Jimoh and Abubarkar, 2003) have noted that VCT is a key element to identifying HIV infected persons who could benefit from therapeutic interventions. Studies have shown, however, that only very few people take advantage of the benefits of VCT services (Holmes, Preko, Bolds, Baido and Jolly 2008; Pignatelli, Simpore , Pietra , Ouodraogo , Conombo and Saeri 2006; O'Donnell Knight, Campbell, Van-Amdel , Zeinick and, Rand 2004). For instance a Ghanaian study showed that 76% of the sampled women reported no prior HIV counselling and 78% had never undergone any HIV testing. The study also indicated that the majority of the respondents were not accessing the available VCT services (Holmes et al., 2008). Also Pignatelli et al. (2006) in a study of all pregnant women receiving ante-natal, group health education at St Camilla Medical Centre, Ouagadougou, Burkina Faso found that less than 20% of the sample accepted VCT.

The findings of low uptake of VCT services informed a team of South African researchers to carry out a study on factors associated with participation in HIV voluntary counselling and testing among tuberculosis (TB) patients in a rural South African hospital and found that educated TB patients accepted VCT more than the illiterate patients. The belief that VCT participation led to better health care and that participants had sufficient privacy to make their decisions about VCT were significantly associated with the acceptance of VCT (O'Donnell et al., 2004). Pignatelli et al. (2006) on their part investigated the factors predicting uptake of VCT in a mother and child centre in Ouagadougou, Burkina Faso and reported that the uptake rate was independently associated with age, the number of previous pregnancies and the number of pevious miscarriages. Another study

found that education, prior HIV testing and history of sexually transmitted diseases (STDs) promoted respondents' acceptance of VCT (Holmes et al., 2008). Equally Olayemi, Odukogbe and Aimakhu (2001) posit that client educational status positively affects their knowledge of HIV transmission and this can affect their decision to go for VCT. Also, Shar, Lopman and Kakwa (2007) found in their studies on impact of VCT on sexual behaviour and HIV incidence in Zimbabwe that age, high level of education and knowledge of HIV were associated with VCT uptake . Likewise, Rey, Carrieri, Obadia, Pardier and Moatti (1998) in their study reported that the acceptance of HIV testing is affected by demographic and cultural factors. They equally, contended that acceptance of the test may be affected by perceived stigma that might be experienced by victims. Thus, Ajuwon (2002) at different instances narrated cases of AIDS patients who were stigmatized and discriminated against and subsequently abandoned by health care providers.

With notable exceptions (Peltzer, Nzewi & Mohan, 2004; Fako, 2006), many studies that have assessed HIV testing behaviour among adolescents (Rotheram-Borus, Gillis, Reid, Fernandez, Gwadz, 1997; Samet, Winter, Grant, Hingson, 1997) and women of child bearing age have been conducted in western countries among high-risk youth or among sexually active adolescents and young adults. These areas have much lower HIV prevalence rates than countries in many parts of sub-Saharan Africa. Hence this study seeks to investigate the psychosocial predictors of VCT uptake among women of childbearing age in Ibadan, Nigeria with focus on testing the following hypotheses:

1 There will be no significant relationship between the independent variables and the respondents practice of VCT.
2 There will be no significant joint effect of predictor variables on the practice of VCT.
3 There will be no significant relative effect of independent variables on the practice of VCT.

Methodology

Study Design

The study adopted a descriptive and explorative survey method in examining the prevalence of each social factor as well as the psychosocial predictors of voluntary counselling and testing (VCT) among women of childbearing ages in Ibadan metropolis.

Participant

The participants for the study consist of 200 women between the ages of 20 and 65 years. The participants cut across market women, (66) self-employed women, (60) (vocational jobs) and civil servants.(74)

Instrumentation

The instrument used for the study was constructed by the researchers. Section A deals with the bio-data of the respondents. Section B consists of 11 items aimed at eliciting responses on the knowledge of HIV. Section C consists of 12 items tailored at eliciting responses on the knowledge of VCT, while section D and E comprise questions eliciting responses on attitudes and practices of VCT. Section F which is the last section was tailored to get responses on stigmatization of HIV. The scale has reliability coefficient (r) of knowledge of HIV 0.81, knowledge of VCT 0.70, attitude 0.62, practice 0.67 and stigmatization 0.80.

