Effect of declining socio-economic condition on HIV pandemic among adolescents in Abeokuta, Nigeria.

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Abstract: Effect of declining socio-economic conditions which have encouraged HIV prevalence, reducing capacities for personal and social achievement, and increasing uncertain future among the adolescents was studied in Abeokuta, Nigeria. The study was designed as descriptive cross-sectional study among adolescents age 15-25 using structured quantitative and qualitative questionnaire to investigate the adolescents' sexual behaviour has a major cause of HIV/AIDS and declining socio-economic condition as motivating factor that prone many adolescents into sex business and contraction of HIV/AIDS. 60.0% of the respondents are male and 40.0% female of mean age 21.5±4. 81.3% were single, 16.3% were married and 2.5% were already divorced or separated from their spouse. 58.8% have had sexual encounter with 37.5% agreed to have use condom for sex while 40.0% of them have gone for the routine HIV screening test but only 1.25% was tested positive. Their attitudinal relationship with HIV+ people by means of social activities as hug, live, eat, sleep, sharing bed, bath and toilet, kiss and use of exercise equipment is significant, suggesting discrimination and stigmatization to HIV positive individuals. (X^2 = 36.149, df = 1, p < 0.000). 51.3% got daily income less than #500, majority of 89.8% are not satisfied with their income, while 7.5% agreed that they could give out their body to raise fund for their economic sustenance. It is evident that lack of education, poverty, unemployment, instability of government policy on HIV control and poor socio-economic condition limit young people's choices and vulnerabilities to HIV and other STDs. Social and economic development strategies for poverty reduction are necessary and should be geared towards reducing inequalities, and generation of employment opportunities.

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INTRODUCTION

HIV/AIDS is now rated as the fourth largest cause of death globally and the leading cause of death in Africa (CDC, 2001) with over 40 million people believed to be living with HIV/AIDS and half had became infected between the ages of 15 and 24 (WHO, 2003) which represent the adolescent age group. The epidemic has grown at high proportion among the young adults which are now referred to as the high risk group who are usually adventurous in all spheres of human endeavours including sexual practices (Adegbenga SM, 2002). They constitute about 20 percent of the world's population with about 85 percent of them in developing countries (Okonofua in 2000; WHO, 2001) and many of them still engage in risky sexual activity without protection and most have had their debut through a subtle coercion by their partner. (Gottlieb *et al* 1998; WHO, 2001). This sexual assault commonly resulted in sexually transmitted infections (STIs), HIV infection, unwanted pregnancy and unsafe abortion. Most HIV transmission worldwide is through sexual intercourse, with high degree of risk depending in part on the number of a person's sexual partners, and since sexual promiscuity is high at the very beginning of a person's sexual life, it is evident that the adolescent population, aged 15–20 years, potentially represents the highest risk group (Lamptey et al, 2002). Therefore, sexually active youth ages 15–19 years experience the highest STD with prevalence rates reaching epidemic proportions (Cates et al, 2004). Left untreated STD infections had led to serious complications including infertility, chronic PID, cervical cancer, or death, causing significant toll on society in terms of economic costs associated with detection and treatment (Chesson et al, 2000).

Socio-economic impact of HIV, as well as a harrowing catalogue of lives lost, and the implications of declining socio-economic condition mostly in Southwest Nigeria had encouraged HIV prevalence, reducing capacities for personal and social achievement

and increasing uncertain future. Human tragedy, declining standards of living, reduced community and family viabilities over past decades, have been major factors retarding the social and economic development programmes in many parts of the country.

Despite the demographic impacts and anticipated population implications, it has been very difficult to fully capture the magnitude of the pandemic on economic growth or development. With the advent of democracy for the past ten years in Nigeria, a very high proportion is still poor despite various economic reform policies while millions are living below $1 daily expenditure, according to United Nations poverty index (UNAIDS, 2006). Due to this dwindling social and economic condition in the country, many young adults are taking into various nefarious activities to earn a living especially young women who engage in high-risk sexual relations as a means of economic survival, and they perceive this acts as a form of strategy through which they can improve their socio-economic well being while young men do such acts out of just pleasure and probably as avenues for attaining fulfilled sexual desire despite the widespread of HIV in our society. Poverty and the scarcity of employment opportunities have been identified as the principal reasons why young people enter into sex work and this can be attributed to lack of financial security, survival, and sexual abuse (reference). Poverty in Nigeria is an indubitable factor that creates a tremendous financial burden with high rate of food insecurity for many households forcing many of the poorer households into debt thereby engaging in sex for money.

