

Original Article

Patterns of Reproductive Health and Sexual Behaviours Among Female Undergraduates in Osun State South West Nigeria.

Adeleke Najemdeen Ajao^{1*} FWACP, Farinloye Emmanuel Oludele¹ FWACP, Adebimpe Wasiu.Olalekan² FWACP

1. Department of Obstetrics & Gynecology, Osun State University, Osogbo, Nigeria. 2. Department of Community Medicine, Osun State University, Osogbo, Nigeria.

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ABSTRACT

Background: Sexually transmitted infections including HIV/AIDS in addition to induced abortion continue to exert huge cost in human lives and material resources especially in developing countries. Among the morbidities resulting from these reproductive health diseases are chronic pelvic pains and infertility with further grave consequences on marital harmony and quality of life that may last the entire life of the individual woman.

Young Females in the age group of those in Colleges and Universities constitute majority of the victims.

Objectives: To determine the practices and the risks of unsafe reproductive health behaviors among female undergraduates in south western Nigeria.

Methodology: A cross-sectional survey of reproductive health knowledge, sexual practices as relates to contraceptive use, multiple sexual partners, unwanted pregnancy and induced abortion among the females students in three Universities in Osogbo, Osun State, South Western Nigeria. The responses were analyzed using descriptive statistics, and bivariate and multivariate analysis.

Results: Many Nigerian undergraduates initiated sex at early age and have multiple sexual partners. These two factors are statistically significantly associated with risk of induced abortion ($p < 0.05$). Mothers did not give safe reproductive health information to their daughters. Many respondents were aware of STI and modern contraception, yet emergency contraceptives were being used inappropriately by Nigerian Undergraduates.

Conclusions: There is high magnitude of unsafe reproductive health behaviours and sexual practices among undergraduates in this environment. This calls for behavioral change intervention in other to enhance safety in reproductive health lives of the female undergraduates in south western Nigeria.

Key words: Reproductive health, patterns, undergraduate, Behaviors safety.

Corresponding authors: Adeleke N. A. Email: Najemdeen.adeleke@uniosun.edu.ng FWACS: najemdeenadeleke@yahoo.co.uk

INTRODUCTION

Adolescents who pursue higher education are much likely to delay marriage and childbearing. The age of sexual maturity is declining and young females are starting sexual activities at earlier ages than their parents. (Salako & Sofowora, 2002; Federal Office of Statistics Lagos 1990). Premarital sex also appears to be on the increase as a result of the combination of the reasons mentioned above (Umolysho et al 2004; Araoye & Adegoke, 1996).

Sex before marriage, mostly unsafe, exposes the adolescents to risks of Sexually Transmitted Infections (STI) including HIV/AIDS and unwanted pregnancy, the later often result in the procurement of clandestine abortions with its attendant dangers, (Otiode, 2001; Adeleke et al 2006. Markiuwa – Adebusoye, et al 1997).

Effective and appropriate contraceptive methods use prevent unwanted pregnancy. (Marston C, Cleland J. 2003, Haggaid Emergency Contraception. 2003) and STI. However, prevalence of contraception is low in Nigeria especially among the unmarried young females. (Salako, 2006). There is also regional variation in the country, with the south west having highest and the North West the lowest contraceptive use prevalence. (Goliber et al 2001).

The magnitude of unmet need for contraception is high, it is estimated at between 24 - 26% in developing countries including Nigeria. (National Population Commission 2009; Okeh, et al 2011) Sexually active adolescents both in school and out of school constitute a significant component of the unmet need for contraception and unsafe reproductive health issues.

Factors contributing to low contraceptive use include negative religious attitude, illiteracy, high cost and male disapproval. (Tokeh, et al 2011) Added to these is the unfriendly attitude of the family planning service providers to the adolescents and young adults such as University undergraduates who are often not married.

Youth age is characterized by tendency for risky behaviors such as night parties, alcoholism and drug abuse as well as negative peer influence. These behaviors predispose to casual and unsafe sex. Against the background of active sexual activities and poor contraceptive access and use among these young adults in higher institutions, this study sought to explore the situation among the female undergraduates in this environment.

