

ASSESSMENT OF REPRODUCTIVE HEALTH KNOWLEDGE AMONG STUDENTS IN COLLEGES OF EDUCATION IN NORTH EAST ZONE OF NIGERIA

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Abstract: This paper was set to assess knowledge of reproductive health (RH) among students in Colleges of Education in North East Zone of Nigeria. RH addresses human sexuality and reproductive processes, functions and system at all stages of life that ensures a healthy and satisfying safe sex life. The study was guided by two objectives and two research questions. **Method.** The ex-post-factor design was used for the study. Multi-stage sampling procedure was used to draw sample size of 554 respondents from six Colleges of Education in North East Zone of Nigeria. A researcher developed questionnaire was used to collect data for the study. The data was analyzed using Statistical Package for Social Science (SPSS) IBM version 20. Descriptive statistics was used to analyze demographic characteristics, while one tailed sampled t-test was used to test hypotheses at 0.05 level of significance. **Results:** The study revealed that: students of Colleges of Education in North East Zone of Nigeria have significant RH knowledge on safe motherhood $P= 0.000$ ($p < 0.05$) level of significance. Knowledge of sexually transmitted infections among students in Colleges of Education in North East Zone was also significant at $P = 0.000$ ($p < 0.05$). The study recommended that Information, Education and Communication IEC activities aimed at increasing and maintaining knowledge of reproductive health matters through health education and counseling programs should be intensified by teachers and health care providers to students and youth in the community.

Keywords: Health, Reproductive health, Reproductive health knowledge Safe motherhood.

1. INTRODUCTION

Procreation is a natural phenomenon which makes animals; particularly man remains able to reproduce his offspring continuously through generations. Since it is inevitable it usually comes with a lot of reproductive health (RH) challenges. RH problems are among the current prevailing health issues affecting youth in most societies, especially in developing communities. Unexpected or unplanned pregnancies and reproductive tract infections (RTIs) poses a major public health challenges in women of reproductive age especially in developing countries (Monjok, Smensny, Ekabua & Essien, 2010). As a result of RH complications, too many young lives are lost or compromised due to reproductive health challenges including human immunodeficiency virus (HIV) and unwanted pregnancies which often culminate into obstetrical complications or unsafe abortion.

Reproductive health according to International Conference on Population and Development (ICPD) (1994) is the state of complete physical, mental and social well-being of the individual and not merely the absence of disease or infirmity in all matters that relate to reproductive system and its functional processes. Peters and Wolper (1995) coined reproductive health as complete attainment of well-being in terms of mental, physical, and social conditions. In the same context, World Health Organization (WHO) (2000) reported reproductive health as how social and sexual behaviours and relationships affect health and create ill health in the individual. Scarce knowledge on reproductive health matters risk the vulnerable adolescents to engage in unprotected and unwanted pregnancies, STIs and HIV/AIDS including safe abortions.

Generally, knowledge of RH helps youth/ adolescents to avoid challenges of unplanned births, unsafe abortions, and pregnancy-related disabilities (Women's Health West, 2011). Adolescence is the period of transition from childhood to adulthood; adolescents establish patterns of behavior and make lifestyle choices that affect both their current and future health. Sexual activity among adolescent has been reported to be on the increasing worldwide because most young people engage in sexual intercourse by age 20, whether married or unmarried (UNFPA, 2015). Therefore, adequate reproductive health information among youth at this stage is crucial for behavioural change to address RH challenges in the future. In reality, most adolescents know little about their own bodies and health and moreover, the information available to them is most often incomplete, inadequate, and confusing. RH information that is characterized by culturally relevant, age-appropriate and scientifically accurate information should be provided. This can give adolescents the opportunity to explore their knowledge, attitudes, and values on RH as well as in practicing those skills while taking decisions related to their personal lives (Ecker, Kirby & Gordan, 2009).