The concepts of the declining socio-economic condition, presently in the country was being suggested as motivation for adolescents group into risky sexual behaviour making them vulnerable to HIV/AIDS and other sexually transmitted infections (STI). Therefore, critical deduction in exploratory study to prevent unbiased measures and prove this preconceived notion about the sexual behaviour of many young adults but not necessarily as the single explanation for HIV prevalence due to poor socio-economic and socio-cultural factors that make youth vulnerable to HIV and AIDS (Stephen P. Borgatti,1999).

In spite of this pandemicity of HIV, this study was conducted to assess the impact of declining socio-economic condition on the sexual behavior of adolescent age group in this demographic setting and as a motivating factor for increased prevalence rate of HIV and AIDS.

Research methods

The research was designed as descriptive cross-sectional study among adolescents age 15-25 using structured quantitative and qualitative questionnaire to investigate the adolescents' sexual behaviour has a major cause of HIV/AIDS and declining socio-economic condition as motivating factor that prone many adolescents into sex business and contraction of HIV/AIDS.

Abeokuta North and South (which are located at rain forest belt of Lat. 43E and Long. 37S of the South Western, Nigeria) was the study location with population of about 3.5million (NPC,2007) missing in references of which the adolescents constitute the largest proportion who are primarily students, traders, undergraduates, unemployed graduates, civil servants and artisans,

Multi-stage random sampling method was used to survey male and female adolescents in Onikolobo, Pansheke, Isabo, Sapon, Ijemo, Lantoro, Abiola way, Obantoko, Camp and Idi-aba in the township. The sample size of four hundred was determined according to the formula derived by Mark Kennan (2007). Missing in references and reference appropriately

Well designed quantitative questionnaires were used as instrument of study to generate data from the four hundred adolescents. The questions were sub-divided into sections which include Section A; The respondent biodata (i.e demographic variables) and Section B; Their socio-economic status and HIV awareness. All the questions were close-ended type by simply ticking or circling respective responses. In addition, in-depth interviews were conducted among the respondents in qualitative method.

Ethical clearance was obtained from each respondents who were informed about the purpose of the study (Informed consent not ethical clearance), which was purely survey of their sexual behaviour and HIV spread. Their consent was sought and obtained before the administration of the research instruments while their names remained anonymous and they were assured of confidentiality in view of the intricacy and sensitivity of the questions contained in the questionnaire. Inferential statistical methods were used to analyse and explain the effect of the declining socio-economic condition which could motivate adolescents into unprotected sexual practices and those variables that determine their level of awareness of HIV prevention and transmission while significance of categorical variables and proportions were determined. Association between sexual practice and each of the independent variables were also tested. Data generated from in-depth interviews were analyzed as descriptive statistical methods and 95% confidence interval was calculated for normal values with differences between

the parameters for their statistical significance when p-values are less than 0.05.

Each variable associated with occupation, daily income, and sexual behaviour was analysed with Pearson correlation to quantify the strength of association between sexual practice and the mediating effect of their financial income.

RESULT

The study hypothesised an association between declining socioeconomic condition as a major cause of radical sexual practice among adolescents which mediate HIV prevalence in Abeokuta (Delete). The findings are to support the primary hypothesis that the increasing rate of sexual activity is not caused by declining socio-economic condition and poverty taking the significance at $p<0.05$ (Delete).

Respondents' socio-demographic status is shown in Table 1; with highest proportion of the respondents were students which comprise mainly the adolescents with mean age 21.5±4 of 60.0% male and 40.0% female. 81.3% were single, 16.3% were married and 2.5% were already divorced or separated from their spouse. Associations between socio-demographic variables and sexual practice of the respondents are significant ($p<0.005$).

Table 1; Respondent socio-demographic variable

Sexual practice of the respondents was shown in Table 2 with 58.8% have had sexual encounter with 37.5% agreed to have use condom for sex and 46.5% were indifference about the use of condom.100% of the respondents were already knew about HIV/AIDS and 98.5% were aware of the difference between HIV and commonly known STDs. 40.0% of them have gone for the routine HIV screening test but only 1.25% was tested positive.