METHODOLOGY

Study Area: Osun State is in South Western Nigeria with a population of about 3.5 million. (National Population Commission 2009) There are three tertiary institutions in the state capital namely Osun State University, LAUTECH College of Health Sciences and Fountain University. Osun State University has only the main campus (with two Colleges) in Osogbo. LAUTECH has only the College of Health Sciences in Osogbo city. Fountain University is a private University unlike the other two that are government-owned and has only one campus located in Osogbo. The total population of these institutions is about fifteen thousand students.

Study design: This study was a descriptive cross-sectional study of patterns of sexual behaviors and associated risks among female University undergraduates in South Western Nigeria. Registered female students of these Universities with age 15 years and above constitute the target population.

Sample size estimation: Using the Leslie Fischer's formula for the calculation of sample size for a population more than 10,000, a sample size of 400 was calculated. This was increased to 500 to take care of possible non-response from this study.

Sampling method: A multi-stage sampling method was used in selecting respondents into this study. In the first stage, two out of three Universities were selected by simple random sampling technique employing simple balloting. Osun state University and Fountain University were selected. In the second stage, a list of all Colleges and Departments in each University was obtained from the University authorities. Using simple random sampling, two of three Colleges, and two Departments per College were selected in Osun State University employing simple balloting. Similarly, four of six Colleges and two Departments per College were selected from Fountain University. Questionnaires were proportionately allocated to the twelve departments selected.

In stage three, stratified sampling method was used in selecting the classes using their level of education as the stratifying factor. One level or class per department was randomly selected. In

stage four, Respondents were recruited into the study using a systematic sampling of one in three according to the day's sitting arrangement in the lecture hall. Questionnaires allocated to the classes

were distributed until they got exhausted. In the class where questionnaires were not exhausted, another class was chosen using simple random sampling and respondents were recruited in the same way.

Research instruments: A semi-structured self-administered questionnaire was used. This was pre-tested among University students in Ile Ife in Osun State. Study was carried out during the Harmattan semester of 2013/14 academic session. The variables sought include socio-demographic data, sexual practices (such as age of first coitus, number of sexual partners) and pattern of condom use, awareness of sexually transmitted infections (STI) and sources of their knowledge as well as Voluntary Counseling and Testing HCT were assessed.

Ethical clearance: Ethical clearance was obtained from UNIOSUN College of Health Sciences research ethical review committee. Permission was sought from the selected Universities' and departments' head. Furthermore, informed consent was obtained from each respondent. Respondents were assured of confidentiality of findings.

Data management: The Statistical Package for Social Sciences (SPSS) software version 17.0 was used for data entry and analysis after sorting out the questionnaires. Validity of data was done by double entry and random checks for errors and outlier values. Relevant frequency distributions tables and summary indices were generated. The Chi-square test was used to demonstrate relationships between categorical variables. Regression models were used for multivariate analysis of quantitative variables while level of statistical significance was set at P-values ≤ 0.05 in determination of relationships between categorical variables.

RESULTS

Table 1.0 shows the socio-demographic features of respondents; a total of 494 respondents distributed across the four levels of study returned completely filled questionnaires giving a response rate of 98.8%. The highest number of respondents was from the 200 level. The age group 20 to 24 years was the most common, less than 2% were

married and Christianity was the dominant religion among the respondents.

Table 1.0 shows the socio-demographic features of respondents; a total of 494 respondents.

Table 2.0 shows the awareness and knowledge of certain aspect of safe reproductive practices. Among 390(78.9%) who had family life education (FLE) or Reproductive Health Education.

Table 1: Sociodemographic Characteristics of Respondents

Socio-demographic (n=494)	No	%
Age		
15-19	193	39.1
20-24	238	48.2
25-29	54	10.9
30 and above	9	1.8
Class/level		
100	47	9.6
200	214	43.3
300	162	32.8
400	71	14.4
Marital status		
Married	8	1.6
Single	396	98.4
Religion		
Christian	368	74.5
Muslim	105	21.3
Traditional	14	2.8
Others	7	1.4
All females, all students		

Table 2.0: Safe Reproductive Health Knowledge of the Undergraduates.