Procedure

The researchers visited the selected area of survey and solicited the cooperation of the respondents explaining to them the importance of HIV/AIDS and how women are more vulnerable. Native language interpretation was done for those who find it difficult to understand English language by the researchers. In order to get the 200 sample size, 220 questionnaires were printed and 220 were retrieved out of which 200 were analysed.

Method of Analysis

Pearson product moment correlation and multiple regression analysis were employed to analyse the data using SPSS 10.

Results

The results are presented according to the hypothesis which guided the study.

Hypothesis 1: There will be no significant relationship between the independent variables and the respondent's practice of VCT

Table 1: Correlation matrix showing the different corelational levels of the independent variables on the respondent's practice of VCT

	Practice of VCT	Knowledge of HIV	Attitude	Knowledge of VCT	Discrim.	Age	Occup..	Marital status	Religion	Educ. Qualif.
Practice of VCT	1									
Knowledge of HIV	.726**	1								
Attitude	.510**	.384**	1							
Knowledge of VCT	.764**	.649**	.556**	1						
Discrim.	.421**	.321**	.169**	.385**	1					
Age	.375**	.372**	.192**	.209**	.290**	1				
Occupation	.689**	.423**	.474**	.645**	.379**	.256**	1			
Marital status	.273**	.308**	.203*	.248**	.166*	.707**	.013	1		
Religion	-.113	-.156*	.057	-.018	.092	.067	.025	.139*	1	
Educ. Qualif	.606**	.508**	.268**	.546**	.310**	.281**	.723**	.108	-.048	1
Mean	40.28	43.82	15.65	37.38	15.81	28.03	1.99	1.54	1.51	1.81
Std. Dev.	8.46	7.04	4.36	9.22	14.55	5.36	82	.49	.50	1.17

*significant at p< 0.05; ** significant at p< 0.01

Table 1 above shows that all the independent variables (knowledge of HIV, attitude to VCT, knowledge of VCT, fear of discrimination, respondents' age, occupation, marital status and educational qualification) except religion have significant linear relationship with the dependent variable (practice of VCT), p<0.01. Therefore, the hypothesis of no significant relationship is rejected.

Hypothesis 2: There will be no significant joint effect of predictor variables on the practice of VCT.

Table 2: Summary of Regression Analysis showing joint effects of Predictor's Variable on Practice of VCT

R^2 = 0.762
Adj R^2 = 0.751

Model	Sum of squares	DF	Mean square	F	Sig.
Regression	10842.32	9	1201.7	67.680	.000
Residual	3382.001	190	17.800		
Total	14224.32	199			

***significant at < 0.001 level

Table 2 shows that when all the predictor variables (knowledge of HIV, attitude to VCT, knowledge of VCT, fear of discrimination, respondents' age, occupation, marital status, religion and educational qualification) are taken together, they significantly predict respondents' practice of VCT ($F_{(9, 190)} = 67.68$, $p<0.01$; R^2 adj = 0.75). The nine variables jointly explained 75% of the variance in respondents' practice of VCT.

Hypothesis 3: There will be no significant relative effect of independent variables on the prediction VCT practice.

Table 3: Relative Effect of Independent Variables to the prediction of practice of VCT

Model	Unstandardized Coefficient		Standardized Coefficient	T	Sig.
	B	SE(β)	β		
Constant	4.745	3.933		1.753	.081
Knowledge of HIV	.377	.091	.076	6.037	.000
Attitude	.147	.127	.076	1.674	.096
Knowledge of VCT	.232	.084	.253	4.036	.000
Discrimination	4.244E-02	.034	.073	1.802	.073
Age	8.339E-02	.133	.53	.911	.364
Occupation	2.69	.985	.262	3.975	.000
Marital status	.764	1.403	.045	.791	.430
Religion	-1.561	.904	-.092	-2.510	.013
Educational Qualification	.504	.585	.070	1.252	.212

*significant at p< 0.05, ** significant at p< 0.01, *** significant at p< 0.001

Table 3 shows that the nine variables contributed differently to the prediction of respondents' practice of VCT. The most significantly potent contributor to the prediction is the knowledge of HIV ($t = 6.04$; $p<0.01$) followed by knowledge of VCT ($t = 4.04$; $p<0.01$), type of occupation ($t = 3.98$; $p<0.01$) and religion ($t = -2.51$; $p<0.05$). The other variables did not significantly predict respondents' practice of VCT ($p>0.05$).

