



Article

Knowledge of Fertility Awareness-Based Methods (FABMs) of Family Planning Among Senior Secondary Students in Okrika Kingdom, Rivers State, Nigeria

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Abstract: A critical look at our society today exposes a disturbing trend in sexual activities among adolescents. Knowledge of family planning is a prerequisite to its utilization. This study examined the knowledge of fertility awareness-based methods of faming planning among Senior Secondary pupils in Okrika Kingdom of Rivers State. The descriptive cross sectional design was used with a population which comprised 5,087 senior secondary students in Okrika Kingdom. The sample size was 408 which was determined using the Taro Yamane formula: $n = N/1+N(e)^2$. Multistage sampling procedure was adopted to select the participants. The research instrument for this study was a questionnaire designed titled “knowledge of fertility awareness based method rating scale (KFABMRS)”, with a reliability coefficient of 0.81. Data was collected by administering the questionnaire to the respondents physically. The completed copies of the questionnaire were collated, coded and analysed using mean and Point Biseral at 0.05 Alpha level. The result showed on that, overall, less than half 186(46.6%) were knowledgeable about FABMs while 213(53.4%) were not knowledgeable about FABMs of family planning. The result showed that more of those aged 10-14 years and 15-19 years had averaged knowledge 42.6% and 48.7% respectively. High knowledge was found more among the Christians (35.1%) followed by the Muslims (13.3%). There was a statistically significant relationship between knowledge of FABMS of family planning, and age ($n = 399$, $r = 0.35$, $p = 0.00$). It was concluded that there was a fair knowledge of fertility awareness-based methods among senior secondary students, which was linked directly to the religious affiliation of the students. It was recommended among others that, the ministry of health and health educators should embark on Fertility Awareness Based Methods awareness campaign to secondary schools especially in the rural areas.

Keywords: Family Planning, Fertility, Knowledge, Students

1. Introduction

Knowledge about fertility awareness is fundamental to making informed decisions about reproductive and sexual health. However, most adolescent lack the knowledge, skills and access to obtain the available contraceptive information to enable them make such decision. The term fertility awareness is used to describe an individual's understanding of male and female reproductive anatomy and physiology as it relates to fertility [1], [2]. For women it includes being able to identify the fertile time during her menstrual cycle, while for men it includes understanding their own reproductive potential. For the couple it includes developing a shared understanding about their fertility potential at different stages of their lives and their ability to discuss fertility issues with each other

and with health professionals. Health and educational professional have ample opportunities to provide information about fertility awareness to senior secondary students [3]. This knowledge will encourage them to become more aware about the changes that occur in their own bodies at different times of their life, especially during puberty; when considering choice of appropriate family planning methods or when making sexual and reproductive health decisions [4], [5], [6].

Knowledge is familiarity, awareness, or understanding of someone or something, such as facts, information, descriptions, or skills, which is acquired through experience or education by perceiving, discovering, or learning. Hornby explains knowledge as the information, understanding and skills that one gains through education or experience. In the context of this study, knowledge refers to the act of secondary school students having adequate information and understanding of the concept of fertility awareness based methods. Adolescent struggle with lack of knowledge about reproductive health and healthy sexual relationships. Therefore, knowledge and information about fertility awareness will help secondary students understand the normal variations in the body when individual reaches puberty, normal variations in the genitals and breast development, and the normal variation of menstrual cycle. Urrutia et al. (2018) affirm that information about fertility awareness is also useful in clarifying the difference between a normal physiological discharge caused by cervical secretions and an abnormal discharge caused by a sexually transmitted infection, as well as increasing awareness that if sexually transmitted infections are not treated the fallopian tubes or vas deferens can be infected, potentially resulting in infertility [7].

