

2012

Knowledge and Attitudes of Young People in Nigeria about HIV/AIDS- A systematic review

Jerome Okudo

The University of Texas School of Public Health, jeromeokudo@yahoo.com

Follow this and additional works at: http://digitalcommons.library.tmc.edu/uthsph_dissertations

 Part of the [Public Health Commons](#)

Recommended Citation

Citation Information: Okudo, Jerome, "Knowledge and Attitudes of Young People in Nigeria about HIV/AIDS- A systematic review" (2012).

DigitalCommons@The Texas Medical Center, School of Public Health, *Dissertations (via Proquest)*. Paper 1.

http://digitalcommons.library.tmc.edu/uthsph_dissertations/1

Knowledge and Attitudes of Young People in Nigeria about HIV/AIDS- A systematic review

Okudo, Jerome

Introduction

HIV/AIDS has been one of the world's greatest challenges for decades. Sub-Saharan Africa bears the greatest burden of the disease even though it has only 10 per cent of the world's population¹. Nigeria has the second largest number of people living with HIV/AIDS after South Africa in Sub-Saharan Africa². It is estimated that 60 per cent of all new HIV infections

in Sub-Saharan Africa occur among young people aged ten to twenty four years of age³.

The first confirmed reports of HIV infection in Nigeria were in Lagos in 1985 and reported in an international conference in 1986. HIV prevalence estimates have continued to increase from 1.8 per cent in 1991 to 4.5 per cent in 1996 and 5.8 per cent in 2003⁴. Many studies have suggested that the prevalence of HIV infection has crossed the critical epidemiological threshold of 5.0 percent⁴. However, this figure did not change in 2003 but reduced to 5.4 per cent in 2005 and further to 4.8 per cent in 2006⁵. However, it is important to note that the national data in 2001 were actual estimates from sero-prevalence surveys conducted among pregnant women at 86 antenatal clinics which at that time served as sentinel surveillance sites. Unfortunately, it can be argued that these data may not provide good measures of group specific prevalence rates⁶. These data do not explain anything about sero-prevalence in men or children. In addition, no explanations are given about regional or rural or urban differences. Regional variations have been seen in some reports from United States Agency for International Development (USAID)²⁴. For example states such as Benue (10.6%) in the north central part of Nigeria have higher prevalence rates than Ekiti state (1%) in the south western part of Nigeria²⁴. It is therefore not surprising that Venier et al reported in their

study in Nigeria, Kenya and Zimbabwe that urban students had more information and knowledge about HIV than their counterparts in the rural areas ²³.

More studies reported in the following age groups of 15-19, 20-24 and 25- 29 show estimates of 4.9, 8.1 and 6.9 per cent prevalence⁴. Nigeria bears about 8 per cent of the global and 10 per cent of Africa's HIV/AIDS burden⁷. At the outset of this disease, government's response was at best passive and the country was in denial about the epidemic. However, the responses over time by the government and non-governmental agencies have been considerable so far¹.

Lack of adequate knowledge has been implied as a major reason for high risk heterosexual behaviour and in Nigeria the most common mode of transmission of HIV is via sexual intercourse^{8, 9 and 10}. Many papers have reiterated that multiple partners, early sexual experience and inconsistent use of condoms have been responsible for the rise in the disease among young people^{8, 9 and 10}. These suggest that a positive attitude towards sexual health in young people or HIV/AIDS preventive strategies/measures could produce desirable behaviours and reduce risk¹⁰.

HIV's natural history has a long latency period between acquisition of the infection and manifestation of the disease and this may suggest that a large proportion or percentage of individuals have been infected during youth or adolescence only to develop full blown AIDS a number of years later¹¹. Adolescents including those of school age are identified as the group at highest risk of acquiring the infection since they are sexually active, take greater risks and believe in their invulnerability¹⁰. The focus on young people is because people aged

between 15 and 24 years of age comprise about 20 per cent of the world's population and account for 60 per cent of the new HIV infections each year. Studies published on HIV have suggested that young people lack information adequate enough for them to make informed decisions about sexual behaviour and solutions to the consequent problems that arise from such behaviour^{10, 12}. Young people may be aware of HIV, cultural traditions and inhibitions by parents prevent these young people from acquiring knowledge from their teachers and parents¹⁰. Some other reasons suggested by literature include high level of pre-marital, multiple, short term sexual relationships, vulnerability to sexual violence, and exploitation of females by older, richer men where there is an exchange for money, goods and sex, sexual abuse as well as poor assertiveness skills^{10, 12 and 13}. Many studies have shown high awareness about HIV/AIDS, other studies have shown that information and education are not enough to positively impact on behaviour change. Unfortunately, Nigerian students have been shown in some studies to perceive AIDS as a highly dreaded disease which leads to avoidance of information and denial of risk²². The goal of this paper is to perform a systematic review of the available literature of the Knowledge and attitudes of young people in Nigeria about the disease. This may be the first of its kind performed on Nigerian data.