Discussion

Hypothesis one stated that there will be no significant relationship between the independent variables (knowledge of HIV, attitude to VCT, knowledge of VCT, fear of discrimination, respondents' age, occupation, marital status, religion and educational qualification) and the respondents' practice of VCT. The results indicated that significant linear relationships existed between the practice of VCT and all the independent variables with the exception of religion. That there is a significant linear relationship between the HIV and VCT knowledge as well as the attitude to VCT and respondents' practice of VCT is in line with the findings of previous similar studies. Shar, Lopman and Kakwa (2007) in Zimbabwe reported that high level of education and knowledge of HIV were associated with VCT practice. This is also similar to findings in studies in which levels of education significantly influenced the HIV/AIDS related knowledge of respondents (Olayemi, Odukogbe & Aimakhu, 2001; Asuzu & Odanye, 2008).

One study also shows that HIV infection is more common among pregnant women who did not go to school or complete secondary school education (Olanrewaju, Ola, Akintunde, Ibrahim , Ibiyemi, 2007). This agrees with study that reported that women with higher education have better knowledge of HIV transmission whereas low level of female education promotes ignorance about HIV transmission and its prevention, especially to the unborn child (Kayode, Adeyemo, Omotade, 2002) and this will invariably affect their knowledge of VCT. Some other studies however have reported that women who were educated were less likely to accept VCT as compared to those who were uneducated (Thoir, et al. 2007; Cartoux, Meda, Van de Perre, Newell, De Vincenzi & Dabis, 1998; Keogh, Allen, Almedal, Temahagili, 1994; Orubuloye, Caldwell & Caldwell, 1993). This could be explained by the fact that women who were educated feared HIV testing due to their evaluation of risks or implications of a positive HIV result.

The regards to relationship between age and practice of VCT, the linear relationship pre-supposes that as the respondents' age increases, there is a higher tendency of them to practice VCT. Respondents in the younger age group are less likely to have gone for

VCT. This finding is in line with the findings of Thior et al. (2007) in which acceptance of VCT decreased significantly with increasing age. They explained that this could be attributed to the older women perceiving themselves to be at a higher risk of having being infected with HIV as a result of past unsafe sexual behaviours. Younger people in this study may shy away from VCT because they are not supposed to be having sex if unmarried and attending VCT clinic would suggest that they are already engaging in sexual acts and others may fear the stigmatisation that may result from testing positive to HIV. The prevalence of HIV is high in the reproductive age group during which sexual activity is maximal (Olanrewaju, Ola, Akintunde, Ibrahim, Ibiyemi, 2007) and studies have shown that young adults, especially females are at the centre of the epidemic in Nigeria (UNAIDS, 2002). In a study conducted in Harar Town about utilization of VCT services, perceived barriers and preference of adolescents 15 -- 24 yrs of age, majority of them (83.3%) felt that they were at either no or low risk of acquiring HIV and 92.2% responded that they have heard about VCT, the most frequent and preferred source of information for VCT being radio/television (59.2%). Only 21.9% of adolescents reported that they had ever been tested for HIV (Lemessa, 2005).