A critical look at our society today exposes a disturbing trend in sexual activities among adolescents. It is said to be a universal trend and not peculiar to our society. In most countries of the world, sexual activity amongst the adolescent starts before the age of 15 years. The attendant outcome of this misnomer is pregnancy. In addition, is the jeopardization or truncation of future endeavors, especially educational pursuits or skill acquisition. Unfortunately, efforts to combat adolescent pregnancy have met with limited success. It is necessary to mention that sexual arousal especially within this age bracket, is a normal adolescent development. Triggered by hormonal surge, the adolescent imbued with energy is adventurous, particularly in experimentation with sex. Be that as it may, many of our young ones who are sexually active would prefer to avoid becoming pregnant but are not using any method of contraception. This has been a major issue among teens. This unmet need can be associated with factors such as ignorance, negligence, carelessness/laxity and ill-information. In many cases providers are unfriendly which also compound the above mentioned factors. They shy away and are ashamed to access such facilities. This unmet need constitutes a gap for the researchers' motivation. One strategy in reducing adolescent pregnancy is to provide information on family planning methods that are accessible and affordable. Fertility awareness based-methods (FABMs) of family planning are accessible and free for all to practice and get protected from unwanted pregnancies [8]. Therefore, the present study investigated the knowledge of fertility awareness-based methods of faming planning among Senior Secondary pupils in Okrika Kingdom of Rivers State. The study provided answers to the following research questions:

1. What is the knowledge of FABMs of family planning among senior secondary students in in in Okrika Kingdom, Rivers State?
2. What is the knowledge of FABMs of family planning among senior secondary students in Okrika Kingdom Rivers State based on age?
3. What is the knowledge of FABMs of family planning among senior secondary students in Okrika Kingdom, Rivers State based on Religion?

Hypotheses

The following null hypothesis were formulated to guide the study at 0.05 significant level:

1. There is no significant relationship between age and knowledge of FABMs of family planning among senior secondary students in Okrika Kingdom, Rivers State.
2. There is no significant relationship between religion and knowledge of FABMs of family planning among senior secondary students in Okrika Kingdom, Rivers State.

2. Materials and Methods

The descriptive cross sectional survey design was used for this study. The population for this study comprised 5,087 senior secondary students in Okrika Kingdom, Rivers State. The sample size for the study consisted 408 which was determined using the Taro Yamane formula: $n = N/1+N(e)^2$. Multistage sampling procedure was adopted to select the participants. At the first stage, the stratified sampling technique was used to group Okrika Kingdom into three strata three based on the region namely: Ogu/Bolo, Okrika and parts of Port Harcourt Abuloma, Amadi-Ama & Okuru-Ama). At stage two, the proportionate sampling technique was used to select number of participants based on the number of student in each strata. At stage three, simple random sampling method was used select schools from each of the strata. Two from (Ogu Bolo), four (Okirika) and two schools (Port Harcourt) LGA. This gave a total of eight schools. Stage four adopted a systematic sampling technique to draw the number of participants from each of the classes with the aid of the teachers.

The research instrument for this study was a questionnaire designed titled "knowledge of fertility awareness based method rating scale (KFABMRS)", with a reliability coefficient of 0.81. Data was collected by administering the questionnaire to the respondents physically. The completed copies of the questionnaire were collated, coded and analysed using mean and Point Biserial at 0.05 Alpha level.

3. Results

The result of the study were presented below:

Table 1. Percentage distribution showing knowledge of FABMS of family planning among senior secondary students in Okrika Kingdom.

SN	Items	Yes F(%)	No F(%)	Decision
1	FABMs refers to all methods of contraception where a woman monitors and records different fertility signals to identify when she is likely to get pregnant	247(61.9)	152(38.1)	Average
2	FABMs work by identifying the signs and symptoms of fertility in the menstrual cycle and avoiding sexual intercourse to prevent pregnancy	282(70.7)	117(29.3)	High
3	Menstrual cycle lasts from the first day of woman's period until the day before her next period starts	300(75.2)	99(24.8)	High
4	Those with irregular menstrual period cannot use FABMs	161(40.4)	238(59.6)	Poor
5a	A woman must record the length of her menstrual cycle for at least 6 months to be able to identify her fertile time	221(55.4)	178(44.6)	Average
5b	One can use calendar to track length of cycle and calculate ovulation	147(36.8)	252(63.2)	Poor