Methods

A systematic literature search was done on articles containing studies on HIV/AIDS and young people aged between 10 and 24. The search also included studies done in secondary schools and college. Key words used included HIV/AIDS, young people, sex, interventions,

Nigeria, Sub-Saharan Africa, West Africa, attitudes, knowledge and beliefs. The following data bases were searched; Pub Med (National Library of Medicine); Medline (Ovid: 1950 to most current); Cumulative Index of Nursing, African Index Medicus (WHO) and Allied Health (CINAHL) (EBSCO host). Search strategies included in the flow chart below. Other relevant articles were hand searched in Scopus (Elsevier) to determine if they were cited by studies that previous searches had not found. The inclusion criteria for each searched article were defined and all papers screened for inclusion in this review. Each selected article which was of any study design mostly cross sectional included studies that demonstrated HIV knowledge, awareness and beliefs among young people living in Nigeria, studies that were conducted in Nigeria, studies conducted from the year 1986 (because HIV/AIDS was officially reported in Nigeria in 1986) to present and studies written in English. The titles and abstracts were scanned through to evaluate the relevance of the study in answering the research question and were given due consideration. To test the eligibility criteria, twenty citations were randomly selected from the database of found articles and a fellow student was asked to scan the titles and abstracts for relevant information; read the full the full text to be sure of relevant information and evaluated the articles based on the criteria. This was done to ensure that inclusion criteria were well defined and understood.

Study Quality Assessment

An assessment of the study quality of the studies meeting the inclusion/exclusion criteria was performed by two independent scorers. The scorers were required to reach a consensus on all the answers. In cases where the consensus by the primary scorers could

not be reached, a third scorer was consulted to ensure that consensus was obtained among the three scorers. The quality of the studies was assessed based on the table below. The following were considered in assessing the quality of the studies; well defined assessment of HIV knowledge, attitudes and beliefs by specific questions, presence of a verifiable outcome measurement, clearly statement of the research question/objectives, statistical analyses appropriate to the study design and limitations and how well they were addressed. The quality assessment form is a commonly used form as seen in a previously published systematic review; however, it was adapted and made to fit this particular review.

Quality assessment form

	Assessment questions	Yes	Uncertain /Implied	No
1	objective(s) clearly defined /stated/justified	5	2.5	0
2	correctly justified/defined sample size	5	2.5	0
3	sampling method clearly explained/ justified	5	2.5	0
4	outcome measures clearly validated	5	2.5	0
5	relevant outcomes considered	5	2.5	0
6	reliability of measurement tools	5	2.5	0
7	drop-out details described/loss to follow up details	5	2.5	0
8	description of data adequately done	5	2.5	0
9	appropriate statistical tests	5	2.5	0
10	assessment of statistical significance/any confounders considered	5	2.5	0
11	main findings considered	5	2.5	0
12	considerations for limitations	5	2.5	0

Maximum possible score 5x12=.....

Overall rating = total score expressed as a percentage of maximum score.

Weak = ≤ 50%

Moderate = 51-80%

Strong =81-100%.

High quality studies were selected for data abstraction. The data abstraction form was developed based on the study objective and variables of interest to summarize findings of the studies to prepare an evidence table.

The components of the table included the following: study citation, study population, study characteristics and design, study details and major findings. The summary of the selected studies deemed to be of high quality is shown below in the table. The synthesis of the findings from this evidence table was applied in the development of the overall conclusions. The proposal for this study was approved by the School of Public Health, University of Texas IRB at Houston.

