# PSYCHOSOCIAL AND SOCIO-CULTURAL FACTORS ASSOCIATED WITH NON-UTILIZATION OF CONTRACEPTIVES AMONG ADOLESCENTS IN NSUKKA LOCAL GOVERNMENT AREA OF ENUGU STATE

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#### **Abstract**

The purpose of the study was to investigate the psychosocial and socio-cultural factors associated with non-utilization of modern contraceptives among adolescents in Nsukka LGA of Enugu state. Specifically, four research questions and two hypotheses were formulated to guide the study. The study adopted the descriptive research design. The multi-staged sampling procedure using simple random sampling technique of balloting without replacement was used to select 540 adolescents in Nsukka LGA. The researchers' self-develop questionnaire was used for data collection. Data collected were analysed using percentages to answer the four research questions, and chi-square statistics was used to test the two null hypotheses at .05 level of significance. The results showed that psychosocial and socio-cultural factors were associated with non-utilization of modern contraceptives among adolescents in Nsukka LGA, and that educational qualification influenced the responses of the respondents on the psychosocial and socio-cultural factors associated with non-utilization of modern contraceptives among adolescents in Nsukka. Based on the findings, the researchers recommended among other things that, government and non-governmental organizations should establish youth-friendly clinics to provide separate and friendly reproductive health services for adolescents.

Key words: Psychosocial, Socio-cultural, Determinants, Contraceptives, Adolescents

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#### Introduction

Unwanted pregnancies and Sexually Transmitted Infections (STIs) among adolescents often result from lack of contraceptive use. Otoide, Oronsaye and Okonofua (2009) stated that Nigerian adolescents generally have low levels of contraceptive use. Teenage pregnancy, which refers to pregnancies that occur in young people below 19 years of age, in most cases are unwanted, unplanned and out of wedlock (Nwankwo, 2011) The author further stated that teenage pregnancies occur as a result of inadequate information about reproductive health and contraception. World Health Organization-WHO (2003) reported that 1,000,000 conceptions and 350,000 sexually transmitted infections occur each day among adolescents, about 50 per cent of the conceptions were unplanned and about 25 per cent were definitely unwanted, resulting in about 150,000 induced abortions and 500 deaths every day. These imply that adolescents are sexually active and there is low utilization of contraceptive use among them.

Contraception refers to intentional prevention of pregnancy through the use of various drugs, devices or surgical procedures. Samuel (2010) defined contraception as the use of various procedures directed at impeding conception, These various drugs, devices or procedures are referred to as

contraceptives. Contraceptive could be traditional methods, used by our forefathers to prevent pregnancy; natural methods, which are methods that do not violate or interfere with the body mechanisms; and modern or artificial methods, which involve the use of orthodox drugs, devices or surgical procedure to prevent conception. Modern methods of contraception according to Adesokan (2010) refer to methods of contraception that either interfere with the body system or block the spermatozoa from entering the womb. There are different methods of modern contraceptives.

Modern contraceptive methods include hormonals (oral contraceptive pills, injectables, and implants), barriers methods (condoms both male and female, diaphgram, and spermicidal (chemical barrier), intrauterine contraceptive devices (IUCDs), and voluntary surgical contraception or sterilization (vasectomy for males and tubal ligation for females). These methods have been found to be very effective in preventing unwanted pregnancy and some are meant for both the young and old. Therefore, adolescents who cannot practise abstinence or use natural methods effectively, should access modern contraceptive services.

It has been observed that adolescents do not utilize contraceptives as a result of certain factors like social, cultural, psychological, and educational, among others. Araoye, Fakeye and Jolayemi (1998) opined that the use of contraceptive methods among adolescents is significantly different from that of older married couples, and it is influenced by educational, developmental, social, and psychological factors. Contraceptive usage by adolescents according to Lebes, Mapputle, Ranathuba and Khoza (2013) has been perceived to be influenced by various factors, including, socio-economic status, knowledge about contraceptives, attitudes about issues related to contraceptives, residential area, educational status, counseling received about contraceptives, attitude of contraceptive providers, cultural values, beliefs and norms.

