

---

**INFLUENCE OF CURRICULUM CONTENT OF HEALTH EDUCATION ON  
STUDENTS' HEALTH RISK BEHAVIOR IN SELECTED PRIVATE SCHOOLS IN  
IBADAN, OYO STATE, NIGERIA**

**Funmilola T. Odunyemi, RN, RM, BNSc**

*Department of Nursing, University of Ibadan Nigeria*

---

**ABSTRACT:** *Background: Health risk behaviors remain high among in-school adolescents despite the effort of Nigeria Federal Ministry of Education to ensure that aspect of health risk behavior are captured and taught within the curriculum in order to promote health. Methods: This cross sectional survey was conducted among randomly selected two hundred and five (205) students from two private secondary schools in Ibadan North LGA Oyo state, Nigeria. A structured questionnaire was used to assess respondents' level of knowledge regarding content of health education curriculum, and common health risk behavior practice by the adolescents. Results: More than average of the respondent (54.1%) had basic knowledge on the content of health education curriculum. Moreover, health risk behavior remain high among in-school adolescents, as 70.2% of respondents were involved in substance use, while low knowledge on cigarette smoking is significantly associated to adolescents involvement in cigarette smoking <math>p=0.05</math>. Lack of school health teachers at the senior secondary classes as being implicated as a major factor influencing adolescents' knowledge and practice of health risk behavior. Conclusion: Health education efforts aimed at improving adolescents' health behavior depends on implementation of the curriculum and improving instructional materials, not only at the junior secondary school class but as well at the senior secondary school level.*

**KEYWORD;** *Adolescents' health risk behavior, Private Secondary schools*

---

## **INTRODUCTION**

Health risk behaviors among adolescents have been reported to be increasing worldwide. An estimated 1.3 million adolescent death was reported in 2012 mostly from preventable or treatable causes such as early pregnancy, violence, Alcohol and drugs, tobacco use etc (WHO 2014). Psychosocial development in adolescents is a challenging aspect in the developmental trajectory for both the adolescent and the society. It is a crisis period which determines the success or failure of transition to adulthood. Psychosocial stages of development as discussed by (Erikson in McLeod 2013) describe specific tasks which must be accomplished, without which confusion and developmental crises results. Of particular interest to this discourse is the stage of identity versus role confusion, which occurs between ages 12 to 20 years.

Accordingly, the task at this phase is successful integration of personal identity, with resulting quest for freedom of expression and association. Okanlawon (2015) noted that the struggle for identity tends to create tension as they attempt to gain independence from their parents, a situation which Erickson describes as identity crisis. The onus then lies on the society, home and school to support the adolescents in the process of choosing appropriate behavioral patterns that will enhance effective transition to adulthood. The crave for social recognition is strongly attributed to the risk–

taking behaviors commonly observed among adolescents such as initiation of sexual activity, risky sexual behaviour, alcohol, smoking etc. (Graham, Mailyn & Baily 2000)

## LITERATURE/THEORETICAL UNDERPINNING

Educational Institution, often recognized as the secondary socializing agent has a strong role in building positive behavior among in-school adolescent, it is an avenue with greater opportunity to imbibe social norms and morals to the adolescents, effort to achieved this is captured and taught within health education curriculum in secondary schools. The education system in Nigeria require the recipient to spend six years(6) in primary schools, three(3)years in Junior secondary School, three(3) in senior secondary school and minimum of four(4)years in tertiary institution completing the 6-3-3-4 educational system in Nigeria. As a means of enriching the educational system curriculum, a structure of 9-year Basic Education Curriculum was developed in 2012 to ensure the curriculum are more practical, relevant and interesting to young learner, thus enhance a positive change in behavior that promote health (Igbokwe 2015). This objective was captured in Physical & Health Education (PHE) and Health education (HE) subjects taught during Junior and Secondary schools in Nigeria respectively.