Details of studies included in the review

Study	Sample characteristics	Details of the study	Study design and analysis	Major findings/Important considerations
Lawoyin 2007	Young women in Southwest Nigeria N= 68	Objectives- To assess findings from a report of an HIV/AIDS program	Cross sectional study Chi square test.	Post-test respondents' rates of 99% for correct identification of primary mode of HIV/AIDS transmission. No attrition.
Arowojolu et al., 2002	College students in Southwest Nigeria N= 2388	Objectives- to examine sexuality, contraceptive choice and AIDS awareness	Cross sectional study Chi square test	Knowledgeable respondents in the study (100%) Condom use was identified more to prevent pregnancy than HIV/AIDS. 80% response rates

Study	Sample characteristics	Details of the study	Study design and analysis	Major findings/Important considerations
Ijadunola et al., 2007	College students in Southwest Nigeria N= 405	Objectives- to assess the perceptions of personal risk of acquiring HIV/AIDS infection	Cross sectional study Analysis- Multiple regression analyses	83% of participants demonstrated adequate knowledge about HIV/AIDS 85% did not perceive themselves at personal risk. No comments on attrition rates
Ezumah et al., 2003	Indigenes of Ibo communities in Anambra, Nigeria N= 1000	Objectives- to evaluate gender issues in the prevention and control of STDs and HIV/AIDS	Cross sectional study No comment on statistical analyses	82% of participants believed that certain groups of people (commercial sex workers and promiscuous women) were at risk of the HIV/AIDS Less than 1% attrition rate
Akpabio et al., 2009	Secondary school students in Akwa Ibom, Nigeria N= 360	Objectives- to examine the effects of school health nursing education interventions on HIV/AIDS related attitudes	Cross sectional study ANOVA was used for analyses	More favourable responses(better attitudes) among students who received HIV/AIDS interventions 6% attrition rate
Arulogun et al., 2010	Unmarried youth in Oyo, Nigeria N= 571	Objectives- to determine the attitudes towards mandatory pre-marital HIV testing	Cross sectional study Chi square test and logistic regression were used.	30% personal perception of risk of HIV infection. No comments about attrition rates.
Maas at al., 2009	Adolescents in Ebonyi, Nigeria N= 465	Objectives- to assess the effectiveness of peer education for HIV knowledge	Cross sectional study Binary logistics regression was used.	Non-peer educated students had less knowledge about HIV, also showed a lot of misconceptions and high levels of stigmatization across board.
Wagbatsoma et al., 2006	Secondary school students in Benin City, Nigeria N= 920	Objectives- to determine the knowledge of HIV/AIDS and sexual practices	Cross sectional study Pearson chi square test was used.	Only 16% of respondents knew the correct aetiology of HIV/AIDS though 100% were aware of the disease. No attrition in this study.
Nweneka 2007	Church youths in Southern Nigeria N= 361	Objectives- to assess sexual practices of youths in the church in the era of HIV/AIDS	Cross sectional study Chi square test was used.	53% of participants used condoms during sexual intercourse to prevent HIV/AIDS. 15% attrition rates
Obiechina et al., 2002	High school female students in Onitsha, Nigeria N= 983	Objectives- to determine the knowledge, awareness and perceptions of sexually transmitted diseases	Cross sectional study No comments about methods of statistical analysis	94% of participants are knowledgeable and aware of HIV/AIDS Abstinence was identified by 68% of participants as the major preventative strategy No comments on attrition rates
Okonta et al., 2007	Secondary school students in Nsukka, Nigeria N= 250	Objectives- to assess HIV awareness and changes in sexual practices	Cross sectional study Chi square was used in statistical analyses	Low awareness about HIV/AIDS. 18% of participants did not believe in the use of condoms. Less than 30% believed that HIV/AIDS is real