PARAMETERS	POSSITIVE (%)	NEGATIVE (%)
Knows own HIV status.	143 (29)	351(79)
Knows partners HIV status.	49 (10)	445 (90)
Safe period	217(44)	277(57)
Knows about STI	356(72)	138 (28)
Informed about modern Contraceptives	346(70)	148(30)
Know Ovulation signs	207 (42)	287(58)
Aware of Own Ovulation	198(40)	296 (60)
Other RHI	346(70)	148(30)

The sources of their awareness was depicted in Figure 1.0 and included the following; course 140(28.3%), topic of discussion 271(54.9%) on school’s assembly ground 108(21.9%) and at a seminar 294(59.5%). Other sources are internet, health workers and friends.

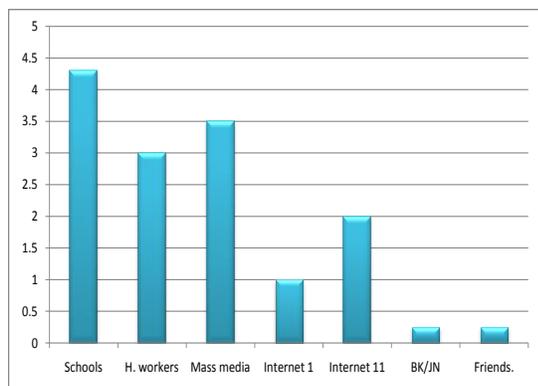


Figure 1.0: Sources of Reproductive Health Information to the Nigerian Undergraduates.

Ten percent of respondents knew own HIV status while 29.0% were aware of partners HIV status. Most respondents (72.0%) knew about group of diseases referred to as sexually transmitted infections (STI) such as HIV, gonorrhoea and syphilis, while 23(4.6%) had been treated for STI.

Forty-four percent and 42% of respondents had knowledge of safe period in a menstrual calendar and self-ovulation signs respectively while 70% were awareness of modern contraceptive methods and how they are used. Sources of information to the respondents on reproductive health matters are shown in figure 1.0. Mass media including Television, radio and print media were the main sources in 80.0%. Health workers in 18.0%, internet (i) and (ii) (in this study internet i refers to standard web sites including Wikipedia while internet ii refers to social interactive sites such as face book, twitter and Twoo webs) were responsible in 25.0% while friends and books accounted for another 15.0%. Parents especially mother was the source in 2.0%. There was multiple reporting of sources.

Early age of initiating first sexual intercourse and multiple sexual partners were found in 50.0% and 30.0 % of the sexually active respondents respectively. Non-use of contraception including barrier methods was found in 50.0% while EC was used more frequently. Eight and 7.0% respectively had experienced unwanted pregnancy and undergone induced pregnancy termination; of the later about one third had repeated induced abortions. Thirty percent of the sexually active had multiple sexual consults and about half knew their male partners had other sexual partners. Oral and anal sex was practiced by 20.0% and 19.0% respectively. Casual sex often at night parties and use of alcohol was reported by 7.0% and 12.0% respectively (Table 3).

Correlations of sexual behaviors of the respondents using bivariate analysis was done. There was significant association between awareness of STI and number of sexual partners ($p=0.005$), but awareness of STI was not statistically significantly associated with pregnancy or ever-use of contraceptive ($p>0.05$). A statistically significant association existed between having procured abortion and ever used contraceptive ($p<0.05$), but no statistically significant relationship was found between having procured abortion and having multiple sexual partners ($p>0.05$). Similarly, there was significant association between age at first sex and number of sexual partners ($p<0.05$) (Table 4.0).