6a	Fertility period can be known by wiping and checking changes in amount and texture of vaginal secretions	171(42.9)	228(57.1)	Poor
6b	First few days after menses, when the vagina is dry, without any mucus is a safe period to have sex	200(50.1)	199(49.9)	Average
6c	One sign of ovulation is when vaginal secretion mucus is thin clear slippery and stretches between fingers	218(54.6)	181(45.4)	Average
7	There is a small rise in body temperature (0.2 ^{oc}) after ovulation	139(34.8)	260(65.2)	Poor
8	Taking body temperature same time every morning before getting out of bed can be used to prevent or achieve pregnancy	115(28.8)	284(71.2)	Poor
9	Daily taking and recording body temperature along with wiping and checking vaginal secretion regularly can be used to identify ovulation	65(16.3)	334(83.7)	Poor
10	Cycle bead can be used to know ovulation period	80(20.1)	319(79.9)	Poor
11	An egg released at ovulation lives for 24 hours and sperm can live for 3 days	202(50.6)	197(49.4)	Average
12	FABMs is 99-91% effective if observations are followed consistently and correctly	105(26.3)	294(73.7)	Poor
13	FABMs are cheap and readily available to use	213(53.4)	186(46.6)	Average
14	No health personnel is needed to administer FABMs	182(45.6)	217(54.4)	Average
15	FABMs have no medical side effects	222(55.6)	177(44.4)	Average
16	No drug or device is used	239(59.9)	160(40.1)	Average
17	FABMs can be used to prevent or achieve pregnancy	209(52.4)	190(47.6)	Average
Grand total		186(46.6)	213(53.4)	Average

Guide: <40% is poor knowledge, 40-69% is average, & ≥70% is high (Source: Jatau, 2013).

Table 1 revealed the knowledge of FABMS of family planning among senior secondary students in Okrika Kingdom. The result showed on that, overall, less than half 186(46.6%) were knowledgeable about FABMs of family planning, indicating average level of knowledge while 213(53.4%) were not knowledgeable about FABMs of family planning. Thus, the level of knowledge of FABMS of family planning among senior secondary students in Okrika Kingdom, Rivers State was average [9], [10].

Table 2. Percentage distribution showing age and level of knowledge of FABMS of family planning among senior secondary students in Okrika Kingdom Rivers State

Age	Knowledge of FABMs			Total	Decision
	Poor	Average	High		
10-14 years	26(19.1)	58(42.6)	52(38.2)	136(100)	Average
15-19years	51(19.4)	128(48.7)	84(31.9)	263(100)	Average
Total	77(19.3)	186(46.6)	136(34.1)	399(100)	Average

Table 2 showed the percentage distribution of level of knowledge of FABMS of family planning based on age. The result showed that more of those aged 10-14 years and 15-19 years had averaged knowledge 42.6% and 48.7% respectively [11]. Thus, based on

age, knowledge of FABMS of family planning among senior secondary students in Okrika Kingdom, Rivers State was more among the older students.

Table 3. Percentage distribution showing religion and level of knowledge of FABMS of family planning among senior secondary students in Okrika Kingdom, Rivers State

Religion	Knowledge of FABMs			Total	Decision
	Poor	Average	High		
Islam	1(6.7)	12(80.0)	2(13.3)	15(100)	Average
Christianity	76(19.9)	172(45.0)	134(35.1)	382(100)	Average
Tradition	0(0.00)	2(100)	0(0.00)	2(100)	Average
Total	77(19.3)	186(46.6)	136(34.1)	399(100)	Average

Table 3 showed the percentage distribution of level of knowledge of FABMS of family planning based on religion. The result showed that high knowledge was found more among the Christians (35.1%) followed by the Muslims (13.3%). Thus, based on religion, knowledge of FABMS of family planning among senior secondary students in Okrika Kingdom, Rivers State was more among Christians.