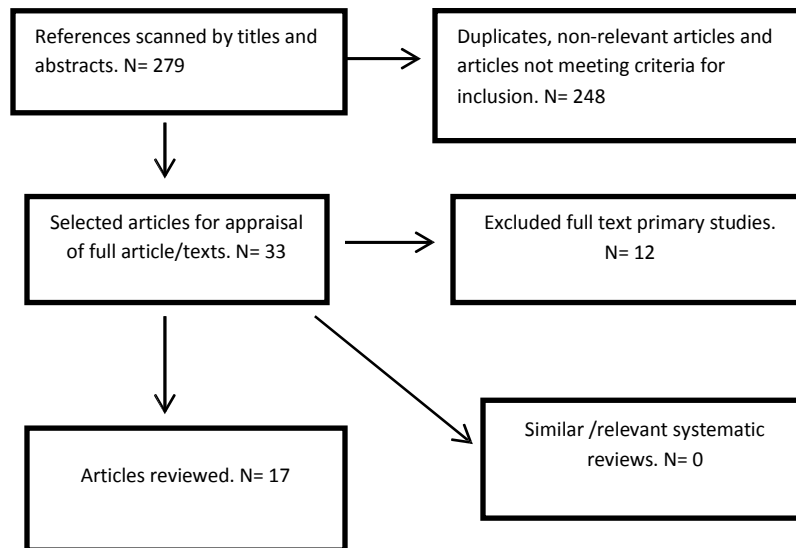
Study	Sample characteristics	Details of the study	Study design and analysis	Major findings/Important considerations
Smith 2004	Adolescent and unmarried youth in different Nigerian locations N= 863	Objective- to assess the relationship between premarital sex, procreation and personalized HIV risk	Cross sectional study Survey.	High awareness of HIV/AIDS but low level responses to consistent condom use or abstinence as preventative strategies. Low level personal perception of risk of acquiring the disease.
Owolabi et al., 2005	Secondary school students in Osun, Nigeria N= 450	Objective- to determine sexual behaviour; implications for STIs and HIV/AIDS	Cross sectional study Z test was used for analyses	89% of participants appreciate that HIV/AIDS is real. No comments on attrition rates.
Odu et al., 2008	Tertiary institution(university) students in Osun, Nigeria N= 368	Objective- to determine the Knowledge, attitudes to HIV/AIDS and sexual behaviour	Cross sectional study Chi square test was used in the analyses	72% of participants believed that abstinence would prevent HIV. 83% believed that condoms would do same. 91% of participants said that unprotected sexual intercourse could lead to HIV/AIDS. Attrition rate of 3%
Nwokocha et al., 2002	Secondary school (high school) students in Enugu, Nigeria N= 360	Objective- to determine the Knowledge, attitudes to HIV/AIDS	Cross sectional study No comments on statistical analyses.	83% of participants in this study knew the correct aetiology of HIV/AIDS. More than 90% could correctly identify risk factors for the disease. No attrition.
Venier et al., 1997	Adolescents in three countries in Africa (Kenya, Nigeria, Zimbabwe) N= 974	Objective- to examine social anxieties associated with HIV/AIDS prevention	Cross sectional study. ANOVA, post hoc Scheffe tests and Product-moment correlation coefficients	No comments on attrition rates. Major findings show that there is less anxiety among Kenyan adolescents than adolescents in Nigeria probably because they have learned about AIDS earlier than their Nigerian counterparts.
Akande et al., 1994	Nigerian students above 18 years of age N= 2500	Objective- To determine cross cultural competency and replicability of HIV fears	Cross sectional study. SPSS package was used.	No comments on attrition rates. Major fears such as loss of control and dependence especially with infection with AIDS.

Tables 1, 2 and 3 summarize the major findings in the studies used for the literature reviews. Many of the studies focused more on knowledge than attitudes. The criteria for knowledge and attitudes and major findings are listed in the tables.

Search Results;

The results of the search and study selection are shown on the flow chart below.

A total of seventeen articles (seventeen studies) met all the criteria and have been reviewed and included in this paper.



Key: N is number of studies included at any level included in the text box. Flow chart for study selection

Results

All seventeen studies were cross sectional and were conducted in Nigeria. Majority of the studies were done in the Western and Eastern parts of Nigeria. Some were done in other areas but none was carried out in the North. Table 1 shows that six of the studies were done in the South Western part of Nigeria, ten of the studies were done in the South Eastern part, one in the South-South (Akwa Ibom) and the last one was carried out in multiple locations. The target group was young people aged 10 to 24 years but higher institutions were included because many of the study participants are in higher institutions and fall within that age bracket. Nine of these studies were carried out in secondary schools and the rest were done in communities as well as Colleges.

Tables 1, 2 and 3 summarize the major findings in the studies used for the literature reviews. Many of the studies focused more on knowledge than attitudes. The criteria for knowledge and attitudes and major findings are listed in the tables.