The Senior Secondary Education Curriculum (SSEC) was developed to consolidate the educational gains of the 9- year Basic Education Curriculum which constitute four major specialized field of study viz; Science (include health education), Humanities, Technology, and Business (Nigeria Educational Research & Development Council, 2014). The present health education curriculum has ten instructional units, which are to be implemented by senior secondary schools in Nigeria. The ten units include: Theme 1: History and development of health education, Theme 2: Human Anatomy and physiology, Theme 3: Personal health, Theme 4: Community health, Theme 5: Environmental health, Theme 6: Food and Nutrition, Theme 7: Safety education & first Aid, Theme 8: Communicable and Non-communicable disease, Theme 9: Family life and Human sexual education and Theme 10: Consumer health education (NERDC, 2014).

Health education remains an integral component of health promotion and illness prevention, which could be provided by a professional or individual with in-depth knowledge in a specific area of health concern. Therefore, school health education involves all activities and services offered by, or in association with schools which are designed to promote students' physical, emotional and social development. This involves teaching students about health and health related behaviors. The school health education curriculum emphasis the principle of healthy living for students to enhance positive health behavior that will effectively reduce the prevalence of health risk behavior among students. The evaluation of the above listed curriculum content is expected to bring a positive health behavior among adolescent and thus reduce the incidence of health risk behavior if well implemented.

However, health risk behavior remain high among adolescent (WHO 2014). High risk behaviors are behaviors that can have adverse effects on the overall development and well-being of youth, or that might prevent them from future successes and development. This includes behaviors that cause immediate physical injury (e.g. fighting), as well as behaviors with cumulative negative effects (e.g. substance use, Cigarette use & Risky sexual behavior). A study conducted by Guzman and Bosch (2007) in Nebraska-Lincoln reported that 26 percent of youth nationwide and 23 percent of teens are alcohol drinker and cigarette smokers respectively. Likewise a study in Nigeria by

(Oshodi, Aina and Onajola 2010), shows prevalence of substance use, such as kolanut, coffees alcohol and tobacco use among student. Engagement in unhealthy sexual behavior is considered to be another group of high-risk behaviors for adolescent. This has potential physical consequences like STDs, teenage pregnancy and socio-emotional risks they present with and majority of the adolescent learn about sex through the media and not the school health curriculum (Chukwunonye, Chisom., Achunam, Fidelia, Seyifumi and Dabeluchukwu, 2015). In Nigeria, Envuladu (2013) pointed out the prevalence of risky sexual behavior among teenagers such as premarital sex, early sexual initiation and unprotected sex which may exposed them to STIs and all its related consequences, this was also supported by (Onyemuchara, Ezekwe, Oshi and Emohumadu, 2011). Despite the consequences of teenage pregnancy that are eminent, students still involved in risky sexual behavior (Bamidele, 2014).

Drop (2011) report that the smoking prevalence among adolescents and young adults in Nigeria is on the increase. Adolescent, especially in the south-south Nigeria have easy access to cigarette since they are involved in purchasing it for the adult, some even light it up for them. These factor increase children accessibility to cigarette smoking (Catherine, 2014). Health education curriculum content taught in various schools is expected to bring a positive change in-school adolescent health behavior and reduction in health risk behavior, in contrast, a study conducted by Ebirim, Amadi, Abanobi and Iloh (2014) reported poor rate at which student imbibe the instruction and implement health information, as a result of lack of health education teachers, lack of relevant health education textbooks, pamphlets and posters (Idehen & Oshodin, 2008). Likewise, in a study done among Nigerian secondary schools by Fabiyi (1991) reported the effect of few resources and little time devoted to health education curriculum as a major factor contributing to this knowledge-practice gap.

Poor parent-child communication, family structure, low parental monitoring and a lack of family support were other factors implicated in risky health behavior among adolescent (Moses, Lokoyi & Falola 2012).