Statement of the Problem:

It has been observed generally that adolescent reproductive health remains a sensitive issue. Adolescence stage through young adult is a period of increased risk taking and sexual experimentation due to physiological, psychological and hormonal body changes that is experienced at this stage. Problems of HIV and AIDS infections, unintended pregnancies, illegal and unsafe abortions that leads to obstetrics complications becomes prevalent among young people especially college students. This has remained public health problems because of its affects their studies and health in school. Equipping students with adequate information on RH matters would help students avert such problems and could also help them take correct decision on matters that affect their health which is the basis of this paper.

Objectives of the study:

- a. To assess knowledge of safe motherhood among students in Colleges of Education in North East Zone of Nigeria
- b. To assess knowledge of sexually transmitted infections (STIs) among students in Colleges of Education in North East Zone of Nigeria

Research Questions:

- a. Do students in Colleges of Education in North East Zone of Nigeria have knowledge of safe motherhood?
- b. Do students in Colleges of Education in North East Zone of Nigeria have knowledge of STIs?

Hypotheses:

1. Students of Colleges of Education in North East Zone of Nigeria do not have significant RH knowledge of safe motherhood
2. Students of Colleges of Education in North East Zone of Nigeria do not have significant RH knowledge of STIs

2. REVIEW OF RELATED LITERATURE

This study was anchored to the health believe mode (HBM). The model theorizes that people's beliefs about whether they are at risk for a disease or health problem, and their perceptions of the benefits of taking action to avoid it, influence their readiness to take action (Rosenstock, 1974). This implies that people have the ability to reproduce, that a woman can go through pregnancy and child birth safely, and with successful maternal and child survival outcomes and further states that people are able to regulate their fertility without risk to their health and they have satisfying safe sex life (UNICEF, 2001). However, National Reproductive Health Strategic Framework and plan (2006), defined RH as state of complete physical, mental and social wellbeing and merely absence of disease or infirmity in all matters related to the reproductive system and its functional process. Hence, RH concerns diseases, disorders and conditions that affect the functioning of male and female reproductive systems. Men too have RH concerns and needs, though their general health is affected by reproductive health to a lesser extent than is the case for women (WHO.2015).

When addressing the sexual and reproductive health needs of young people, we must first identify the possible obstacles they face. In most parts of the world and in Nigeria in particular, more than 90 percent of young people know at least one contraceptive method, but usage rates remain low, especially in rural areas (NDHS, 2013). Utilization of scarcely available health services by women of reproductive age in the communities is not encouraging. This is probably due to the

lack of adequate knowledge on RH issues. Absence of knowledge means that respondents cannot make or are not in a position to make informed and correct choices, with the consequence that they are likely to suffer from STIs and unwanted pregnancies which can be extremely damaging to young women social well being (Farith, Khan, Freeth, & Meads, 2014). Providing available youth-friendly services to orient them on some peculiar related problems, myths about sexuality and reproductive health, lack of knowledge about sexual & reproductive rights as human rights, and gender inequality cannot be overemphasized (Osakinle, Babatunde & Alade, 2013).

In many African countries, Nigeria inclusive, adolescent reproductive health remains a sensitive issue. The problems of HIV/AIDS infections, cases of unintended pregnancies, illegal and unsafe abortions that leads to obstetrics complications are prevalent among young people especially adolescents and has remain public health problems which need unprecedented intervention. Adolescence stage through young adult is a period of increased risk taking due to physiological, psychological and hormonal changes that they experience which leads them to sexual experimentation. This experimentation risks them to unprotected and planned pregnancies, unsafe abortion, obstetrical complications, STIs including HIV and AIDS. When contracted they do not seek for health care due to inadequate knowledge and thus compound their health conditions. Sexually active adolescents are in need of safe and effective contraception (Botha, 2010). Knowledge of reproductive health component is necessary to ensure positive health in the individual.

3. METHODOLOGY

Research Design:

The ex-post- factor research design was adopted for the study. It is an empirical inquiry, in which the researcher does not have direct control of the independent variables (Carlos, 2013).

The population for the study comprised of 54042 students comprising of 33,809 males and 20,233 females in 12 Colleges of Education in North East Zone of Nigeria as of 2016/17 academic session.(NCCE, 2016).