Attitudes Table-

Study/ Finding	Lawoyin 2007	Arowolaju et al., 2002	Ijadunola et al., 2007	Ezumah et al., 2003	Akpabio et al., 2009	Arulogun et al., 2010	Maas et al., 2009	Wagabito ma et al., 2006	Nweneka 2007	Obiechina et al., 2002	Okonta et al., 2007	Smith 2004	Owolabi et al., 2005	Odu et al., 2008	Nwokocho et al., 2002	Akande et al., 1994	Venier et al., 1998
Attitudes about HIV/AIDS	+				+	+			+					+		+	+
Attitudes about abstinence							+					+					+
Attitudes about mutual fidelity				+													+
Attitudes about condom use				+			+					+	+				+
Attitudes about PLWHAs	+						+		+					+	+	+	+
Attitudes about unprotected sexual intercourse and HIV/AIDS	+		+	+								+	+			+	+
Perceived susceptibility to HIV/AIDS			+	+		+						+		+	+	+	+

Tables 1, 2 and 3 summarize the major findings in the studies used for the literature reviews. Many of the studies focused more on knowledge than attitudes. The criteria for knowledge and attitudes and major findings are listed in the table.

Discussion

We conducted a systematic review of the literature to explore the Knowledge and Attitudes of Young People living in Nigeria concerning HIV/AIDS. There was indeed a dearth of well-conducted studies on HIV/AIDS. Many of the studies either concentrated on Knowledge alone or Attitudes alone or explained HIV as an STI. Some of the constructs needed to assess knowledge or attitudes were neither nor partially met. Some of these studies did not have statistical analyses done. Of the 259 studies identified by the search strategy, only 17 studies met some of the criteria. Very few were of very high quality (N= 3). A thorough search of the literature did not find any systematic review done in Nigeria on this topic. All the studies had the socio-demographic characteristics such as age and sex reported. However, socio-economic status in this review was not really pertinent especially considering the ages of the study participants. Many of these participants still live with their parents or guardians so socio-economic status did not play a great role in the review. Many of the studies were randomly conducted and all the studies were cross-sectional. Some of the studies had their researchers obtain permission from the head teachers of the respective schools studied. Lack of adequate knowledge has been cited for high risk behaviour in some of the studies, however, some of these studies showed that sexual behaviour has been impacted marginally by awareness of HIV infection. Low levels of information and in other studies misconceptions are the bane of HIV/AIDS knowledge^{2,7}. Knowledge is the first step to be taken to address prevention of HIV. It may impact change in attitude and sexual practice. In contrast though, the scientific foundation for so many knowledge only based programs may be overtly limited and their impact low^{1,7}.

Developing a positive attitude toward sexual health or HIV/AIDS preventive measures could produce tangible behaviour changes in HIV/AIDS risk behavior³. In Sub-Saharan Africa, sexual intercourse is arguably the most common mode of transmission of HIV infection, so any health education on behavioural change must emphasize sex education and the role of sexual risk behaviour in the transmission of the disease³. Certain ideologies about sexuality may predispose young men and women to indulge in risky sexual behaviour and unprotected sex. Women are expected to be passive in sexual relations while men are assumed to be active¹⁴. The future trend of HIV/AIDS pandemic depends largely on the level of HIV/AIDS awareness and knowledge possessed by the people¹⁵. Awareness of HIV/AIDS is important for young people to protect themselves from HIV. It is important to state categorically that even though information and education are necessary to induce change in behaviour, they cannot sustain this change⁹. Information and education have weak to moderate effects on sexual risk behavior⁹. Even though these sources of information are available, many young people may not use this information effectively. However, Kirby and his colleagues concluded that interventions based on education and information dissemination caused a delay of the onset of sex, frequency of sex and partners and increased use of contraceptives like condoms in developing countries like Nigeria⁶. Young people who know about HIV/AIDS and about condoms, who are in pre-marital sexual relationships with people they care about, and who do not want yet to have a child, nonetheless sometimes find negotiating condom use difficult⁶. The reproductive and sexual health of this group is very important because it determines not only the quality of the generation concerned, but also that of generations to come. In addition, young people are

less likely to seek information due to stigma, lack of information or inexperience. It is therefore of paramount importance that evidence based prevention strategies are targeted at this population^{9, 10, 16 and 17}. Sexually transmitted infections are common among men and women aged 20 – 24 years, however, there is an increase in rates of young women. Young people's perception of threat is necessary to understand and alter sexually risky behavior that leads to HIV/AIDS¹. Fear and anxiety will act as barriers to acquisition of accurate information, and promote denial^{22 and 23}.