Theoretically, human action is guided by three kinds of consideration according to the theory of planned Behavior by Icek and Ajzen 2006 viz;

(1) Perceived behavior control, this component represents a person's belief about his or her ability to perform the behavior in question, the likely outcome of the behavior and the evaluation of those outcomes (behavioral belief)

(2) Belief about normative expectation of others and

(3) Motivation to comply with this expectation (normative belief)

In particular, the model underscores the importance of assessing the extent to which target audiences possess the information needed to carry out a promoted action; the skill, resources and opportunities to act and the support of others (Normative belief). In their respective aggregates, behavioral belief produces a favorable and unfavorable attitude towards the behavior, normative belief results in perceived social pressure or subjective norm and the greater the perceived control the stronger should be the person's intention to perform the behavior in question. Intention is thus assumed to be the immediate antecedent of behavior. The extent to which adolescent (in-school adolescents) possess health information and skills through the content of health education curriculum or health information from parents, peers, and believe about outcome of health risk

behavior produce either favorable or unfavorable attitude or intention towards the implementation of such health information. Thus students who are exposed to adequate and correct health education are expected to have a demonstrable change in behavior due to the influence of the course on their intention to health behavior.

## METHODOLOGY

This descriptive cross sectional study was conducted among adolescents in private secondary schools in Ibadan North Local Government, Oyo State, Nigeria. Ibadan North Local is located approximately on longitude 8.5 degrees east of the Greenwich Meridian and latitude 7.23 north of the equator. According to 2006 population census it has a population of 306,795. A simple random sampling technique was used in the selection of the schools, the sample frame of the private secondary school in Ibadan North Local Government was obtained and a computer-generated table of random numbers was used to select two schools. Participants were randomly selected in each school to participate in this study.

The study population consisted of male and female adolescent in the senior classes. A total of 207 students were statistically sampled randomly from the senior classes and proportionately allocated to each school [private school 1(PS1) & private school two (PS2)]

Total number of participants in PS2 was = 220

Total number=621

PS1 =  $401/621 \times 207 = 134$

PS2 =  $220/621 \times 207 = 73$

Total =  $134+73 = 207$

A structured questionnaire was developed from literature review, consist of 38 items. The section A of the questionnaires consists of 7 items for the socio demographic data. Section B; contain 4 items used to assess the source of health information of students. Section C, consist 19 items questions constructed to determine knowledge on content of health education curriculum. Section D, consist 20 items questions about students involvement in health risk behavior like cigarette, tobacco use, substance use, personal hygiene and sexual behavior. Section E, consist 5 items question on factors influencing health knowledge; this was constructed using a Likert scale.

Ethical issues were considered from the school institution to personal consent of participants. Incorrect response was scored 0, a 'not sure' response was awarded 1 mark, while each correct response was scored 2marks. A total obtainable score was 38. Knowledge was categorized into two levels based on the scores, thus Low(<50%), high(>50%)

**RESULT AND FINDINGS****Table 1: Socio-demographic characteristics of the respondents**

VARIABLES	FREQUENCY	PERCENTAGE%
1. Age		
10-12	4	2.0
13-14	126	61.4
15-16	58	28.3
No response	17	8.3
2. Class of Study		
SSS 1	180	87.8
SSS 2	25	12.2
3. Religion		
Christianity	159	77.6
Islam	89	19.0
Total	198	96.6
No response	7	3.4
4. Sex		
Female	128	62.4
Male	77	37.5
5. Family Status		
Monogamous	129	62.9
Polygamous	28	76.6
Divorced	17	8.3
Single Parent	31	15.1

N = 205

In table 1, mean age of respondents was 14 years (SD= 1.9) range was 4. The result shows that the highest frequency 97 (47.3%) of respondents are 14 years. It shows that the respondents were predominately Christians 77.6%. 129(62.9%) were product of monogamous family while 17(8.3%) were from divorced family.