Sample and Sampling Procedures:

Multi-stage sampling procedure of simple random sampling, stratified random sampling and proportionate sampling procedures was adopted to draw sample size of 580 respondents based on Krejcie and Morgan (1970) recommendations. A researcher developed questionnaire (instrument) divided into three sections was used for the study. A four point modified Likert scale response mode was used to collect data for the study. A mean score of response which is 2.5 and above was considered positive, while mean score of response below 2.5 was considered negative or not acceptable. The instrument was vetted by experts in reproductive health related area to determine its validity. A pilot study was conducted and a reliability coefficient of 0.819 was obtained using Cronbach Alpha statistics.

Procedure for Data Collection:

The researcher sought permission from College authorities to collect data and respondents were consented for agreeing to participate in the research. The researcher and the research assistants after orientation administered the 580 questionnaire to the respondents. A period of two weeks duration (14 days) was used to collect which 554 of the questionnaires were successfully returned and used for the analysis using (SPSS) IBM version 20. Descriptive statistics and students one sampled t-test was used to analyse hypotheses at 0.05 level of significance.

4. RESULTS

Table 1: Demographic Characteristics of Respondents according to their Frequencies (n = 554)

S/No.	Variables	Options	Frequency	Percent (%)
1.	Age Range	18 - 23 years	449	81.0
		24 - 29 years	95	17.1
		30 - 35 years	8	1.4
		36 years and above	2	0.4
		Total	554	100.0
2.	Gender	Male	331	59.7
		Female	223	40.3

3.Level of Study	Total	554	100.0
	NCE I	130	23.5
	NCE II	314	56.7
4. Marital Status	NCE III	110	19.9
	Total	554	100.0
	Single	477	86.1
	Married	70	12.6
	Separated	5	0.9
	Divorced	2	0.4
	Total	554	100.0

Table 1 shows that most of respondents 449(81%) were in the age range of 18 - 23 years, age range of 24-29 years were 95(17.1%), age 30-35 years were 8(1.4%), while 2(0.4%) were above 35 years. Males were 331(59.7%) while females were 223(40.3%). Table 1 items 3 revealed that majority of the respondents 314(56.7%) were NCE11, 130(23.8%) were NCE 1, while NCE 111 were 110(19.9%). Table 1 item 4 shows marital status 477(86.1%) were single, while the least 2(0.4%) were divorced.

Research Question 1

Do students of College of Education in North East Zone of Nigeria have reproductive health knowledge of safe motherhood?

Table 2: Mean Scores of Responses on Reproductive Health Knowledge of Safe Motherhood among College (n=554)

S/No.	Statement	Mean	S. D.
1	Sperm is a reproductive cell found in a male	3.53	0.714
2	The male sperm is produced in the testes	3.18	0.789
3	Ova are the reproductive cells in a female	3.20	0.969
4	The ovum (female egg) is usually produced in the ovary	3.28	0.844
5	Estrogen promotes the development of breast and regulate menstrual cycle in a female	3.01	0.937
6	Testosterone is the sex hormone that regulates sperm production in males	2.90	0.993
7	Testosterone hormone promotes hair growth and muscle development in males	2.70	1.055
8	Follicle stimulating hormone (FSH) is responsible for developing sexual characteristics in females	2.83	1.000
9	Pregnancy may occur when male sperm fertilizes a matured female egg after ovulation	3.28	0.916
10	Females use the same opening to urinate and have sex	2.92	1.007
11	Safe delivery under skilled care promotes mothers health	3.41	0.829
12	Attending antenatal care during pregnancy reduces maternal death	3.14	0.968
13	Poor management of obstetric complications usually leads to maternal morbidity and mortality	2.81	0.978
14	Undernourishment is a risk factor during pregnancy	3.00	1.010
15	Regular menstrual flow is an indicator that pregnancy may occur in a woman	3.15	0.936
16	Believe that a woman can get pregnant at first intercourse	3.10	1.003
17	A woman can get pregnant if she has sexual intercourse during menstruation	2.89	1.051
18	Providing health talks to pregnant mothers during their antenatal and postnatal periods helps to improve their health	3.06	1.014
Aggregate mean		3.08	0.496

(Decision mean = 2.5)

Table 2 shows respondents had adequate knowledge of how and when pregnancy occur in female, mean score of 3.28 SD 0.916, and attending ante-natal clinic ensure that maternal morbidity and mortality is greatly reduced, mean 3.14 SD 0.968. Table 2 affirmed knowledge of respondents on preventive measures and how to enhance health status of prospective mothers mean 3.06 SD 1.014. Hence reproductive health knowledge on safe motherhood was positive with mean score aggregate of (3.08) among respondents.