Table 1; Respondent socio-demographic variable

Characteristics	Number	Percentage
Age distribution		
15-17	22	5.5
18-20	105	26.2
21-23	190	47.5
24-25	85	21.3
Total	400	100.0
Gender		
Male	240	60.0
Female	160	40.0
Total	400	100.0
Marital status		
Single	325	81.3
Married	65	16.3
Divorced	10	2.5
Total	400	100.0

Table 2; Voluntary HIV Test

The attitudinal response of the respondents towards HIV+ people was surveyed as follows; 90.0% of the respondents quite knew very well that mosquito cannot transmit HIV, 81.3% said they could live with HIV+ person, 73.8% could eat with them, 68.8% could hug them, 1.3% could dance with them, 51.3% casually agreed that they could share food and drink with them, 54.8% said they could sleep on the same bed with them, 1.3% could use same shower, bath or toilet, 4.8% could sleep on the same bed with them and 32.5% could share exercise equipment with them. Their attitudinal relationship with HIV+ people by means of social activities as hug, live, eat, sleep, sharing bed, bath and toilet, kiss and exercise equipment is significant. (X^2 = 36.149, df = 1, p < 0.000). This suggests that most respondents could show unaffectionate attitude and discrimination to the people living with HIV and AIDS.

Table 2; Voluntary HIV Test

Characteristics	Number	Percentage
Have you had sex before?		
Yes	235	58.8
No	165	41.2
Total	400	100.0
Do you use condom?		
Yes	150	70.1
No	64	29.9
Total	214	100.0
Have you heard about HIV/AIDS before?		
Yes	400	100.0
No	0	0.0
Total	400	100.0
Do you know the difference between HIV/AIDS and STD?		
Yes	394	98.9
No	4	1.1
Total	398	100.0
Have you done HIV test before?		
Yes	160	40.0
No	240	60.0
Total	400	100.0
If YES,		
Positive	2	1.25
Negative	158	38.75
Total	160	40.0

Table 3. Attitudinal response of the respondent to HIV+ people.

Socio-economic status of the respondents was shown in Table 4. 60.0% were students, 20.5% were civil servants, 15.8% were self employed while 1.3%, 0.8% and 0.5% were traders, apprentice and drivers respectively. Remaining 1.3% was unemployed. 51.3% got daily income less than #500, 20.0% earned between #500 and #1000, 7.5% and 3.8% usually make between #1000 - #2000 and #2000-#3000 daily respectively. 17.5% got #5000 and above daily. Majority of 89.8% were not satisfied with their income, 60.0% usually got additional money to meet their income through their parent, 30.1% got additional money from their family member, while 2.5%, 1.3%, and 3.5% usually got more fund from their boyfriends, girlfriends and sexual partners respectively.7.5% agreed that they could give out their body to raise fund for their economic sustenance.

Table 3. Attitudinal response of the respondent to HIV+ people.

Characteristics	Number	Percentage
Live with HIV+ people	325	81.3
Eat with HIV+ person?	225	56.3
Hug HIV+ people	275	68.8
Dance with HIV+ people	5	1.3
Share food or drink with HIV+ people	205	51.3
Use same shower, bath and toilet with HIV+ people	5	1.3
Sleep together on the same bed with HIV+ people	19	4.8
Kiss HIV+ person	4	1.0
Share exercise equipment with HIV+ people	125	32.5
Total	1548	100.0

Table 4. Percentage distribution of the socio-economic status of the respondents.

Characteristics	Number	Percentage
What is your job?		
Civil servants	82	20.5
Self-employed	63	15.75
Apprentice	03	0.75
Driver	02	0.5
Student	240	60.0
Trader	05	1.25
Unemployed	05	1.25
Total	**400**	**100.0**
Your daily income is?	**250**	**62.5**
Less than #500	205	51.3
#500-#1000	80	20.0
#1000-#2000	30	7.5
#2000-#3000	15	3.8
#5000-above	70	17.4
Total	**400**	**100.0**

Are you satisfied with your income?	**400**	**100.0**
Yes	41	10.3
No	359	89.7
Total	**400**	**100.0**
From whom do you get additional money from?		
Parent	240	60.0
Boyfriend	10	2.5
Girlfriend	5	1.3
Sexual partner	15	3.5
Family member	120	30.1
Total	**390**	**97.4**
Can you give yourself to your partner for sex to meet your		
Yes	30	7.5
No	365	91.3
Total	**395**	**98.8**