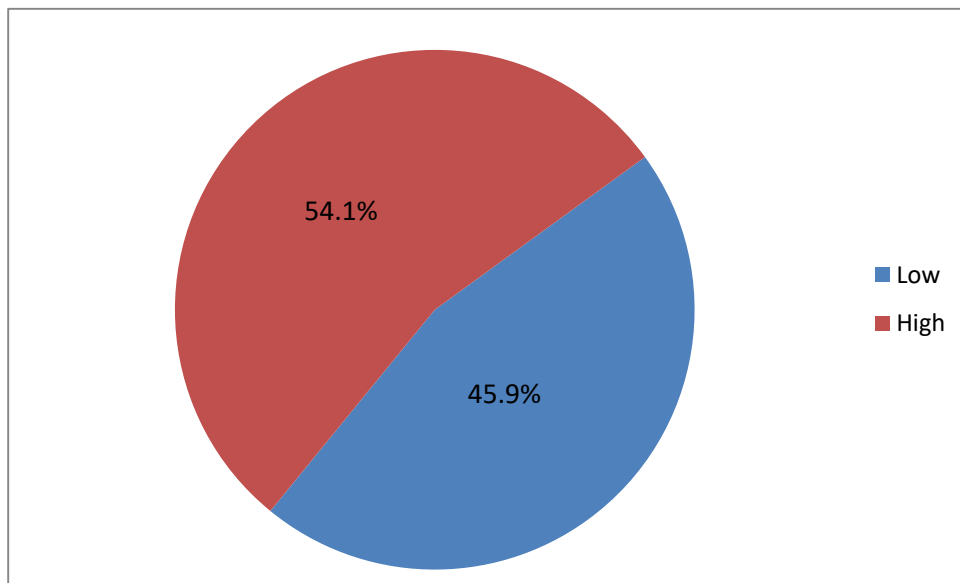
**Table 2: Level of Knowledge on Content of Health Education Curriculum**

S/N	VARIABLES	YES	%
1	Disease prevention	46	22.4
2	Detection of illness	4	2.0
3	Sex Education and family life	15	7.3
4	Prevention of health risk behaviors e.g STIs ,HIV	11	5.4
5	Categories of drugs and consequences of drug abuse	18	2.7
6	All of the above	111	54.1
	<b>TOTAL</b>	<b>205</b>	<b>100</b>
7	Health risk behavior are; Use of tobacco/cigarette	22	10.7
8	Substance abuse and alcohol consumption	38	18.5

9	Sexual risk behavior	19	9.3
10	Violence	7	3.4
11	Risky physical activity	8	3.9
12	Lack of personal and environmental hygiene	12	5.9
13	All of the above	54	26.9
14	No response	45	22.0
15	None of the above	0	0
	<b>TOTAL</b>	<b>205</b>	<b>100</b>

This table shows that 54.1% of respondents had the basic knowledge of health education curriculum content. This implies that the larger percentage of respondents had good knowledge on what health education entails.

**Fig 1**



Summary of Level of knowledge on content of Health Education curriculum  
The above chart revealed that 111 (54.1%) of respondent had high knowledge on what education entails while 94 (45.9%) had low knowledge.