Table 4. Point biserial correlation showing relationship between age and knowledge of FABMS of family planning among senior secondary students in Okrika Kingdom, Rivers State

Variables		Knowledge	Age	Decision
Knowledge	Correlation Coefficient	1	0.35	H ₀ rejected
	Sig.		0.04*	
	N	399	399	
Age	Correlation Coefficient	0.35	1	
	Sig	0.04*		
	N	399	399	

*Significant; $p < 0.05$

Table 4 presents the Point Biserial Correlations on relationship between age and knowledge of FABMS of family planning among senior secondary students in Okrika Kingdom, Rivers State. The result revealed that there was a statistically significant relationship between age and knowledge of FABMS of family planning as $p < 0.05$ ($N = 399$, $r = 0.35$, $p = 0.00$). Thus, the null hypothesis which stated that there is no significant relationship between age and knowledge of FABMS of family planning among senior secondary students in Okrika Kingdom, Rivers State was rejected [12].

Table 5. Point biserial correlation showing relationship between religion and knowledge of FABMS of family planning among senior secondary students in Okrika Kingdom, Rivers State

Variables		Knowledge	Religion	Decision
Knowledge	Correlation Coefficient	1	0.02	H ₀ not rejected
	Sig.		0.65*	
	N	399	399	
Religion	Correlation Coefficient	0.02	1	

Sig	0.65*	
N	399	399

*Not Significant; $p > 0.05$

Table 5 presents the Point Biserial Correlations on relationship between religion and knowledge of FABMS of family planning among senior secondary students in Okrika Kingdom, The result revealed that there was no statistically significant relationship between religion and knowledge of FABMS of family planning as $p > 0.05$ ($N = 399$, $r = 0.02$, $p = 0.65$). Thus, the null hypothesis which stated that there is no significant relationship between religion and knowledge of FABMS of family planning among senior secondary students in Okrika Kingdom, Rivers State was not rejected.

4. Discussion

The findings of this study revealed average 186 (46.6%) knowledge of FABMS of family planning among senior secondary students in Okrika Kingdom of Rivers State. This result is not encouraging it means that a good number of the respondents are not able to monitor and record the different fertility signal to identify when they are likely to get pregnant to guide timing of sexual intercourse. The resultant effect is continuous incidence of unintended and or unwanted pregnancy. This finding was anticipation noting the rural background where this research was conducted. Most rural areas have little or no access to contraceptive education. This finding is similar to the results of studies carried out by other scholars. The finding of this study is in keeping with that of Foluso and Gigi carried out among non-academic workers in a Private University in Ogun State which revealed moderate level of knowledge of Natural family planning methods among the respondents. Also in line with the present study is a study by Capotosto which revealed that women seeking pregnancy have low to moderate fertility knowledge [13].

Also in line is findings of Kabonga in Chilonga Zambia who revealed that about 58.2% of the respondents had limited knowledge on natural family planning. Out of which only 41.6% (171) of respondents could state at least one method of NFP. On the contrary, findings of Danis et al (2017) revealed that medical student do not have adequate knowledge (53.57%) of FABMs and do not have confidence in sharing FABMs information with patients. The findings of this study is also at variance with a study carried out among Senior Secondary School Students in Abakaliki Metropolis, by Ndudi et al (2020) whose finding show low utilization of natural methods (15.3%), male condom (42.0%), female condom (22.3%). Sherry et al. (2010), stated that only 3% to 6 % in Ogun State, Nigeria of physicians have correct knowledge of the effectiveness in perfect use of natural family planning methods. Also contradicting this study is Ezeome and Nwankwo (2020) who reported poor knowledge of FABMs among men and women in Enugu, Nigeria. Dissimilarity found between the present and previous one might be due to the heterogeneity of the respondents while the present is carried out among secondary school student on FABMs the previous is among medical students, women and men who are more mature and exposed to family planning services (z in most cases. It is assumed that knowledge influences utilization hence, intensifying family planning education in secondary schools to improve their knowledge of fertility awareness is very necessary for the sexually active one [14].