Table 3.0: Sexual Behaviors of Undergraduates

BEHAVIORS	Positive	%
Sexually Active n=(494)	186	37.7
Early Age of First Coitus (n=186)	93	50
First Coitus not Planned (n=186)	116	62.4
Multiple Sexual partners	56	30
Partners have other Consults	35	18.8
Nonuse of contraception	93	50
Had unwanted pregnancy	15	8
Terminated Pregnancy	13	7
Treated for STI	9	5
Sex at party	13	7
Casual Sex	9	5
Practice Oral sex	37	20
Practice Anal sex	19	10

In Table 5.0 multivariate analysis revealed that respondents who were aware about STI were 3.9 times more likely to have single sexual partners compared to those who were not aware. Respondents who have had abortion have no higher likelihood of having more sexual partners

compared to those who never had abortion. Respondents whose age at first coitus is above 15 years were three times more likely to have single sexual partner and twice less likely to have experienced unwanted pregnancy compared to those whose sexual debut was at a younger age.

	Single Partners		Ever been pregnant		Never used male condoms	
	OR	95% CI, P	OR	95% CI, P	OR	95% CI, P
Heard about STI (Constant = no	3.92	1.53-10.06 0.003	1.20	0.48-2.99 0.358	1.12	0.60-2.08 0.365
Had abortion (Constant = no	1.15	0.43-3.60 0.351	3.70	7.56-18.8 0.001	8.50	3.29-22.0 0.001
Age at first sex (Constant = <15	0.03	5.4-14.7 0.001	0.55	0.62-4.89 0.329	0.64	0.10-4.08 0.3262

study among Adolescents in a rural community in

DISCUSSION:

Reproductive health education is important for safe sexual health behaviour and practices for every adult particularly the young adults as most undergraduates who are beginning sexual relationship. Majority of the respondents have had pieces of information about RH in the form of family life education and educational institution is the main source. The parents particularly the mother who is expected to be the source of early

information on safe reproductive health to their daughters were lacking in this responsibility, this is in agreement with the report by Asekun-

Olarinmoye et al in a study titled practice and context of sex education within a family setting: A

Osun State, South west, Nigeria. (Asekun-Olarinmoye, et al 2011).

A large percentage of respondents were aware of sexually transmitted infections especially Gonorrhoea, Syphilis and HIV, while about 4% had been treated for same in the past, this is higher when compared to a 1.5% previous treatment for STI in a recent study amongst graduate students in China. (Zhou, et al 2013). Awareness of STI appears to exact a checking effect on having multiple sexual partners and this relationship was found to be statistically significant in this study, this shows the information is properly utilized.

Only about ten percent of respondents knew their HIV status, however, three times that number knew the status of their male partners. This suggests that many the respondents demanded HIV status of their sexual partners even without knowing their own status. However, about fifty percent expressed desires to have HIV Counseling and Testing (HCT). This later finding is encouraging as it demonstrates a new positive attitude to safer sex.

Many respondents were sexually active and engaged in risky sexual practices such as, early age of first sex (which is defined as first coitus before the age of fifteen years in this study). This was found to be significantly associated with having multiple partners and unwanted pregnancy. Casual sex and sex at night party were also practiced by many respondents. These types of unsafe sex behaviors are common in this age group. (Hoque and Ghua, 2012; WHO 2007; Qiaoqin, et al, 2006) These behaviors call for intervention designed to effect positive behavioral change as shown by awareness of STI in this study.

Awareness of modern contraceptives was high, ever use and use of contraceptives at the last sexual act was reported among less than fifty percent of respondents. This is similar to reports by Rapossi and Arane (1994) in Spain in their studies on University students. This finding reveal the magnitude of unmet need for contraception in this age groups and calls for program of intervention to reduce the problem of unsafe sexual practices.

In figure 1.0, the main sources of information on safe reproductive health including contraceptives are the educational institutions programmes. Others are mass media, health workers, friends, journals and internet especially through the social media. This is contrary to the finding of Adeleke and Olowookere in the study on anaemia in the booked pregnant women in Osogbo where mass media was the dominant source of health information. (Adeleke & Olowookere, 2010). However, this may be a reflection of differences in the population studied. We recommend that information obtained from the social media must be treated with caution. The finding that more than a third of the sexually active demanded their partners use condom at the last coitus is encouraging as it is a reflection of women being in control of own sexual practices to ensure safety.