Hypothesis 2 and **Hypothesis 3** related respectively to the joint and relative effects of predictor variables on the practice of VCT gave results indicating that when taken together, these variables (knowledge of HIV, attitude to VCT, knowledge of VCT, fear of discrimination, respondents' age, occupation, marital status, religion and educational qualification) jointly predicted respondents' practice of VCT. On the relative contribution however, the result indicated that the significant contributors to the prediction of respondents' VCT practice are the knowledge of HIV followed by knowledge of VCT, type of occupation and religion. This finding is in congruence with a study done in Kano, Northern Nigeria concluded that among the study population HIV/AIDS knowledge significantly predicted positive attitude towards VCT for HIV/AIDS (Iliyasu, Abubakar, Kabir & Aliyu, 2006) which will also likely affect the use of VCT. In another study done in a black township in Cape Town, Kalichman et al (2003) reported a generally

high HIV/AIDS knowledge score across the participants in the study, with a mean of 83% but no significant difference between those who tested for HIV in the study and those who didn't. This might mean that in groups were knowledge about VCT and HIV/AIDS is high other factors like attitude towards VCT and HIV/AIDS might then have a greater effect on the practice and acceptability of VCT. Religion was found to be one of the predictors of VCT practice among the respondents in this study. Opinions held by religious leaders have often been known to influence their followers health-related decisions. Normative belief generally focuses on what an individual believes important people in his/her expect him/her to do. Perception of social or peer norms concerning the acceptability of VCT is an important determinant of VCT acceptance (UNAIDS, 2000). In some other study however, religion had no influence on the respondents' decision on whether or not to accept to go for VCT (Yahaya, Jimoh & Balogun. 2010).

Unlike the finding in this study, some other studies have found marital status to be a predictor of VCT acceptance. Thoir et al (2007) found in their study that unmarried women were more likely to accept VCT than married or cohabiting women (44% vs 57%, respectively). This is likely because in many African countries, married women are more often than not controlled by their husbands (Van der Straten King, Grinstead, Serufilira & Allen, 1998; Macdonald, 1996; Langen. 2005), and may therefore avoid practice of VCT or at best request their husbands' permission before undertaking one this is to forestall any negative consequences in case a positive HIV test result is obtained (Keogh, Allen, Almedal, Temahagili, 1994; Orubuloye, Caldwell, Caldwell, 1993).

Implications and Recommendation of the findings

The findings from this study have shown that HIV and VCT knowledge as well as religion are very important predictors of VCT practice. It is recommended that more intensive enlightenment programmes be organised to educate women on the behaviours that could put them at risk of HIV as well as on the importance of VCT to help them make informed decisions on behaviours or practices

affecting their health. Such enlightenment campaigns should be carried out in conjunction with religious bodies to enhance acceptance by the women.

Reference

Ajuwon, O.(2002). Mechanism and tuning of perinatal HIV-transmission. International AIDS Society (IAS) 10th Conference on HIV/AIDS

Alan Guttmacher Institute(2004) Adolescents in Ghana: Sexual and reproductive health. Research in Brief, Series, No. 1

Alan Guttmacher Institute(2004) Adolescents in Burkina Faso: Sexual and reproductive health. Research in Brief, Series, No. 3

Alan Guttmacher Institute(2005) Adolescents in Malawi: Sexual and reproductive health. Research in Brief, Series, No. 3

Alan Guttmacher Institute (2004) Adolescents in Uganda: Sexual and reproductive health. Research in Brief, Series, No. 2

Arthur, G. M, R, & Odihambo, J. (2000) Voluntary Counselling and Testing (VCT): Improved access for the poor through integrating same day services into public health care clinics. In: programme and abstract of the X111 International Conference on AIDS, July 9-14 Durban, South Africa, Abstract MOPPC 1028.

Asuzu, C.C. & Odanye, T. (2008) Influence of educational level on HIV/AIDS related knowledge, attitude and sexual behaviour of road transport workers in Ibadan. *Journal of Sociology and Education in Africa.* 7 (1): 219-226

AVERT (2009). Sub-Saharan African HIV/AIDS Statistics. http://www.avert.org/subaadults.htm.

Cartoux M, Meda N, Van de Perre P, Newell ML, De Vincenzi I, Dabis F. (1998) The Ghent International Working Group on Mother to child Transmission of HIV. Acceptability of Voluntary HIV testing by pregnant women in developing countries: an international survey. *AIDS.* 12 :(2) 489–93.

de Paoli MM, Manongi R, Klepp KI. (2004) Factors influencing acceptability of voluntary counselling and HIV-testing among pregnant women in Northern Tanzania . *AIDS Care.* 2004; 16(4):411-25.