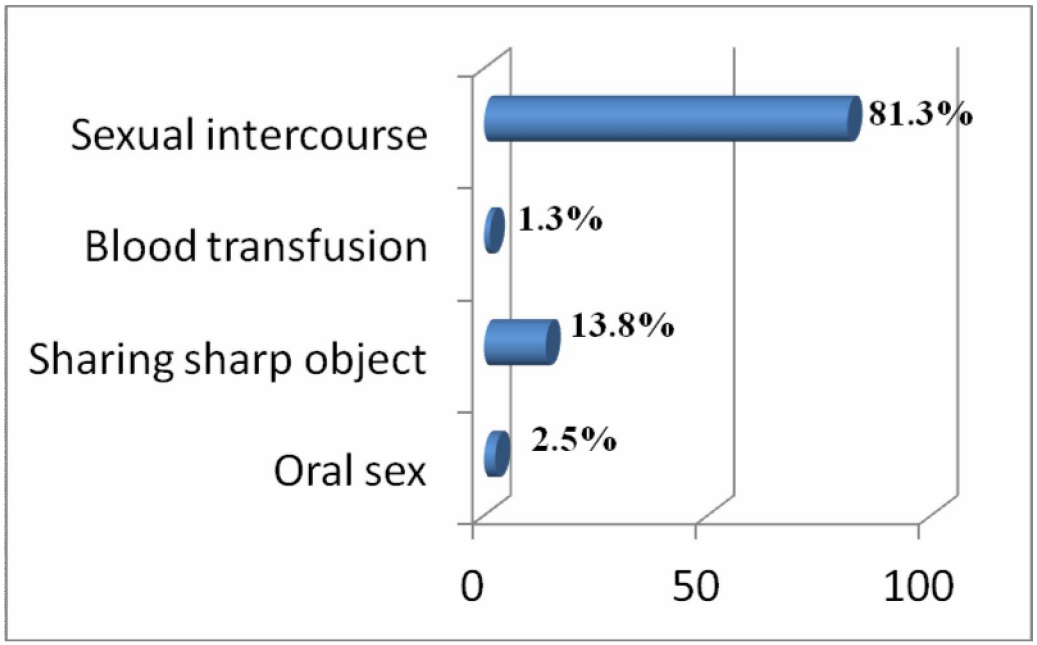

FIGURE 1; Percentage distribution of the respondents awareness of various route of HIV contraction.

Discussion

Adolescents in all cultures are probably the most sexually active and are the most exposed to dangers of prevalent sexually transmitted diseases given by their behaviour. Though, the adult population has been shown to carry a large burden of diseases which has great consequences in term of morbidity and mortality since the advent of the HIV and AIDS pandemic. Highest proportion of the respondents were of mean age 21.5±4 of which 60.0% (repetition) were male. This category were who mostly students who learnt about sexual issues from their school-mates, friends and sources often not properly informed about adolescent reproductive issue guiding them to unsafe sexual practises mostly for monetary gains. It could be inferred that increasing sexual activity among adolescents in Abeokuta township might be due to rapid urbanization due to increasing industrialization coupled with the poor socioeconomic background of the indigenous adolescents who were majorly unmarried that accounted for 81.3%.