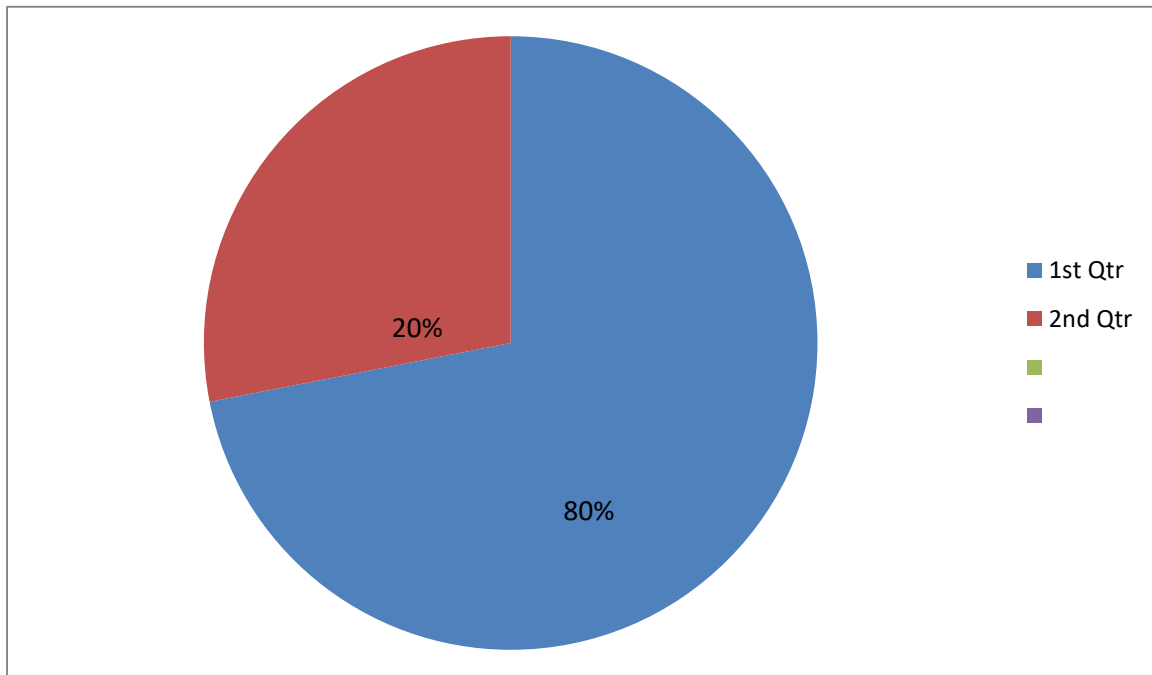


Fig 2: Distribution of Availability Health Education subject in Schools.

80% of respondent indicated that health education was a subject being taught

**Table 3 : The Common Health risk Behaviors Practice among Respondents**

Variables	Yes		No		% Total	
	Freq	%	Freq	%		
Have you ever smoke cigarette	24	11.7	173	84.4	197	100
Have you ever drank alcohol	74	36.1	100	48.8	174	100
Have you ever take substance like kolanut, coffee and sleeping tablets	144	70.2	30	14.6	173	100
Have you ever being infected with toilet disease	26	12.7	128	62.4	153	100
Have you ever involve in sexual intercourse	28	14.1	176	85.9	204	100

The above table shows different health risk behavior among the respondents with highest involvement in substance use 70.2%

**Table4**

Variables	SA	A	D	SD	UD	No response
	Freq	Freq	Freq	Freq	Freq	Freq
Lack of school health Teacher	88 (42.7%)	77 (37.5%)	15 (2.3%)	7 (3.4%)	11 (5.4%)	7 (3.4%)
Lack of school nurse	43 (21%)	6.5 (31.7%)	44 (21.5%)	23 11.2%	23 11.2%	7 (3.4%)
Inadequate health textbook	74 (36.1%)	49 (23.9%)	41 (20.0%)	15 7.3%	19 (9.3%)	7 (3.4%)
Belief/health information from parents	34 (16.6%)	12 (5.9%)	78 (38.0%)	55 (26.8%)	19 (9.3%)	7 (3.4%)
Peer pressure	14 (6.8%)	4 (2.0%)	54 (26.3%)	115 (56.1%)	11 (5.4%)	7 (3.4%)

The above table revealed that inadequate health textbooks and school health Teachers 36.1% and 42.9% respectively influence students' health knowledge.

### Hypothesis Testing

Hypothesis 1; There is no significant relationship between level of student's health knowledge and involvement in health risk behavior.

**Table 5: Factors Influencing Student's Health Education Knowledge.**

Level of knowledge	Have you ever drank alcohol		Total
	Yes	No	
Low	37	46	83
	44.6%	55.4%	100%
High	37	54	91
	40.7%	59.3%	100%
<b>Total</b>	<b>74</b>	<b>100</b>	<b>174</b>
	<b>42.5%</b>	<b>57.5%</b>	<b>100%</b>

The table shows that of 107 participants who had *high* knowledge of cigarette smoking, some were still involved cigarette smoking. Using chi-square test shows the significant value  $.04 < p=0.05$ .