HIV/AIDS as a health problem has exerted severe strain on the health budget of Nigeria especially considering the vast resources needed to meet the needs of this infection. In addition, antiretroviral drugs are still unaffordable especially considering that more than 70 per cent of the population live below the one dollar per day level^{15, 18 and 19}. The social impact of this disease includes unemployment and this is an area of concern because many young people searching for jobs who have HIV cannot secure jobs because HIV/AIDS testing has become a yard stick for employers of labor¹⁶. For others, because of the days lost at work, employers are quick to fire staff discovered to have HIV. This therefore poses issues of stigmatization. Other areas of concern include reduced literacy levels, diversion of funding to HIV at the expense of other services and increased family budget in poor families especially¹⁶. HIV/AIDS interventions may not work in Nigeria because of weaknesses inherent in its health system for example poor access to health care, bureaucratic issues, cost implications of seeking health care, issues of confidentiality, stigmatization of people seeking treatment for sexually transmitted diseases etc. This contributes to bottlenecks in the distribution and utilization of funds for health care and this would require strengthening

the health system. HIV/AIDS involves social determinants. There is a connection in the complexity of HIV/AIDS which is intertwined with social and environmental factors ²⁰.

Young people in Nigeria and in the world take great risks and they have the highest rates of infections. People aged between 15 and 24 years comprise about 20 per cent of the world's population and account for 60 per cent of new infections each year in the world⁷. In many developing countries including Nigeria, only a small percentage of HIV-positive young people know they are infected. Studies have also shown that despite being aware of the disease, young people still take risks. In a study carried out in one of Nigeria's most prestigious universities, it was found that only one-fifth of the participants believed they were vulnerable to HIV/AIDS and continues their risky behavior ⁴. Other studies done in Nigeria among young people showed that they did not believe that abstinence could be useful in preventing this disease even though about 90 per cent of them were sexually active ^{9, 10, 11 and 14}. These young people initiate sexual intercourse while in their teenage years. Some of the studies show that they are sexually active as early as ages eleven. Sexual practices range from penile-vaginal and are largely heterosexual. Another interesting finding from many studies done in Nigeria among young people showed cultural beliefs and misconceptions about the disease. Before a pre-test in a study done in Nigeria, many young women (98 per cent of participants) believed that HIV/AIDS was indeed a punishment from God but worse is the fact that many of the participants(almost 100 per cent) asserted that they would not reveal their HIV status or seek treatment if they tested positive ¹. For some others, acquiring the disease meant their lives had come to an end. These beliefs are because of the degree of stigma in Nigeria. Many Nigerians are very moralistic in their views about this disease and

this does not help people share their HIV status with health care professionals to get treatment. For others, it means there will no extension of help to people living with the disease¹.

Smith carefully explains the issue of parenthood and social expectations for young people and how it impacts sexual relationships in Nigeria. The belief that sexual relationships should strictly be for procreation impacts on premarital sexual relationships and the use of contraceptives⁶. On one hand, young people who know about HIV/AIDS and condoms, who get involved in premarital sexual relationships with people they love and care about but are not ready to have children sometimes find negotiating condom use difficult⁶. Conversely, other young people who have premarital sexual relationships with people who they do not care about may not be too particular about the use of condoms or may be very careful because they are not ready for parenting as such⁶. However, it is important to consider how parenthood and social expectations are intertwined with HIV/AIDS. In the discussion of condoms as a disease preventive strategy, it is essential to note that these discussions are inhibited by stigma which is transferrable from the disease to people who may have the disease or others who are at risk of the disease⁶. In essence, condoms become attached to the stigma attached to the disease in the first place. In addition, the stigma associated with HIV is also because it is a sexually transmitted disease. Notwithstanding, condom negotiation is difficult because it requires the overt cooperation of both partners^{6 and 14}.

Some papers have suggested that men may be not be willing to use condoms even when the women are willing to use condoms but assertiveness then comes into play on the part of the women. In addition, Venier and her colleagues explain that women's role in relationships

differ from men across Nigeria, Kenya and Zimbabwe because of the impact of social anxieties. They also explain the need for more research in this area ²³. Interestingly, they also found that adolescent women tended to show much less anxiety about sexual assertiveness than their male counterparts ²³. Furthermore, they explain that programs have failed in the past because of their inability to address the important role of women in sexual relationships when condoms are promoted ²³. More so, they categorically state that the person making decisions does so in a relationship setting and in a social interactive setting too, and this should form the basis of appraising gender differences in anxieties especially in the design of interventions ²³.

Another point of consideration is the fact that early onset of sexual activity is because young people reach puberty at earlier ages and therefore have a longer interval of sexual practices before any intervention takes place.