Research Question 2.

Do students of Colleges of Education in North East Zone of Nigeria have **reproductive health** knowledge of **sexually transmitted infections (STIs)**?

Table 3: Mean Scores of Responses on Reproductive Health Knowledge of STIs among College Students n= (554)

S/No.	Statements	Mean	S. D.
1	Gonorrhoea can be transmitted through unprotected sexual intercourse	3.18	1.022
2	Human immunodeficiency Virus (HIV) causes AIDs	3.17	1.037
3	HIV is transmitted through unprotected sexual intercourse	3.27	0.955
4	HIV/AIDs can be transmitted through blood transfusion	3.27	0.929
5	Persons infected with gonorrhoea can discharge pus or blood from their genitals	3.04	0.904
6	Painful urination is a sign of sexual infection	3.03	0.947
7	Use of male and female condoms during coitus prevents STIs	3.17	0.954
8	HIV/AIDS can be transmitted from mother to child during breastfeeding	3.20	0.958
9	STIs without treatment can lead to sterility in males or females	3.09	0.897
10	Being faithful to each other as married couples can prevent STIs	3.11	0.997
11	Syphilis can be transmitted through unprotected sexual intercourse	2.93	1.029
12	Know that mosquito bites cannot transmit HIV/AIDs	2.94	1.096
13	I understand that abstinence is the best way to prevent STIs	2.97	1.063
14	I know that HIV/AIDs cannot be cured	2.77	1.066
15	Streptococcal infection is caused by bacteria	2.96	1.025
16	The herpes simplex virus can be transmitted through unprotected sexual intercourse	2.90	1.008
17	Having sexual intercourse with multiple partners may subject individuals to contract STIs	3.10	1.067
18	Voluntary screening tests help individuals know their HIV status	2.90	1.125
Aggregate mean		3.06	0.590

A careful look at Table 3 shows the students' reproductive health knowledge of sexually transmitted infections. The result indicates that the respondents were knowledgeable about mode of transmission of HIV through unprotected sexual intercourse with mean 3.27; SD (0.955), and through blood transfusion mean 3.27; SD (0.929). Painful urination was expressed as a sign of sexual infection mean 3.03; SD (0.947), while HIV/AIDS can be transmitted from mother to child through breastfeeding mean 3.20; SD (0.958). The table generally revealed that respondents were knowledgeable on STIs since mean aggregate score of 3.06; SD (0.590) is higher than the decision mean of 2.5.

Test of Hypotheses:

Hypothesis 1: Students of Colleges of Education in North East Zone of Nigeria do not have significant reproductive health knowledge of safe motherhood.

Table 4: One tailed Sample t-test on Reproductive Health Knowledge of Safe Motherhood by Respondents (n = 554)

Variable	Mean	SD	Std. Error	t	Df	P-value
Safe motherhood	3.08	0.496	0.021	27.359	553	.000
Test mean	2.50	0.000	0.000			

$$t(553) = 1.96 \leq p < 0.05$$

A careful observation of Table 4 shows that the respondents had significant reproductive health knowledge of safe motherhood as revealed by t-value 27.359 at 553 degree of freedom (Df) at P = 0.000 and P = 0.05 level of significance. This shows that the students have significant reproductive health knowledge of safe motherhood. Therefore, the null hypothesis which states that students of Colleges of Education in North East Zone of Nigeria do not have significant knowledge of safe motherhood was therefore rejected.

Hypothesis 2: Students of Colleges of Education in North East Zone of Nigeria do not have significant knowledge of sexually transmitted infections (STIs).