Therefore, the prevalence of sexual behaviour of the adolescent population as key to dynamics of HIV and AIDS infection was studied. Based on the results of this survey, 58.8% of the respondents have had prior sexual experience. This rate is higher compare to the earlier reports of prevalence rate of 28.3% sexual behaviour of in-school adolescents in Ibadan, South-West Nigeria by Morhason-Bello IO et al, 2008, 33% of male and female adolescents aged 11–25 years in Niger State of Nigeria, December 2002 (Adegbenga et al, 2002) of those who had already had first sexual experience and 34% sexual rate among the adolescents in Jos, Plateau State, Nigeria; in 2003 (Gail B Slap et al, 2003). These results further reveal that despite the HIV/AIDS awareness amongst this high-risk group, many still engage in casual sex with multiple sexual partners and they also feel that this is the general trend based on their experiences and observation amidst the HIV and AIDS scourge. This study further shows that condom has been identified as major protection against HIV and other sexually transmitted infections. The respondents were asked if they usually use condom for sex. The result obtained shows that 70.1% used condom for sex while 29.9% did not protect. In view of this, the only positive change by the high-risk group adolescents to HIV/AIDS epidemic is condom use for casual sex with their partners. In this regard, regular use of condoms by women also seems to be easily compromised when faced with situations where their anticipated gains in terms of money are higher than the usual gains. Even for adolescent girls, where materialism was not expressed greatly, the issue of age with condom use is being compromised when it comes to having sex with older persons and yet this is the norm in our society. The study found that the impact of various supportive international organisations to intensify the HIV awareness was reflected, as 100% of the respondents are adequately aware of HIV and AIDS in our society. 98.9% respondents are already aware of the difference between HIV/AIDS and other common STD while 1.1% did not know the difference. Results further reveal that despite the HIV/AIDS awareness, many still reported engaging in casual sex with multiple sexual partners and they also feel that this is the general trend based on their experiences and observations. There were also variations as to why different categories of high risk groups continue having reckless sex amidst the HIV and AIDS scourge. Adolescents and street children attributed their continued involvement with multiple sexual partners to peer pressure, desire to experiment and the physiological changes they undergo due to age, which they felt were responsible for the heightened sexual urge particularly among boys. In relation to HIV testing, declining socio-economic condition being experienced in the country could have changed the community awareness and acceptance of HIV testing and counselling services, which is now more embraced compared to the past. Although actual taking of the HIV tests by the people is still very minimal mainly due to fear of positive test results and inaccessibility to testing services. The findings of the HIV status of the respondents surveyed shows that 40.0% of the respondents have done HIV test before and 1.25% actually declared that they are positive. Similarly, a vast majority of respondents lacked knowledge of effective method of HIV and AIDS prevention. Programmes should be designed to provide adequate knowledge on reproductive and sexual issues to adolescents and help change their attitudes towards reducing their sexual risk behaviours.

From the illustration of the respondent knowledge of HIV transmission, 81.3% absolutely agreed the sexual intercourse was the major route for HIV transmission while 13.8% agreed that sharing of sharp objects could aid HIV transmission. Minimal proportion of 1.3% and 2.5% of the respondents agreed that blood transfusion and oral sex could as well transmit HIV. Consequently, more informative awareness programs are still needed in the schools, higher institutions, and the streets. Society and religious bodies should not shy away from discussing HIV and AIDS among their congregations to correct inadequate knowledge on modes of transmission so that adolescents can develop positive attitudes towards their sexual behaviour and other route of infection. Therefore, there is need to implement innovative

strategies to improve public knowledge of HIV and AIDS.

The Attitudinal behaviour of the respondents to HIV+ individual was surveyed to assess the stigmatization and discrimination attached to the HIV positive people in our society as many people kept away from them and even relate with them from distance. Therefore, the population attitude to stigmatization and discrimination to HIV+ people shows that 81.3% agreed that they can live and 56.3% could eat with them, 68.8% could hug HIV+ person, while relatively low proportion of 1.3% could dance with them. 51.3% could share food and drink with them but only 1.3% use same shower, bath and toilet with HIV+ person (individual). 4.8% affirmatively agree to sleep with them on the same bed without sex and minimal proportion of 1.0% of the respondents could kiss HIV+ person on the cheek (none agree to have wet kiss with them). 32.5% could share exercise equipment with HIV+ people. This shows that most people especially the adolescents could show unaffection to HIV+ people around them. Thereby making relationship with them no longer cordial as usual as their status is made known and work productivity is reduced. As a result of possibility of stigmatization and discrimination, workers would no longer able to work as a team. Thereby, reducing the productivity, increasing medical expenses and reduces their income. Subsequently, they might not be able to fulfil their responsibilities to their families and the society. At the end of the day, you have a worker who was not happy. Despite a PLWHA's need for support, many are unable to tell relatives and friends because of fear of stigmatization and rejection. On many occasions when PLWHA do disclose their status they do not receive the necessary emotional and financial support making them having secret affairs to meet their economic needs (Lamptey et al, 2001).