Psychosocial refer to interrelationship between a person and his or her environment. Psychosocial factor are psychological, organizational and personal stressors that can affect one's health. These factors are associated with the use of modern contraceptives by adolescents. Psychosocial factors that are associated with non-utilization of modern contraceptives include fear of suspicion and sharing their problem with parents or adults they know. Accordingly, Kamou (2006) opined that sharing services with adults hinder adolescents' access and use of reproductive services including family planning services. Hence, adolescents are likely to avoid services if they feel that the services will expose them to meeting their parents, respected friends and other adults

that might not support them. Other psychosocial factors according to Kamau include fear to be served by familiar health providers, fear of parental involvement and breach of confidentiality. Communication barrier is another social factor affecting level of contraceptive use among adolescents. Poor communication and lack of openness among the health providers can lead to low level utilization of modern contraceptives by adolescents. This is due to cultural influence.

Some cultures frown at open discussion of sexual matters and adolescent's use of contraceptives. Unmarried adolescents culturally (especially in Igbo culture) are not supposed to indulge in premarital sexual intercourse and therefore, should not even talk about contraceptives. The implication of this is that even those who could not abide by this cultural expectation feel shy and ashamed to seek or access contraceptive information or services. Amuyunzu and Nyamongo (2005) observed that adolescents feel shy and are ashamed to obtain sexual and reproductive health services. Many women especially adolescent girls feel it is their role to remain chaste with little knowledge about sex and contraception. They do not feel comfortable carrying, purchasing or owing contraceptive pills and condoms (Marston & King, 2006). The authors further stated that the perception of sex as an unforeseen romance makes it acceptable for women not to plan for sexual intercourse and not to be prepared with contraception use.

Individual's educational level influences his or her level of utilization of health services. Level of education of adolescents seems to influence their level of utilization of modern contraceptives. Mbambo (2009) opined that person's level of education affects his or her ability to make informed decisions and could impact negatively on their choices and use of service. Moreover, the fact that most adolescents often prefer seeking sexual health information from their peer group, make them get inaccurate information about modern methods of contraception. Such information may hinder the use of contraception.

Adolescents are young people between the ages of transition from childhood to adulthood. WHO (2001) defined adolescents as young people between the ages of 10 and 19 years. Adolescents according to Federal Ministry of Health (1995) cover young people between 10 and 24 years. This group of people goes through developmental changes that expose them to unhealthy behaviours like unsafe sex and its consequences which include teenage pregnancy and STIs. Teenage pregnancy and STIs could be prevented among adolescents through modern contraceptives especially barriers methods.

The problem here is that adolescents do not freely access and use methods of contraception due to one reason or the other. Monjok, Smesry, Ekabua and Essien (2010) stated that the current prevalence rate for contraceptive use in Nigeria is approximately 11-13 per cent. They further stated that this rate is very low in spite of the high rate of sexual activity and widespread awareness of the various contraceptive methods among Nigerian adolescents. There is ample research evidence identifying the various factors that contribute to the low prevalence of modern contraceptive use in Nigeria. The present study therefore, sought to find out the determinants of non-utilization of modern contraceptives among adolescents in Nsukka LGA of Enugu State. Nsukka Local Government Area (LGA) is one of the seventeen LGAs in Enugu State. It has some socio-cultural norms and belief especially with regards to adolescents' sexuality and the use of modern contraceptive methods. Adolescents, who use condom or oral pills for instance, are perceived as prostitutes. There is also a belief that adolescent girls who use contraceptives are likely to be infertile later. These factors might influence their level of utilization of modern contraceptives. The following research questions and hypotheses were formulated to guide the study.

### Research Questions

1. What are the psychosocial factors associated with non-utilization of modern contraceptives among adolescents in

#### Nsukka LGA?

- 2. What are the socio-cultural factors associated with non-utilization of modern contraceptives among adolescents in Nsukka LGA?
- 3. What are the psychological factors associated with non-utilization of modern contraceptives among the adolescents based on Level of Education?
- 4. What are the socio-cultural factors associated with non-utilization of modern contraceptives among the adolescents based on Level of Education?

#### **Hypotheses**

- H<sub>1</sub> There is no significant difference in the psychosocial factors associated with non-utilization of modern contraceptives based on level of education
- H<sub>2</sub> There is no significant difference on the socio-cultural factors associated with non-utilization of modern contraception among the adolescents based on level of education

#### **Methods:**

The study adopted the descriptive survey research design. The descriptive survey research design according to Nworgu (2006) is a research design that permits the description of the situation in the natural setting. The population for the study consisted of all

adolescents in Nsukka LGA. The multistage sampling procedure employing simple random sampling technique of balloting without replacement was used to select 45 adolescents each from 12 communities in Nsukka LGA. This gave a total of 540 adolescents used for the study. The instrument for data collection was researchers' structured questionnaire. The validity of the instrument was established through the judgment of three experts from the Department of Health and Physical Education University of Nigeria Nsukka. The 540 copies of the validated instrument were administered by the researchers and five research assistants to the respondents through the community youth leaders. The copies of the administered questionnaire were collected later with a return rate of 96 per cent (518 copies were returned).