Hypothesis 2; There is no significant relationship between family status and cigarette smoking in-school adolescents



## Cross tabulation of relationship between sex and multiple sexual partners

	Have you	Ever smoke				
Family Status	Yes	%	No	%	Total	%
Monogamous	15	11.6	114	86.4	129	100
Polygamous	-	-	24	100	24	100
Divorce	3	42.9	4	57.1	7	100
Single Parent	3	13.0	20	87.0	23	100
Missing	13	59.0	9	40.9	22	100
Total	34	16.6	171	83.4	205	100

The table shows out of 129 participant were from monogamous family, 15(11.6%) had smoke cigarette while 114 never did. Also, out of 24 participants from polygamous family, none have ever smoke cigarette. Significant value  $0.01, X^2 = 9.956, df=3, p > 0.005$

## DISCUSSIONS OF FINDINGS

This study was carried out to examine influence of health education curriculum content on students' health risk behavior & factors influencing such behaviors. It also answered the question whether health knowledge acquired by the students provide demonstrated changes in health behavior and if not what are the intervening variables influencing adolescents health behavior. The result shows that the mean age (14yrs) of the respondents fall between early and middle age adolescents who are exposed to challenges of health risk behavior, as one-quarter of respondent in this present study, had first sexual intercourse before the age of 14. This corresponds to Erikson in McLeod 2013 that described that adolescent at this stage have special characteristics of exploration and discovery of identity with resulting quest for freedom and association. Consequent upon the analysis of data, 80% of the respondents are exposed to health education curriculum in their various schools at the Junior class level (JSS1-3) which is often refer to as Physical and Health Education (PHE), while this was quiet different at the senior class level as most respondents indicated lack of school health teacher at this level, This is in line with the report of Idehen & Oshodi (2008) in Nigeria who reported that health education is poorly carried out in many part of the country. Moreover, there must not only be reflection of the subject distribution within the schools but rather the implementation of the curriculum content to enhance increase knowledge that will promote healthy behavior among students. The proportion of respondents' with good understanding of health education curriculum content was slightly higher in comparism with those with little knowledge on what the health education entails. However, this level of knowledge (54.1%), does not appear to influence positive health behavior among the adolescent, since adolescent from this present study were involved in health risk behavior such as early sexual initiation (26.8%), Alcohol (36.1%), substance use (70.2%) this agree with similar findings reported by Graham, Duff, Marilyn & Bailey (2000) and Onyemuchara, Ezekwe, Oshi & Emohumadu (2011) that substance use, premarital sex, early sexual initiation and unprotected sex was common among in-school female adolescent in Nigeria.

The conceptual framework of this study indicated that there were some other intervening variables that could influence students' intention to carry out a health behavior e.g peer pressure, parental instructions, lack of school health nurse and societal norms. Findings from this study, revealed lack

of school health teachers, lack school health Nurse and inadequate health textbook account for poor implementation of the knowledge acquire from the health education curriculum taught in the Junior class level at various schools, this support the conclusion by Idehen & Oshodi 2008 that inadequate health education textbooks and pamphlet for teaching of health education in schools in Nigeria are major factors of concern in implementation of health education subject.

The study also sought to establish an association between socio demographic data and involvement in health risk behavior. Participant in this study were involved in the use of different substance like kolanut, coffee and sleeping tablet, at age 14 and 15 years respectively, male participant are more involved in smoking and alcohol to their female counterpart, this agrees with observation of study carried out by Catherine (2014) that adolescent in South-South Nigeria have access to cigarette which indirectly contribute to their involvement in smoking. The knowledge and involvement in substances abuse (coffee, kolanut, and sleeping tablet) in this study revealed that over half of the participants were involved in substance listed above despite high knowledge on the consequences involved. It corroborates Oshodi, et.al (2010) who reported prevalence rate (85.7%) of substance use among students. There is significant relationship between health education knowledge and involvement in cigarette smoking in this study, it agrees with Ebirim et al 2014 that poor knowledge of health effects of smoking was statistically associated with cigarette smoking while knowledge of health problems associated with smoking proved to be the major reason for not smoking by never smoked adolescents, which means that awareness creation on health problems associated with cigarette smoking through health education in schools can be a positive tool for adolescents health promotion.