The socio-economic condition of the respondents in relation to their risky sexual behaviour was assessed in the study. 20.5% were civil servants, 0.8% were apprentice and 15.8% self-employed. These are high-risk categories and who could make sex an acts of pleasure and probably as avenues for attaining fulfilled sexual pleasure after day work. The search for money among women and the constant desire for men to have sexual pleasure, which are greatly facilitated by their financial status, seem to come out as the driving forces behind the recklessness in sexual behaviour among these high-risk groups. What could be drawn from these findings is that most adolescents in these categories could engage in high-risk sexual relations as a means of economic survival, and they perceive their acts as a form of strategy through which they could improve their socio-economic well being. The study further revealed that majority of the respondents who comprises 51.3%, earned daily income less than five hundred naira (#500) showing that most adolescents are living below poverty level. This reflect a day-to-day experience of declining standards of living, reduced capacities for personal and social achievement, an increasing uncertain future (with important consequences for what can be achieved today) and a diminished capacity to maintain what has been secured over past decades. In order to meet the terms of social and economic development, many adolescents are forced to seek alternative ways of making more money through sex. This study further shows that 20.0% of the respondents earn daily income of #500 to #1000, which is relatively insufficient to meet their needs but still sought for better source. Those earning above #2000 were not yet comfortable. This low income could prone many especially the young ones to trade their body for more money in order to meet their financial needs and as well that of their family members (Oyefara, 2008). In maintaining adequate economic well being, HIV and AIDS pandemic kept increasing through this prevalent sexual practice and is becoming an enormous health problem with profound socioeconomic defects at both the household and national levels. It has created exorbitant health expenses and economic waste for households through care costs, labour deaths, eroding household asset bases, breaking down the cultural and social relationship and contributed to economic meltdown.

The pandemic damages economic development prospects through early death of the economically productive young adults, reducing life expectancy by as much as 40% in some countries and affects the most productive age group - people aged between 15 and 49, leading to loss of young talents and skills. It could be inferred from the study that 89.8% were not satisfied with their income which suggest that they could give themselves for sex if adverse condition persist. 60.0% sought for additional income from parents, 30.1% from family member while 3.5% got theirs from their sexual partners. 2.5% and 1.3% got additional money from their boyfriends and girlfriends which could prone them to sexual relation in exchange for financial support. In some occasions, young women lacking income-earning opportunities seek support from men, at times trading sex for economic security and where economic conditions is fast declining many of them could find it difficult to cover their school fees and other living expenses, thereby some may acquire a "sugar daddy" or an older men who could offers compensation in cash or in kind in exchange for sexual favours. Engaging in transactional sex or occasional

exchange of sex for money or goods might be instigated by periods of financial hardship or temporary displacement from place of work.

From the study, it could be inferred that poverty and the scarcity of employment opportunities are the principal reasons why young people enter into sex work. The unfortunate reality is that young women often become sex workers because they make more money from "corporate" prostitution than they would in other occupations regardless of tremendous risk of infection.

Recommendations

In addition to offer protection from HIV, condom use should be encouraged as effective method of preventing STIs and to reduce current and future morbidity resulting from these infections. Skills for effective decision-making and problem solving, creative and critical thinking should be included to strengthen the adolescent's communication and interpersonal relationship, raising self-awareness, coping with emotions and causes of stress. National policy to promote young people's rights and reduce their vulnerability to HIV and AIDS should be formulated and adequately implemented to strengthen the capacity of public and private health sector and support facilities to provide youth-friendly services and sustained health promotion activities. Ensuring correct diagnosis and the availability of appropriate medications could reduce infection rates and implementation of VCT services for this population is essential. Educating young people who test positive and convince them to protect themselves and their partners has been shown to be an effective strategy for controlling the epidemic.

Conclusion

Today all young people are at risk for HIV, though that risk is not shared equally among them. It is evident that lack of education, poverty, unemployment, instability of government policy on HIV control and poor socio-economic condition limit young people's choices and vulnerabilities to HIV and other STDs. Social and economic development strategies for poverty reduction are necessary and should be geared towards reducing inequalities, increasing public expenditure on essential services for children and youth (including health and education), and generation of employment opportunities.