The result shows that based on age knowledge of FABMS of family planning was higher among older students aged 15-19 years. (48.7%) followed by 10-14years (42.6%) respectively It can be deducted that older student know more of how to monitor and identify the fertile period during their menstrual cycle. The present finding corroborates with findings of Asiedu in Cape Town and Dangat and Njau in Tanzania where majority (51%) of students between 15 and 19 years had adequate level of knowledge on family planning services. Ejembi in his report said use of contraceptive increases from 4% at age

15-17% to 17% 40-45years with age, this finding may not be surprise because it is assumed that as age increases there is increase desire to engage in sexual intercourse thus the increase in knowledge of FABMs. The tested hypothesis established that there a statistically significant relationship between age and knowledge $p < 0.05$ ($N = 399$, $r = 0.35$, $p = 0.00$). The findings of this study is similar to that carried out among adolescent by Samuel and Elechi which shows that Age significantly influences adolescent knowledge of contraceptive, ($df = 1$, $X^2 = 15.495$, $P = 0.00$). The similarity could be based on the premise that both studies were focused on knowledge of family planning methods among adolescents.

This is in consonance with the study of Duane et al who observed that women of reproductive age interest in learning to track their menstrual or reproductive cycle has increased dramatically over the last couple of decades, both for health monitoring and family planning purposes. This interest has been paralleled and fuelled by the development of over 500 mobile health applications intended for cycle tracking, more than triple the number from only 5 years ago. By working with trained instructors or via other educational programs, Women or couples of all age level can learn how to track their cycles and. increasable use fertility awareness-based methods for family planning purposes [15].

Thus, based on religion, Knowledge of FABMS of family planning among senior secondary students in Okrika Kingdom, Rivers State was found to be more among Christians. The result implies that more Christians know how to keep tract of the days of their menstrual cycle to identify the start and end of their fertile period. The tested hypothesis revealed that there was no significant relationship between religion and knowledge $p > 0.05$ ($N = 399$, $r = 0.02$, $p = 0.65$).). The present finding differs from that of Samuel and Elechi (2017) which affirms that religion significantly influences adolescent's knowledge of contraceptives ($df = 1$, $X^2 = 68.7$, $P = 0.00$). The present study differ from one conducted by Barro and Bado among religious leaders in Burkina Faso who reported that Knowledge of FABMS was more of 90.7% among Muslim when compared to Catholics (5.5%) and Protestants 3.8%. The finding is not in agreement with that of Owolabi, et al. in Osogbo in Nigeria which showed majority 118(59%) of respondents who are Muslims where knowledgeable about family planning contraceptive. The difference could be due to the heterogeneity and size of the study population while the previous studies is carried out among religious leaders and women of child bearing age the present one is carried out among secondary school students. Bellow et al. expounded that Religion has a very powerful influence on the activities of members of the society, whether they are Christians, Muslims or African Traditional worshippers. Religion is a strong predictor of contraceptive use ($P < 0.05$). Studies of Mohammed-Durosamorun et al. Extensive literature exists on the association between religion and Knowledge of FABMs, much of which focuses on the alleged higher fertility and greater resistance to Family Planning. The views of religious leaders carry great weight and profoundly influence the behaviour of the general population [16].

5. Conclusion

Based on the findings of the study, it was concluded that there was a fair knowledge of fertility awareness-based methods of family planning among senior secondary students in Okrika Kingdom, Rivers State which was linked directly to the religious affiliation of the students. Based on the findings of the study, the following recommendations are made;

Ministry of Health and health educators to embark on Fertility Awareness Based Methods awareness campaign to secondary schools especially in the rural area. to improve their knowledge of FABMs.

Government should mandate health professional and family planning providers to provide adequate information of FABMs and include FABMs as one of the available option for student during family planning counselling to encourage utilization.

Health educators and institutions should design better educational strategies to teach FABMS in schools, to improve the level of knowledge on FABMS irrespective of their age, religion and class.

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