Fako TT: (2006) Social and psychological factors associated with willingness to test for HIV infection among young people in Botswana. *AIDS Care* 18(3):201-207.

HIV/AIDS Care and Treatment: A clinical course for people caring for persons living with HIV/AIDS, (2004) Family Health International, Institute for HIV/AIDS, 2101 Wilson Boulevard, Suite 700 Arlington, VA 22201, USA

Federal Ministry of Health (2001) HIV/AIDS emergency action plan. Abuja. German Development Service (ded). The GLOBAL AIDS EPIDEMIC | 2010 UNAIDS REPORT

Holmes C.N, Preko PO, Bolds R, Baido J, Jolly PE (2008). Acceptance of voluntary counselling, testing and treatment for HIV among pregnant women in Kumasi, Ghana. *Ghana Medical Journal* 42(1): 8-15.

Hope K.R. (2000) Mobile workers and HIV/AIDS in Botswana. *AIDS Analysis Africa* 10(4):6-7

Thior, I., Gabaitiri L., Grimes, J., Shapiro, R., Lockman S., Kim, S., Kebaabetswe, P., Garmey, E., M Montano,M., T Peter, T., Su-Yuan Chang S., Marlink, R., and Essex, M. (2007) Voluntary counseling and testing among post-partum women in Botswana. *Patient Education and Counselling.* 65(3): 296–302.

Idris, M. (2006) Clinical manisfestation of HIV/AIDS in Nigeria. A nation on the threshold.
Harvard Centre for Population Initiative in Nigeria. Cambridge USA.

Iliyasu, Z., Abubakar, I.S., Kabir, M. & Aliyu, M. H. (2006). Knowledge of HIV/AIDS and attitude towards voluntary counselling and testing among adults. *Journal of National Medical Association*, 98, 1917-1922.

Jimoh AAG (2003). The scourge of Aids in the new millennium socio-economic implications in an emerging economy: Which way out? *Human Resources Journal.*, 11-14: 16-19. . Publication of Kwara State chapter of Institute of Personnel Management of Nigeria

Jimoh AAG, Abubarkar D (2003). Antiretroviral treatment in Africa: Problems and prospects. Postgraduate Doctor-AFRICA, 25(4): 77-80. PMH Publications, U.K.

Kalichman, S.C. and Simbayi, L.C.(2003). HIV testing attitude, AIDS stigma and voluntary HIV counselling and testing in a black township in Cape Town, South Africa. *Sex Transm Infect,* 79, 442-447

Kayode CM, Adeyemo AA, Omotade OO.(2002) Beliefs and perceptions about HIV infections andAIDS among mothers of infants in Ibadan, Nigeria. *West African Journal of Medicine* 2002 ; 21:43-47.

Kebaabetswe P, Bukonda NKZ, Ntseane D, Thior I. (2003) Male involvement in the prevention of mother to child transmission of HIV program in Botswana. First national HIV/AIDS/STI/ other related infectious diseases research conference; Gaborone, Botswana. Abstract TBT46–3.

Keogh P, Allen S, Almedal C, Temahagili B. (1994) The social impact of HIV infection on women in Kigali, Rwanda: A prospective study. *Social Science and Medicine*. 38(8):1047–53.

Kiragu, K, & Zabin, L. (1993). The correlate of premarital sexual activity among school age adolescents in Kenya. *International Family Planning Perspectives* 19 (3): 92-109.

Langen TT.(2005) Gender power imbalance on women's capacity to negociate self-protection against HIV/AIDS in Botswana and South Africa. *African Health Science*. 5(3):188–97.

Lemessa, O.(2005). Utilization of VCT services, perceived barriers and preferences of adolescents of 15 24 years of age in Harar town, eastern Ethiopia. pp.34-39.

Macdonald D.S. (1996). Notes on the socio-economic and cultural factors influencing the transmission of HIV in Botswana. *Social Science and Medicine*. 42:1325–33.

Macphai. I., & Campbell, C. (2001). I think condoms are good but I hate those things: Condomuse among adolescents and young people in a Southern African township. Social Science and Medicine 52 (11): 1613-1627.