## **IMPLICATION TO RESEARCH AND PRACTICE**

The implication of the findings in this study is that health risk behavior among in-school adolescent do not only originate from various homes but rather related to inadequate handling and implementation of health education curriculum at the senior secondary school which has contributed to the awful health behavior of the adolescent. Therefore, if this subject is well implemented as one of the major course to be taught at senior secondary level in Nigeria, it will reduce the incidence of health risk behavior among in-school adolescents level. Similar study can be conducted among the public schools within Nigeria to assess the effect of health education curriculum among the students.

## **CONCLUSION**

There remain the prevalence of cigarette smoking, risky sexual behavior and substance use among adolescent, in spite their knowledge on the content of the school health curriculum. The factors associated with this are family background, inadequate teaching in schools, lack of health education textbooks, lack of school health Nurse and peer pressure. Therefore, combined effort of the parent, school authority, health sector and the government is needed to salvage the future of this nation from devouring effect of risky behavior during adolescent.

**REFERENCES**

- Bamidele J, Abodurin O.L& Adebimpe W.O(2014) Sexual behavior and risk of HIV/AIDS among Adolescent in public secondary school in Oshogbo Osun State Nigeria *International journal of Adolescent health*.2014 vol 12 no1 [Pubmed]
- Catherine O.E.(2014)An exploratory study of the socio-cultural risk influence for cigarette smoking among southern Nigeria youth. *BMC publichealth*14;1204 Available;<http://link.springer.com/article/10.1186%252F1471-2458-14-1204> accessed August 10<sup>th</sup> 2015
- Center for Disease Control and Prevention(2015 )National Health Education Standards *CDC A-Z index Healthy School* 2015 Available;[ww.cdc.gov/healthyschools/sher/standards/index.htm](http://www.cdc.gov/healthyschools/sher/standards/index.htm) accessed August 21th 2015
- Chukwunonye A.E,ChisomI.I, Achunam N.S,Fidelia E.O, Seyifumi B.F, DabeluchukwuA.E, et al (2015) Sexual Behaviour Among Senior Secondary School Students in Nnewi North and Nnewi South Local Government Areas of Anambra State, South-Eastern Nigeria, *European Journal of Preventive Medicine*.3(2)26-33.Available;<http://www.sciencepublishinggroup.com/>accessed September 9th 2015.
- Ebirim C.I, Amadi A.N, Abanobi O.C and Iloh G.U (2014) The Prevalence of Cigarette Smoking and Knowledge of Its Health Implications among Adolescents in Owerri, South-Eastern Nigeria *Health*.:6(12).Available: <http://www.scirp.org/journal/> accessed October 6th 2015
- Davis D & Clifton A Psychosocial Theory: Erikson.(1995) Retrieved 24/9/15 from [ttp://www.businessballs.com/erik\\_erikson\\_psychosocial\\_theory.htm](http://www.businessballs.com/erik_erikson_psychosocial_theory.htm) 2
- Drop J (2011) Nigeria Tobacco, situation Analysis Tobacco control in Africa. People, politic and policies.London, England Anthem press.:201-218.Avialable <http://www.idrc.ca/EN/Resources/Publications/openebooks/510-6/index.html>
- Edim, M. E,Ogabor, J. O.& Odok, E (2014) Adaptability of physical education curriculum in Nigeria: The way forward. *International Journal of Capacity Building in Education and Management (IJCBE)* vol 2 no;2 <http://www.rcmss.com>. ISSN: 2350-2312 (Online) ISSN: 2346-7231 (Print) 2014, 2(3):71-76 <http://rcmss.com/2014/IJCBE-VO12-No2/ADAPTABILITY%2520OF%2520PHYSICAL%2520EDUCATI>
- Envuladu E.A, Agbo H.A, Ohize V.A, & Zoakah A.I(2013) Social factors associated with teenage sexual health behavior; A risk factor for STI/HIV among female Adolescent in a rural community in Plateaus state Nigeria *.Journal of medical Research*. 2(2) 00117-0122
- Fabiya A.K,(1991) Blumenthal DS Health education in Nigerian secondary schools *Journal Community Health*.;16 (3):151-8.Available: [ww.ncbi.nlm.nih.gov/pubmed/1860967](http://www.ncbi.nlm.nih.gov/pubmed/1860967) accessed September 23th 2015
- Graham M, Duff E, Marilyn &Bailey (2000) Risk factors for sexually transmitted diseases among female Adolescents *West Indian Medical Journal*. Available: <http://www.bn/wxishd.exe/>