Many studies done among young people concerning HIV knowledge and awareness reveal several lapses and gaps. Unfortunately, beliefs in superstition, wrong information and poverty negatively impact HIV/AIDS knowledge and awareness among young people. In many of the studies done among young people, abstinence seems to be the most appropriate way of preventing HIV/AIDS^{14, 15}. In a study done among church youths in Nigeria, abstinence seemed not to be a plausible option of preventing the disease despite the moralistic stand of the churches ²⁸. It is essential to emphasize that even though young people know about HIV/AIDS and may be aware of condoms, there still exist risky sexual practices in this population especially in Nigeria. Not understanding the reasons for this high level of risk is the bane of many interventions to prevent HIV/AIDS in young people ^{14, 15 and 19}.

In a study done by Smith in Nigeria, he found that many young people believe that condoms interfere with the closeness or intimacy of sexual intercourse, thus disrupting sex and finally making it less enjoyable and cumbersome⁶.

This paper is a systematic review and has the strengths of providing a number of studies in many areas and settings more than any individual researcher can track, follow up or synthesize. The methods which were used in this review were transparent and reproducible by following an explicit process of standard scrutiny. Tabulating and integrating the most relevant material which addressed the research question was paramount. It has helped in eliminating any form of bias and to a large degree explains any doubts raised in the original studies for the research question as well as identified gaps in the studies' individual qualities. In addition, it has shown the need for further work for research and evaluation.

It is important to note that this review may have been prone to selection bias because all the studies used were in English and were published in peer reviewed journals only. No conference proceeding or intergovernmental/non-profit reports or publications were considered. Therefore our conclusions were made based on the selected studies. One big issue in the review was misclassification of knowledge and attitudes. Different studies had different constructs for knowledge and attitudes in their respective studies and these posed problems in the review.

Conclusion

Even though the review found fairly reasonable levels of knowledge in the studied population, it showed that future interventions need to focus on attitudes and correction of

misconceptions about HIV/AIDS in young people. These interventions may be impacted by good sexuality education in schools. Including HIV/AIDS related subjects in the curriculum may be somewhat effective. The role of the media cannot be over emphasized but the roles of parents and teachers (who are not in the habit of teaching anything related to sex) are very enormous in this issue. Indeed, it is difficult to change attitudes but a focus on the proper use of condoms will be more practical. The review showed that many young people who are aware of the benefits of condoms do not use them. The severe disparity between knowledge and the use of condom was attributed to stigma and morality. The negotiation of condom use in the prevention of this disease poses threats to many sexual relationships because they seem to question the character of the individual in the relationship and also raising sexual immorality issues⁶. Many of the studies showed that young people did not perceive themselves as vulnerable to this disease despite being sexually active and the use of condoms and number of sexual partners did not correlate significantly with perceived measure of risk for HIV.

The HIV statistics in Nigeria are really alarming and by the time we realize that young people who do not have access to correct information are vulnerable to this condition, it might be very well too late to curb the disease. Interventions for young people should be multi-pronged involving parents, teachers, religious leaders, policy makers and the media. However, it must be stated that these interventions must be culturally based and very sensitive because Nigeria is a multi-ethnic and secular nation. Venier and her colleagues explain that when we comprehend the obstacles involved in preventing AIDS is because of a

dearth of information on the social anxieties and skills which are important in AIDS preventive skills^{22, 23}. It is therefore necessary to factor these into future research.

References

1. Arulogun AS, Adefioye AA. Attitudes towards mandatory pre-marital HIV testing among unmarried youths in Ibadan Northwest Local Government Area, Nigeria. *African Journal of Reproductive Health* Mar 2010; 14 (1): 83- 94
2. Okonta JM, Momoh MA, Ekwunife OI, Mbagwu ISU & Abali SO. Assessment of HIV/AIDS awareness and changes in sexual practices among secondary school students in Nsukka environment. *Tropical Doctor Journal* 2007; 37 : 268- 270
3. Mass F, Otte WM. Evaluation of HIV/AIDS secondary school peer education in rural Nigeria. *Health Education Research* Nov 2009; 24 (4): 547- 557
4. Odu OO, Asekun-Olarinmoye EO, Bamidele JO, Egbewale BE, Amusan OA, Olowu AO. Knowledge, attitudes to HIV/AIDS and sexual behavior of students in a tertiary institution in south-western Nigeria. *The European Journal of Contraception and Reproductive Health Care* Mar 2008; 13 (1) ; 90 – 96
5. Nwagwu WE. Effectiveness of sources of HIV/AIDS awareness in a rural community in Imo State, Nigeria. *Health Information and Libraries Journal* 2008, 25 pp. 38 – 45
6. Smith DJ. Imagining HIV/AIDS: Morality and Perceptions of Personal Risk in Nigeria. *Medical Anthropology* 2003, 22: 343- 372
7. Wagbatsoma VA, Okojie OH. Knowledge of HIV/AIDS and Sexual Practices among Adolescents in Benin City, Nigeria. *African Journal of Reproductive Health* Mar 2006; 10 (3): 76- 83