Data collected were cross-checked for completeness of responses and were analyzed using frequency tables and percentages. Igbokwe (2008) criteria for determining determinants of non-acceptance of family planning practices were adopted to ascertain determinants of non-utilization of modern contraceptive. A score of less than 50 per cent was considered "not a determinant" (NAD) while a score of 50 per cent and above was considered "determinants" (D) of non-utilization of modern contraception. Chisquare statistic was used to test the null hypotheses.

## Results Table 1

Psychosocial Factors Associated with Non-Utilization of Modern Contraceptives (N = 518)

| Iter | n   | F   | %    | Decision |
|------|---|-----|------|----------|
| 1.   | Fear of sharing sexual health problems with parents | 257 | 49.5 | NAD      |
| 2.   | Fear of sharing services with adults                | 412 | 79.5 | D        |
| 3.   | Fear of being served by familiar health provider    | 319 | 61.6 | D        |
| 4.   | Lack of trust of the health care providers          | 186 | 35.9 | NAD      |
| 5.   | Fear of breach of confidentiality                   | 395 | 76.3 | D        |
| 6.   | Fear of long-term side effect e.g. infertility      | 407 | 78.6 | D        |

NAD = Not a Determinant, D = Determinant.

In table 1, majority of the respondents indicated that fear of sharing health problems with adults (79.5%), fear of being served by familiar health provider (61.6%), fear of breach of confidentiality (76.3%), and fear of long-term side effects (78%) are psychosocial factors associated with non-utilization of modern contraceptives by adolescents.

Table 2
Socio-Cultural Factors Associated with Non-utilization of Modern Contraceptives (N = 518)

| Iten | 1   | F   | %    | Decision |
|------|---|-----|------|----------|
| 7.   | Belief that modern contraceptive use promotes promiscuity         | 205 | 39.6 | NAD      |
| 8.   | Belief that modern contraceptives cause infertility later in life | 350 | 67.6 | D        |
| 9.   | Adolescents who use contraceptives may not get married            | 299 | 57.7 | D        |
| 10.  | Cultural inhibition and lack of openness or free communication    |     |      |          |
|      | about sex   | 421 | 81.3 | D        |
| 11.  | Would be embarrassed to buy modern contraceptives in stores       | 264 | 50.9 | D        |
| 12.  | Adolescents who use contraceptives are usually naughty            | 249 | 48.1 | N        |

NAD = Not a Determinant, D = Determinant

Data on table 2 show that majority of the respondents indicated that the belief that modern contraceptives cause infertility later in life (67.6%), cultural inhibition and lack of openness or free communication about sex (81.3%) are socio-cultural factors associated with non utilization of modern contraceptive methods among adolescents.

Table 3

Psychosocial Factors Associated with Non-Utilization of Modern Contraceptives based on Level of Education (N = 58)

| Iter | n                             | No Formal<br>(N =13) |       |      | Primary<br>(N = 97) |      |      | <b>Secondary</b> (N = 293) | Tertiary (N = 115) |      |      |
|------|-------------------------------|----------------------|-------|------|---------------------|------|------|----------------------------|--------------------|------|------|
|      |                               | F                    | %     | Dec. | F                   | %    | Dec. | F % Dec.                   | F                  | %    | Dec. |
| 1.   | Fear of sharing sexual        |                      |       |      |                     |      |      |                            |                    |      |      |
|      | health problem with parent    | 10                   | 76.9  | D    | 87                  | 90.0 | D    | 110 37.5 NAD               | 50                 | 43.0 | NAD  |
| 2.   | Fear of sharing services      |                      |       |      |                     |      |      |                            |                    |      |      |
|      | with adults                   | 13                   | 100.0 | D    | 89                  | 91.0 | D    | 252 86.0 D                 | 58                 | 50.4 | D    |
| 3.   | Fear of being served by       |                      |       |      |                     |      |      |                            |                    |      |      |
|      | familiar health care provider | 09                   | 69.2  | D    | 73                  | 75.3 | B D  | 190 64.8 D                 | 47                 | 40.9 | NAD  |
| 4.   | Lack of trust on the health   |                      |       |      |                     |      |      |                            |                    |      |      |
|      | care provider                 | 05                   | 38.5  | NAD  | 68                  | 70.  | D    | 88 30.0 NAD                | 25                 | 21.7 | NAD  |
| 5.   | Fear of breach of             |                      |       |      |                     |      |      |                            |                    |      |      |
|      | confidentiality               | 12                   | 92.3  | D    | 89                  | 91.8 | 3 D  | 201 68.6 D                 | 93                 | 80.9 | D (  |
| 6.   | Fear of long-term side        |                      |       |      |                     |      |      |                            |                    |      |      |
|      | effects                       | 13                   | 100.0 | D    | 95                  | 98.0 | D (  | 249 85.0 D                 | 50                 | 43.5 | NAD  |