Knowledge about signs of ovulation including awareness of own ovulation (one of the natural family planning methods) is found in 2 out of 5 respondents, this is below average particularly when it is viewed from their educational status.

This may be among the reasons the use of emergency contraception (EC) was high, probably most of the uses of EC have no valid indications, as many studies had reported poor level of Knowledge and use of EC. (Nworah, 2010, Arowojolu & Adekunle 2000; Bello et al, 2009; Wong 2007).

About ten percent of the respondents had unwanted pregnancy, most of which were terminated by induced abortion. Similar findings were reported by previous studies. (Wong 2007, Oriji, et al 2009, Bankole, et al., 2006). This is another reflection of unmet contraceptive needs and it is rather incongruent with the high level of awareness of contraception found in the study. Curiously, those who had procured abortion were using contraceptives and did not have higher number of sexual partners when compared to those who never had abortion. Possible explanation may be that the contraceptives being used were not appropriate and were not effective. The finding that emergency contraception was used frequently in this study corroborates this position.

Conclusion

This study showed poor knowledge of safe reproductive health and occurrence of unsafe reproductive health practices among female undergraduates in this environment. There is a need for behavioral change interventions targeted at the pre-university age group (less than 15 years) and mothers, to address sexual practices, education about contraception and voluntary counseling and testing HCT. These measures if implemented will promote safety in reproductive health matters among Nigerian female undergraduates.

REFERENCES.

- Adeleke N. A. Olatinuwo W.A.(2006). Trends of induced abortion in Ilorin. Tropical journal
- Adeleke, N.A. Olowookere, S. A. (2010).Patterns of Perception of Causes and Prevalence of Anaemia at Booking in a Tropical General Hospital. Nig. Hosp Pract: 6(3) 50-54.
- Araoye MD , Adegoke A. (1996) AIDS – related knowledge, attitude and behavior among selected adolescent in Nigeria Adolesc. 1996: 19:179 - 181.