- Guzma M,& Bosh K.R (2007)High risk behavior among youth.. Historical materials from University of Nebraska-Lincoln Extension.Paper 4099.Available:[http://digitalcommuns.unt.edu/extension htl/4099](http://digitalcommuns.unt.edu/extension%20html/4099).
- Ice & Azen I(2006) Brief description of theory of planned behavior. Available: <http://www.unesco.org/education>.
- Idehen C.O &Oshodi O.G(2008)Factors Affecting health instruction in secondary school in Edo state.EthnoMed. 2(1):61-66.Available: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4289242>
- Igbokwe, Charity O(2015) "Recent Curriculum Reforms at the Basic Education Level in Nigeria Aimed at Catching Them Young to Create Change." American Journal of Educational Research:3(1) 31-37.Available: <http://pubs.sciepub.com/education/3/1/7/> accessed September 23th 2015
- John C, Okolo S.N & Ischeic C(2014) Sexual risk behavior and HIV Infection among Adolescent in secondary school in Jos. Niger journal of pediatric. 41(2);86-88
- Moses M.O, Lokoyi O, Falola K.O(2012) Health risk behavior factors among secondary school students; A challenge of life expectancy .Greener Journal of medical science.: 2(2)033-037
- McLeod S.A (2013) Erick-Erikson. Available:[www.simplypsychology.org/Erik-Erikson.html](http://www.simplypsychology.org/Erik-Erikson.html)
- Nigeria Educational Research Developmental Council (2012) Physiology & rationale of the new secondary school curriculum Book published under PPP Arrangement between NERDC &some publisher. Available: <http://pubs.sciepub.com/education/3/1/7/Table/5.png> accessed October 10<sup>th</sup> 2015
- Nigeria Educational Research Developmental Council (2014) e-Curriculum; The new curriculum. Available: <http://nerdc.org.ng/curriculum/curriculumView.aspx> accessed October 10th 2015
- Nigeria Population Commission (2009) Federal Republic of Nigeria 2006 population and housing census .IHSN Survey catalog Available; [www.catalog.ihnsn.org/index.php/.../48521](http://www.catalog.ihnsn.org/index.php/.../48521) accessed 25th October 2015
- Okanlawon F.O (2015) Emerging issues in Nursing: Understanding the Bio-Psychosocial Issues and Health challenges in the Life of Adolescents.Ibadan University press .Three crown Building, Jericho, Ibadan.pg 130-141
- Onyemuchara IL, Ezekwe S.C, Oshi SN &Emohumadu (2011)Sources of sex information and its effect on sexual practice among in- school female Adolescent in Osisina Ngwa LGA. South East Nigeria Journal of pediatric *Adolescent Gynecology*:24(5)294-9. Available: [www.ncbi.nlm.nih.gov](http://www.ncbi.nlm.nih.gov) accessed July4th 2015
- Oshodi O.Y, Aina O.F, & Onajola A.T (2010) Substance use among secondary school in urban setting in Nigeria; Prevalence and Associated factors. African Journal of psychiatry 13(1) 52-57

Slap G, Lot L, Hunnay B, Danyan C, Zuk & Succop P (2003) Sexual behavior of Adolescent in Nigeria; cross sectional study of secondary school student. Available: <http://www.ncbi.nlm.nih.gov/pubmed/18609767>

World Health Organization (2015) Adolescent development media center. [www.who.int/maternal-child-adolescent/topic/adolescent/development](http://www.who.int/maternal-child-adolescent/topic/adolescent/development).

World Health Organization (2014) Adolescent; health risks and solution Media center fact sheet Available: [www.who.int/media-center/adolescent; health risks and solution](http://www.who.int/media-center/adolescent-health-risks-and-solutions)