8. Nwokocha ARC, Nwakoby BAN. Knowledge, Attitudes and Behavior of High School Students Concerning HIV/AIDS in Enugu, Nigeria, in the year 2000. *Journal of Pediatric Adolescent Gynecology* 2002; 15 : 93 – 96
9. Owolabi AT, Onayade AA, Ogunlola IO, Ogunniyi SO, Kuti O. Sexual behavior of secondary school students in Ilesa, Nigeria: implications for the spread of STIs including HIV/AIDS. *Journal of Obstetrics and Gynecology* Feb 2005; 25 (2): 174 – 178
10. Akpabio II, Asuzu MC, Fajemilehin BR, Ofi AB. Effects of School Health Nursing Education Interventions on HIV/AIDS-Related Attitudes of Students in Akwa Ibom State, Nigeria. *Journal of Adolescent Health* 2009; 118 – 123
11. Paul-Ebhohimhen VA, Poobalan A, Van Teijlingen ER. A systematic review of school based sexual health interventions to prevent STI/HIV in Sub-Saharan Africa. *BMC Public Health* Jan 2008; 8 (4): 1-13
12. Ijadunola KT, Abiona TC, Odu OO, Ijadunola MY. College Students in Nigeria underestimate their risk of contracting HIV/AIDS infection. . *The European Journal of Contraception and Reproductive Health Care* June 2007; 12 (2) ; 131 – 137
13. Lawoyin OOC. Case Report Findings from an HIV/AIDS program for young women in two Nigerian cities: A short report. *African Journal of Reproductive Health* Mar 2007; 11 (2): 99- 106
14. Ezumah NN. Gender Issues in the Prevention and Control of STIs and HIV/AIDS: Lessons from Awka and Agulu, Anambra State, Nigeria. *African Journal of Reproductive Health* 2003; 7 (2): 89 – 99.

15. Allman D, Adebajo S, Myers T, Odumuye O & Ogunsola S. Challenges for sexual health and social acceptance for men who have sex with men in Nigeria. *Culture, Health and Sexuality* 2007; 9 (2): 153- 68.
16. Adeyi et al. '[AIDS in Nigeria: A nation on the threshold](#)'. Chapter 2: The epidemiology of HIV/AIDS in Nigeria Harvard Center for Population and Development Studies 2006
17. HIV/AIDS in Nigeria. Avert International (2010). Accessed @ <http://www.avert.org/aids-nigeria.htm>
18. National Agency for the Control of AIDS (NACA) (2009, December) '[National HIV/AIDS strategic framework \(NSF\) 2010-15](#)'
19. WHO, UNAIDS & UNICEF (2008) '[Towards universal access: scaling up priority HIV/AIDS interventions in the health sector](#)'
20. Interagency Coalition and HIV/AIDS and Development: Globalization and HIV/AIDS. 2008
21. Oshi DC, Nakalema S, Oshi LL. Cultural and Social Aspects of HIV/AIDS Sex Education in Secondary Schools in Nigeria *Journal of Biosocial sciences* 2005; (37): 175 – 183
22. Akande D, Ross MW. Fears of AIDS in Nigerian students: dimensions of the Fear of AIDS Schedule (FAIDSS) in West Africa. *Social Science and Medicine*, 1994, 38, 339 – 342
23. Venier JL, Ross MW, Akande A. HIV-related anxieties in adolescents in three African countries. *Social Science and Medicine*, 1998, 46, 313 – 320

24. United States Agency for International Development (USAID)/Nigeria. HIV/AIDS Health

Profile October, 2010 accessed @

http://www.usaid.gov/our_work/global_health/aids/Countries/africa/nigeria.pdf