NAD = Not a Determinant, D = Determinant

Data on table 3 show that majority of the respondents with no formal education indicated that fear of sharing sexual problems with parents (76.9%), fear of sharing services with adults (100.0%), fear of being served with familiar health care provider (69.2%), fear of breach of confidentiality (92.3%) and fear of long-term side effects (100.0%) are psychosocial factors associated with non-utilization of modern contraceptives. The table further revealed that majority of the respondents with primary education indicated that all the items: fear of sharing sexual health problems with parents (90.0%), fear of sharing services with adults (91.0%), fear of being served by familiar health care provider (75.3%), lack of trust on the health care provider

(70.1%), fear of breach of confidentiality (91.8%) and fear of long-term side effects (98.0%) are psychosocial factors associated with non-utilization of modern contraceptive methods. Majority of the respondents with secondary education indicated that fear of sharing services with adults (86.0%), fear of breach of confidentiality (68.6%) and fear of long-term side effects (85%) are psychosocial factors, while majority of the respondents with tertiary education indicated that psychosocial factors include fear of breach of confidentiality (80.9%).

Table 4

Socio-Cultural Factors Associated with Non-Utilization of Modern Contraceptives

based on Level of Education

| Iten | 1                                    | No Formal |      |      | Primary  |      |      | Secondary (N = 293) |      |      | Tertiary<br>(N = 115) |      |     |
|------|--------------------------------------|-----------|------|------|----------|------|------|---------------------|------|------|-----------------------|------|-----|
|      |                                      | (N=13)    |      |      | (N = 97) |      |      |                     |      |      |                       |      |     |
|      |                                      | F         | %    | Dec. | F        | %    | Dec. | F                   | %    | Dec. | F                     | %    | De  |
| 7.   | Belief that modern contraceptive     |           |      |      |          |      |      |                     |      |      |                       |      |     |
|      | use promotes promiscuity             | 10        | 76.9 | D    | 87       | 90.0 | D    | 102                 | 35.8 | NAD  | 6                     | 46.2 | NAD |
| 8.   | Belief that modern contraceptives    |           |      |      |          |      |      |                     |      |      |                       |      |     |
|      | cause infertility later in life      | 12        | 92.3 | D    | 91       | 93.8 | D    | 221                 | 75.4 | D    | 26                    | 22.6 | NAD |
| 9.   | Adolescents who use                  |           |      |      |          |      |      |                     |      |      |                       |      |     |
|      | contraceptives may not get married   | 08        | 61.  | 5 D  | 92       | 94.  | 8 D  | 140                 | 47.8 | NAD  | 59                    | 51.3 | D   |
| 10.  | Cultural inhibition and lack of open |           |      |      |          |      |      |                     |      |      |                       |      |     |
|      | communication about sex              | 13        | 100  | .0 D | 94       | 96.  | 9 D  | 240                 | 81.9 | 9 D  | 74                    | 64.  | 3 D |
| 11.  | Ashamed of buying contraceptives     | •         |      |      |          |      |      |                     |      |      |                       |      |     |
|      | in the store                         | 09        | 69.  | 2 D  | 88       | 90.7 | D D  | 127                 | 33.3 | NAD  | 40                    | 34.8 | NAD |
| 12.  | Adolescents who use contraceptive    | s         |      |      |          |      |      |                     |      |      |                       |      |     |
|      | are usually naughty                  | 08        | 61.  | 5 D  | 79       | 81.4 | D    | 152                 | 51.9 | 9 D  | 10                    | 6.5  | NAD |