- Arowojolu AO, Adekunle AO (2000). Perception and practice of emergency contraception by post-secondary students in South West Nigeria. *Afr. J. Reprod. Health* 4(1):56-65
- Asekun-Olarinmoye EO, Dairo MD, Abiodun IO and Asekun-Olarinmoye IO (2011). Practice and Content of Sex Education Within Family Setting: A study among Adolescents in a Rural Community in Osun State South west, Nigeria. WACP/SS3B/31 Proceeding at Annual General & Scientific Meeting West African College of Physician. July 2011 Welcome Centre & Hotels LTD Lagos.
- Bankole A, et al. (2006) Unwanted Pregnancy and Induced Abortion in Nigeria: Causes and Consequences, New York: Guttmacher Institute, 2006.
- Bello FA, Olayemi O, Fawole AO, Ogunbode OO, Sobukunola T, Adesina OA, Aimakhu C, Okunlola MA (2009). Perception and Practice of Emergency Contraception among Female Undergraduates of the University of Ibadan, Nigeria. *J. Reprod. Contracept.* 20(2): N113-121
8. Federal Office of Statistics Lagos, Nigeria demographic and Health Survey. IRD/Macro International Inc. 1990.
- Goliber, Tom, Rachel Sanders and John Ross: 2001; *Analysing Family Planning needs in Nigeria: Lessons for Repositioning Family Planning in Sub-Saharan Africa*. Washington, D.C.: Failure Sub-Saharan Africa. Washington, D.C.: Failure Group Health Policy Initiative, Task Order.
- Haggaid Emergency Contraception: 2003. A global overview of knowledge, attitude and Practice among provider. *Trop J Obslet Gynaecol*; 20; 153 – 158.
- Markiuwa – Adebuseye P, Singh S Audams. 1997 Nigeria Health Professionals Perception about abortion Practice. *Int. Family Plan Persp*: 23155 – 181.
- Marston C, Cleland J. 2003. Relationships between Contraception and abortion: A review of the evidence *Int. Family Planning Perspective*: 29:6 –13.
- Mohammad Hoque. Shaneiz Ghuam. 2012 Contraceptive Practices in the era of HIV/ADS Among University Students in Kwazulu- Natal, South Africa. *SHARA.J : Journal of Social Aspects of HIV/ADS*. Open access Journal 9:1, 15-19. DOI: 10-1080/17290376.2012.665254.
- National Population Commission (NPC) 2009 {Nigeria} and ICF Macro. Nigeria Demographic and Health Survey 2008. Abuja, Nigeria: National Population Commission and ICF Macro.
- Obiechina Nworah J.A., U. Mbamara Sunday, O. Ugboaja Joseph, O. Ogelle Monday and C. Akabuike Josephat 2010 Knowledge, attitude and practice of emergency contraception among students in tertiary schools in Anambra State Southeast Nigeria *International Journal of Medicine and Medical Sciences* Vol. 2(1) pp. 001-004, Available online <http://www.academicjournals.org/ijmms> ISSN 2006-9723 ©2010 Academic Journals
- Qiaoqin Ma, Masako Ono-Kihara, Liming Cong, Guozhang Xu, Saman Zamani, Shahrzad Mortazavi Ravari, and Masahiro Kihara 2006. Sexual behavior and awareness of Chinese university students in transition with implied risk of sexually transmitted diseases and HIV infection: A cross-sectional study *BMC Public Health* ; 6: 232. Published online 2006 September 18. doi: 10.1186/1471-2458-6-232
- Orij VK, Jeremiah I, Kasso T. 2009. Induced abortion amongst undergraduate students of University of Port Harcourt. *Niger J Med*. 2009 Apr-Jun; 18(2):199-202.
- Otiode V. O. Oronsaye F. Okonofua. FE 2001. Why Nigerian Adolescents seek abortion rather than contraception: Evidence from focus group discussion. *Int. Fam Plan Persp*: 27:77–81.
- Ping Wong LI Qualitative 2007. Inquiry into Premarital Sexual Behaviors and Contraceptive use among multi ethnic young women; Implications for the Education and future Research. *Plos ONE* 7(12); es 1745. Doi: 10. 1371/Journa. Pone. 00551745.
- Repossi A, Araneda JM, Bustos L, Puente C, Rojas C. 1994. Sexual behavior and contraceptive practices among university students. *med. chil.* 122(1); 27-35.
21. Salako A.A. Sofowora A. 2002. A study of Teenage pregnancy and its Determinants in the Health District of Ikenne Local

- Government. Nigerian Medical practitioner vol. 44. No.3/4 . pp 38-44
- Salako, A.A. C.A. Iyaniwura, O. A. Jeminusi, R. Sofowora (2006)Sexual behavior, contraception and fertility among in school. Adolescents in Ikenne Local Government. South-Western Nigeria. Nigerian Journal of clinical Practice:9:126 – 36
- Timothy C. Okeh, Nelson W. Wawire, Tom K. Mberu 2011. Contraceptive use among women of Reproductive Age in Kenya's City Slums International Journal of Business and Social Science 2:1:22 – 45.
- Umolysho AJ, Abasiattal AM, Umoh AV, Bassey EA, Udoma EJ. 2004. Sexual activities and contraception awareness as among adolescent in the south – south geopolitical zone of Nigeria. Mary Slessor. J. Med. 4:27-31.

WHO 2009. Sexual Coercion among the youths.2009.www.int/reproduction_health/publication/ RHR-01-8/ehr-01-08-cliapter 4. En.html

Yuanzhong Zhou, Chengliang Xiong, Jinwen Xiong Xuejun Shang Guohui Liu, Meimei Zhang and Pin Yin. 2013. A blind area of family planning services in China: unintended pregnancy among unmarried graduate students *BMC Public Health*, 13:198 doi:10.1186/1471-2458-13-198

Author Contribution:

N.A.: Participated in all the stages of the study from conception, design, production and administration of data instruments, analysis and writing of the manuscript.

E.O.: Was involved in the design, production and administration of data instrument. He also contributed to results and writing the manuscript.

W.O.: Participated in the design, production and administration of data instrument, statistics and writing of the manuscript.

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