Mishra, R.C. (2005). HIV/AIDS education. Lagos: EPP Book Publishers Nigeria Ltd.

National Action Committee on AIDS (2005). Nigeria: HIV/AIDS Country Report.

National AIDS and STI Control Programme (NASCOP): *Kenya AIDS Indicator Survey 2007: Final Report*.Nairobi, Kenya: NASCOP; 2009.

O'Donnell, M.R., Knight, S.K., Campbell, L., Van-Amdel, P., Zeinick, J.R. and Rand, W. (2004). Factors associated with participation in HIV voluntary counselling and testing among TB patients in a rural South African hospital. A paper presented at an International Conference on AIDS. http://gateway.nlm.nih.-gov/MeetingAbstracts/ma? f =102279809.html

Olanrewaju, A. M., Ola, F. A., Akintunde, A. E., Ibrahim, B. and Ibiyemi, F. (2007). HIV Voluntary Counseling And Testing Of Pregnant Women In Primary Health Care Centres In Ilesa, Nigeria. . *The Internet Journal of Third World Medicine*. Volume 6 Number 1

Olayemi, O. Odukogbe, A. & Aimakhu N.(2001). Determinants of knowledge of antenatal patients about HIV transmission in Ibadan Nigeria. *Tropical Journal of Obstetrics and Gynaecology* Nov. 2001.

Orubuloye, I.O., Caldwell, J .and Caldwell, P.(1993). African women's control over their sexuality in an era of AIDS: A study of the Yoruba of Nigeria. *Social Science and Medicine*. 37:859–72.

Peltzer, K., Nzewi, E and Mohan, K. (2004): Attitudes towards HIV-antibody testing and people with AIDS among university students in India, South Africa and United States. *Indian Journal Medical Sciences* 58(3) 95-108.

Pignatelli, S., Simpore, J., Pietra, V., Ouodraogo, G., Conombo, G. and Saeri, N. (2006). Factors predicting uptake of voluntary counselling and testing in a real-life setting in a mother-and–child center in Ouagadougou, Burkina Faso. *Journal of Tropical Medincine and International Health*, 11(3): 350-357.

Rotheram-Borus, M.J., Gillis, J.R., Reid, H.M., Fernandez, M.I., Gwadz, M.(1997) HIV testing, behaviours and knowledge among adolescents at high risk.. *Journal of Adolescence Health* 1 20:216-225.

Samet, J.H., Winter, M.R., Grant, I., and Hingson, R. (1997) Factors associated with HIV testing among sexually active adolescents: a Massachusetts survey. *Pediatrics* , 100:371-377.

Shar., L. Lopman, B. & Kakwa, O. (2007). *AIDS* – Official Journal of International AIDS Society. Abstract, Volume 21 (1) April 23 p. 851-860.

UNAID/WHO, (2000). AIDS, epidemic update. December 2000 UNAIDS/00.44E-WHO/CDS CRS/EDC 2000. 9 UNAIDS Geneva.

USAIDS,(2001). Global health: HIV/AIDS news and information. Key achievements. Prenatal

HIV/ AIDS Counselling and Voluntary Testing in Nigeria. Internet publication.

UNAIDS, (2002). HIV voluntary counselling and testing: a gateway to prevention and care.UNAIDS Best Practice Collection. Geneva.

UNAIDS (2008). AIDS epidemic update. Joint United Nations program on HIV/AIDS.

UNAIDS. (2000). Voluntary counseling & testing (VCT), UNAIDS technical update. 1st.Edition, pp. 23-28.

UNAIDS.(2000) The impact of voluntary counseling and testing: A global review of the benefits and Challenges, 96 p, 2000.

Van der Straten, A., King, R., Grinstead, O., Serufilira, A, and Allen, S. (1995). Couple communication, sexual coercion and HIV risk reduction in Kigali, Rwanda. *AIDS*. 9:935–44.

Yahaya, L.A., Jimoh, A.A. and Balogun, O.R.(2010). Factors hindering acceptance of HIV/AIDS voluntary counseling and testing (VCT) among youth in Kwara State, Nigeria. *African Journal of Reproductive Health.* 14(3):159-64.