Data on table 4 show that majority of the respondents with no formal and primary indicated that all the items: belief that modern contraceptives (76.9%, 90.0%), belief that modern contraceptives cause infertility later in life (92.3%, 93.8%), adolescents who use contraceptives may not get married (61.5%, 94.8%), cultural inhibition and lack of open communication about sex (100.0%, 96.9%), ashamed of buying contraceptive in the stores

(69.2%, 81.4%), and adolescents who use contraceptives are naughty (61.5%, 81.4%) are socio-cultural factors associated with non-utilization of modern contraceptives among adolescents. The table also reveals that majority of the respondents with secondary education indicated that belief that modern contraceptives cause infertility later in life (75.4%) and cultural inhibition and lack of open communication about sex (81.9%) are socio-cultural factors, while majority of the respondents with tertiary education indicated cultural inhibition and lack of open communication about sex (64.3%) as socio-cultural factors associated with non-utilization of contraceptives among adolescents.

Table 5
Summary of Chi-square Analysis of No Significant Difference in the Psychosocial Factors Associated with Non-Utilization of Modern Contraceptives based on Level of Education

| Variable           | N   | Cal X <sup>2</sup> | Tab <sub>X</sub> <sup>2</sup> | df  | P   | Decision     |
|--------------------|-----|--------------------|-------------------------------|-----|-----|--------------|
| Level of Education | 518 | 55.290             | 24.996                        | 15_ | .05 | Not Accepted |

The result in table 5 shows that the calculated chi-square (Cal) value of 55.29 is greater than the table chi-square (Tab) value (24.996) at .05 level of significance and df 15. The null hypothesis of no significant difference in the psychosocial factors associated with non-utilization modern contraceptive based on level of education was not accepted.

Table 6
Summary of Chi-square Analysis of No Significant Difference in the Socio-Cultural Factors Associated with Non-Utilization of Modern Contraceptives based on Level of Education

| Variable           | N   | Cal X <sup>2</sup> | Tab    | )  | df  | P Decision |          |  |
|--------------------|-----|--------------------|--------|----|-----|------------|----------|--|
| Level of Education | 518 | 91.980             | 24.996 | 15 | .05 | Not        | Accepted |  |

The result in table 6 shows that the calculated chi-square (Cal  $X^2$ ) value (91.980) is greater than the table chi-square (tab  $X^2$ ) value (24.996) at .05 level of significance and df 15. This

implies that the null hypothesis of no significant difference in the socio-cultural factors associated with non-utilization of contraceptive is therefore not accepted

#### Discussion

The findings in Table 1 showed that psychosocial factors like fear of sharing services with adults, fear of being served by familiar health provider, fear of breach of confidentiality, and fear of long-term side effects were associated with non-utilization of modern contraceptives among adolescents. This finding is in line with Kamau (2006) who opined that sharing services with adults hinder adolescents' access and use of reproductive services including family planning services. Araoye, Fakeye and Jolayemi (1998) also opined that the use of contraceptive methods among adolescents is significantly different from that of older couples and it is influenced by some factors including social, psychological, developmental and educational. The result was expected and not surprising. This is due to the fact that reproductive health problems of adolescents differ from those of adult and therefore should be provided with separate and friendly services including contraceptives. Meeting parents and familiar adults in the clinic might stop most adolescents from using reproductive services.

The findings of the study in table 2 showed that socio-cultural factors associated with non-utilization of modern contraceptives by adolescents include belief that contraceptives cause infertility later in life, cultural inhibition and lack of open communication about sex. This finding is in line with Marston and King (2006) who stated that adolescents do not feel comfortable carrying, purchasing or owning contraceptive pills and condom. Amuyunzu et al (2005) also observed that adolescents feel shy and are ashamed to obtain sexual and reproductive health services. This finding was not expected in this 21st century. Though there have been misconception and beliefs about the use of contraception by adolescents, but the increase in awareness campaign and sex education and family life education in schools suppose to counteract them. This implies that adolescents' use of contraceptives is still influenced by some beliefs and misconceptions. Adolescents may even possess good knowledge or correct information about these contraceptives but are ashamed of what people around will say about him or her.