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Reference

1. Adegbenga M Sunmola(2002). Reproductive, sexual and contraceptive behaviour of adolescents in niger state, Nigeria. African journal of reproductive health, 6(3): 83-91.
2. Bahar Uddin Bhuiyan, Motiur Rahman, Mohammed Ruhul Amin Miah, ShamsunNahar, Nazrul Islam, Monira Ahmed, Kazi Masihur Rahman, and M. John Albert (1999). Antimicrobial Susceptibilities and Plasmid Contents of *Neisseria gonorrhoeae* Isolates from Commercial Sex Workers in Dhaka, Bangladesh: Emergence of High-Level Resistance to Ciprofloxacin Journal of Clinical Microbiology, April 1999, p. 1130-1136, Vol. 37, No. 4 0095-1137/99.
3. Barbin L, Kemp J, Obunge O (1995). Reproductive tract infections and abortions amongadolescents girls in rural Nigeria. Lancet 345:300-304.
4. Cates JR, Herndon NL, Schulz SL, Darroch JE (2004). Our voices, our lives, our futures:Youth and sexually transmitted diseases Chapel Hill, NC: University of North Carolina Chapel Hill.
5. Centers for Disease Control and Prevention (2001). The Global HIV/AIDS epidemic, MMWR Morb Mortal Wkly Rep 2001; 50:434–9.
6. Chesson HW, Blandford JM, Gift TL, Tao G, Irwin KL (2000). The estimated direct medical cost of sexually transmitted diseases among American youth, 2000. Perspectives on Sexual & Reproductive Health (2004) 36(1):11–19.
7. Cohen ,D (2002). Poverty and HIV\AIDS in sub – Saharan Africa HIV and Development programme of UNDP.
8. Ekott MI(2003). Attitude of parents to their adolescent children's sexuality: A study of health care workers in Calabar. Tropical Journal of Obstetrics and Gynaecology 20(Suppl 1):S22. 2003.
9. Federal Ministry of Health (2003). Situationof Anti-Retroviral drug use in Nigeria. November, 2003.

10. Feyisetan B and Pebley AR (1989). Premature sexuality in urban Nigeria. Stud. Family planning; 20:343-354.
11. Gail B Slap, Lucy Lot, Bin Huang, Comfort A Daniyam, Therese M Zink, Paul A Succop (2003). Sexual behaviour of adolescents in Nigeria: cross sectional survey of secondary school students *BMJ* 2003;326:15.
12. Gottlieb Such Mpangie, Melchizedex T Lehabari (1998). Abortion and unmet need for contraception in Tanzania – The role of male partners in Teenage induced Abortion
13. Lamptey, P.R. and Gayle, H.D (2001). HIV/AIDS Prevention and Care in Resource – Constrained Settings: a handbook for the design and management of programs, Family Health International, Arlington, USA. pp. 69-79.
14. Mackay C.R, Marston W, Duddler L (1992). Altered pattern of T cell migration through lymph nodes and skin following antigen challenge; Churchill Livingstone, London and Network 15th Edition 276-278.
15. Makinwa-Adebusoye P (1992). Sexual behaviour, reproductive knowledge and contraceptive use among young urban Nigerians. *Int Fam Plann Perspect* 1992; 18: 66–70.
16. Morhason-Bello IO, Oladokun A, Enakpene CA, Fabamwo A O, Obisesan KA, Ojengbede OA (2008): Sexual behaviour of in-school adolescents in Ibadan, South-West Nigeria. African Journal of Reproductive Health Vol. 12 No.2 August, 2008.
17. National Action Committee on AIDS (NACA, 2005). 2004 HIV Epidemic Report in Nigeria.
18. Nicholas D, Ladipo OA, Paxuan JM andOtolorin EO: Sexual behaviour, contraceptivepractice and reproductive health amongNigerian Adolescents. Stud. Fam. Plann.(1986) 17(2): 100 – 106.
19. Okonofua F(2000): Adolescent Reproductive Health in Africa: The future challenges. In African Journal of Reproductive Health. (2000). 4(1) 7-9.
20. Olukoya AA and Ferguson DJ(2002): Adolescent sexual and Reproductive Health and development. In: Archives of Ibadan Medicine vol 3, No1: 22 – 27 (April 2002).
21. Oyefara JL (2007). Food insecurity, HIV/AIDS pandemic, and sexual behaviour of commercial sex workers in lagosmetropolis, Nigeria. Journal of Social Aspects of HIV/AIDS VOL. 4 NO. 2 AUGUST 2007
22. Stephen P. Borgatti (1999). Element of Research, September 1996.
23. UNAIDS (2006): 2005 Report on the Global AIDS Epidemic.
24. WHO Geneva (2001); World Health Organisation. Regional office for Africa. Adolescent health: A strategy for the African Region. AFR/R151/10 Rev. 1 Brazzaville (2001).
25. WHO (2001). Adolescent health: A strategy for the African Region. AFR/R151/10 Rev. 1 Brazzaville (2001).

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