Table 5: One tailed sample t-test on Reproductive Health knowledge of STIs among respondents (n = 554)

Variable	Mean	S D	Std. Error	t	Df	P-value
Sexually Transmitted infections	3.06	0.590	0.025	22.163	553	.000
Test mean	2.50	0.000	0.000			

$t(553) = 1.96 \leq P < 0.05$

Observation of Table 5 reveals that the respondents have significant reproductive health knowledge of sexually transmitted infections as indicated by t-value of 22.168, df 553 at significant level of $P = 0.05$. Hence, the null hypothesis which states that students of Colleges of Education in North East Zone of Nigeria do not have significant reproductive health knowledge of STIs was therefore rejected.

Hypothesis 3: There is no significant difference in knowledge of sources of information on reproductive health matters among students of Colleges of Education in North East Zone of Nigeria.

Table 6: One way analysis of variance (ANOVA) showing knowledge of sources of information on reproductive health matters and services by College Students.

Source	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	109.101	2	54.551	1.351	.260
Within Groups	22254.048	551	40.388		
Total	22363.150	553			

$F(551) = 3.000 \leq P > 0.05$

Observation on Table 6 shows that the respondents differ significantly in their knowledge of the sources of information on reproductive health matters and services as indicated by F-value of 1.351 obtained at Df 2, 551 at probability of $P > 0.05$. Therefore, the null hypothesis that states no significant difference in knowledge of sources of information on reproductive health matters and services by respondents is therefore accepted.

5. RESULTS

- i. The study revealed that students of Colleges of Education in North East Zone of Nigeria have significant reproductive health knowledge of safe motherhood ($P = 0.000$)
- ii. The study showed that reproductive health knowledge of sexually transmitted infections among students in Colleges of Education in North East Zone of Nigeria was significant ($P = 0.000$)

6. DISCUSSION

This study assessed two reproductive health (RH) indices among students in Colleges of Education within North East Zone of Nigeria. Generally, knowledge is a necessary precursor to maintain healthy and responsible health behavior in the individual. The indices of safe motherhood were assessed. Safe motherhood refers to a situation in which no woman going through the physiological processes of pregnancy and child birth suffers any injury or loses her life or that of the baby (Pathfinder, (2004). The study revealed significant knowledge of safe motherhood among students. This agrees with Ehiers and Maja (2010), which reported that most youths have good knowledge of safe motherhood and contraceptives. However, this report contradicts Odujinrin (2017), who reported that due to low knowledge of most women on reproductive health matters, pregnancy and abortion related complications are on the increase especially among the youths. Safe motherhood is ensured through provision adequate antenatal (ANC) and post natal (PNC) services to pregnant women.

This study also revealed that the respondents had significant knowledge of STIs with mean score of 3.08. Muhammed and Nabila (2017) reported that majority 130(92.2%) of 141 respondents assessed indicated that they were knowledgeable about infectious diseases that can be transmitted through sexual intercourse which concurs with Aang, Wong, Jani & Yunlon (2014) which indicated that respondents showed 92% knowledge of at least one STDs (gonorrhoea, syphilis, genital herpes, HIV). National Action Committee on AIDS (NACA) (2015) indicated that lower abdominal pain, urethral discharge and pelvic inflammatory disease (PID) including infertility cases are associated with STI infections. Despite awareness of STIs as shown by this report, yet they do not utilize the knowledge for responsible health behavioral change.

7. CONCLUSION AND RECOMMENDATIONS

The study concluded that respondents have shown knowledge of safe motherhood and STIs. It was generally observed therefore that acquiring knowledge on health related issues does not necessarily translate into responsible health behavior. The need to practice the gained knowledge is a necessary tool to enjoy healthy and productive life in the individual. Based on the findings of this study the following recommendations were made:

1. Maintenance of knowledge of safe motherhood to reduce pregnancy related complications among respondents should be encouraged through advocacy program, health education instructions, public lectures and workshop organized by College health department.
2. Respondent's knowledge on STIs should be maintained through intensified peer friendly awareness activities to change behavior to reduce risk of infections which will ensure quality reproductive life

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