Findings of the study in table 3 and 4 showed that level of education had influence on the psychosocial and socio-cultural factors associated with non-utilization of modern contraceptives by adolescents. This result was expected as one's level of education

influences his or her level of knowledge and use of health services. This finding agrees with Lebes, Maputle, Ranathuba and Khoza (2013) who suggested that contraceptive usage by adolescents has been influenced by various factors including knowledge about contraceptives, attitude about issues related to contraceptive, educational status, among others. The findings were also supported by the results of the two null hypotheses of no significant difference in the responses on psychosocial and socio-cultural factors associated with non-utilization of contraceptives based on level of education. The two hypotheses were not accepted as the calculated chi-square values were greater than the table chi-square values. These imply that level of education of the respondents influenced their responses on the psychosocial and socio-cultural factors associated with non-utilization of modern contraceptives by adolescents. The findings reveal that majority of the respondents with tertiary education opined majority of the items on both psychosocial and socio-cultural factors were not associated with non-utilization of modern contraceptives among adolescents. This implies that respondents with tertiary education may have good contraceptive utilization among them.

#### Conclusion

Based on the findings and discussion, it was inferred that psychosocial and socio-cultural factors were associated with adolescents' non-utilization of modern contraceptives. Level of educational attainment of the respondents influenced their responses on the psycho-social and socio-cultural factors.

#### Recommendations

The following recommendations were made based on the findings and discussion of the study:

- Government and Non-Governmental Organization (NGOs) should establish youth friendly reproductive health clinics which should provide separate and friendly reproductive health services for adolescents.
- Sexuality and family life education curriculum should be included in primary and secondary schools, and should also be provided in a friendly manner.
- Primary and secondary education should be made free and compulsory while encouraging tertiary education for all.

#### References

- Adesokan, F.O.O. (2010). Reproductive health for all ages. Ado-Ekiti: Sammy Prints.
- Amujuzu, M. & Nyamongo, M. (2005).

  Qualitative evidence on adolescents views of sexual and reproductive health in sub-saharan African.

  Occasional Report 16, New York:
  The Alan Gutmacher Institute.
- Araoye, M.O. Fakeye, O.O., Jolayemi, E.T. (1998). Contraceptive method choices among adolescents in Nigerian tertiary institution. Retrieved on 30th July, 2013 from <a href="http://www.ncbi.nlm.nih.gov/pubmed/9921086">http://www.ncbi.nlm.nih.gov/pubmed/9921086</a> Federal Ministry of Health (1995). National adolescent health policy. Nigeria: The Author.
- Igbokwe, C.C. (2008). Level of determinants and non-acceptance of family planning practices among couples in Ezeagu LGA of Enugu State. West African Journal of Physical and Health Education. 12, 217-227s
- Kamau, A.W. (2006). Factors that influence access and utilization of preventive

- reproductive health services by inschool adolescents in Kenya. Retrieved 4th February, 2013 from http://www.pub.unibielefeld.de/publication/2305119.
- Lebes, R. T., Maputle, S.M., Ranathuba, D.U. & Khoza, L.B. (2013). Factors in fluencing the uptake of contraception services by vatsonga adolescents in rural communities of vhember District in Limpopo Pronvince, South Africa. Health SA Gesondhied 18(1)
- Marston, C. & King, E. (2006). Factors that shape young people's sexual behaviour: a systematic review.

  Lancet 368:1581 1586.
- Mbabo, D.E. (2009). Behaviour and contraceptive practice among adolescents. Retrieved on 3<sup>rd</sup> August, 2013 from <a href="http://uri.unisa.ac.za/bitstream/handle/10500/21">http://uri.unisa.ac.za/bitstream/handle/10500/21</a>
- Monjok, E., Smesny, A., Ekabua, J. E., & Essien, J.E. (2010). Contraceptive Practices in Nigeria. Dovepress Open Access Journal of contraception.

- Nwankwo, C.U. (2011). Knowledge of consequences of teenage pregnancy among female students in senior secondary schools in Nnewi Urban Anambra state. Nigerian Journal of Health Education.
- Otoide, O., Oronsaye, F. & Okonofua, F.E. (2009). Why adolescents seek abortion rather than contraception. Retrieved on July 30th, 2013 from <a href="http://www.guttmacher.org/pubs/">http://www.guttmacher.org/pubs/</a>...2707701
- Samuel, E.S. (2010). *Human sexuality and* family health education. Enugu: AFRO-ORBIS Publish Co. Ltd.
- WHO (2001). Adolescent Health. Geneva: The Author.