



ISSN: 2395-7476
IJHS 2019; 5(1): 69-72
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www.homesciencejournal.com
Received: 14-11-2018
Accepted: 17-12-2018

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Dietary intake and contraceptive usage of female student in Rivers state University, Port Harcourt

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Abstract

The use of contraceptive methods and nutrient intake among female students of Rivers State University, Port Harcourt was investigated. A cross-sectional study was conducted among the female students in the university from November 2015 to May 2016. A self-administered questionnaire was distributed, 160 were retrieved out of 168. Data obtained was analysed using frequencies and percentages. The results showed that (90%) of the student had knowledge of contraceptive. About 29.2% obtained the knowledge from friends. Oral contraceptives was the most widely used contraceptive (31.3%). On the reasons for use or non-usage, (51.8%) said they used it for prevention of pregnancy. There was no influence of contraceptives on the appetite of the subjects and their nutrient intake. In conclusion, the female students need good understanding of contraceptives, as such, they should be encouraged to go for medical checkup as to be informed properly about the different methods of contraceptive and their uses.

Keywords: Dietary intake, female students, sexual intercourse

Introduction

Contraceptive is the acts of preventing conception as a result of sexual intercourse, it is a mechanism or means by which conception as a result of sexual intercourse can be prevented or made less likely. According to Peterson *et al.* (2013)^[10] contraception is the use of various devices, drugs, agents, sexual practices or surgical procedures to prevent conception or impregnation. Contraception helps women plan if any when they want to have a baby.

As stated by Peterson and Meikle (2013)^[10], more than 200 million women in developing countries would like to delay their next pregnancy or even stop bearing children, but many of them still relied on traditional and less effective methods of contraceptives or use no method at all. It was estimated that of the 210 million pregnancies that occur annually world wide, about 80 million (38%) are unplanned and 46 million (22%) and in abortion (WHO, 2012)^[12].

Otoide *et al.*, (2001)^[8] stated that in Nigeria, unintended intercourse is the primary course of unwanted pregnancies and women with unwanted pregnancies decide to end them up by abortion. Since abortion is illegal in Nigeria, many abortions are therefore carried out clandestinely (done secretly) and often in an unsafe environment (Abiochum *et al.*, 2009). The leading contributing factor to unwanted pregnancies in Nigeria is low contraceptive usage. This has been confirmed by Rasch *et al.*, (2001). Young female students often express a need to avoid pregnancy because they may be too young to care for a baby, they may have to end or postpone their education, or be disowned by parents or sponsors, etc and yet would not stay away from bound to face its consequences, which include malnutrition and poverty.

The fear for the use of contraceptives could be one of the reason for low patronages of contracting as studies have that contraceptives cause a number of biochemical changes that indicate alterations in metabolism and nutritional status and aptitude. Serum concentrations of triglycerides, iron, copper, vitamin A tend to rise, and circulating levels of selected B-vitamins ascorbic acid, zinc and albumin decrease (DHHS, 1988)^[4].

A woman's nutritional status reflects her dietary habits, which are influenced by several life-style factors including contraceptive exposure (usage).

To this end, limited report on the usage of contraceptives including oral contraceptive on nutrient intake of women in Rivers State has been reported. This study therefore, assessed the nutrient intakes of contraceptive users and the type of contraceptive used.

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Material and Methods

One hundred and sixty healthy women aged 17 to 40 years volunteered to participate in the study. The participant completed a general information questionnaire that included questions about their health and socio-economic status, and their usage of contraceptive. Subjects' weight and height were measured to determine their relative body mass index.

All subject were asked to keep a 3 –day food record including one weekend day. Food intakes were determined from multiple regression equations based on 52 food categories and consumption frequency as described by (Hankia, *et al.*, 1990) Dietary records were coded for content of energy and 12 nutrients using the US department of agriculture food composition tables (composition of foods, washing D.C. 1989) and Food composition table for use in Africa (FAO, 1964) Intakes less than two thirds of the dietary standards were considered inadequate.

Data Analysis

Data collected were analyzed using descriptive statistics and ANOVA.

Results

Table 1 shows the age distributions of the respondents 33.8% were aged 17-22, while 24.3% were aged 23 to 28 years, majority of the respondents were single (49.5%) while only 11% were married. With regard to educational level, the 200 level had the highest percent of 25.62% while the lowest level was the 500 level participants with 11.25%. Majority of them were Christians (90.0%), while Moslem were 10.0%.

Table 1: Social Characteristics

| Parameters | Frequency | Percentage | |
|-------------------|-----------|------------|-------|
| Age (years) | | | |
| 17 – 22 | 54 | 33.8 | |
| 23 – 28 | 43 | 26.9 | |
| 29 – 35 | 39 | 24.3 | |
| 36 and above | 24 | 15.0 | |
| Total | 160 | 100 | |
| Marital Status | | | |
| Single | 79 | 49.5 | |
| Engaged | 63 | 39.5 | |
| Married | 18 | 11.0 | |
| Total | 160 | 100 | |
| Religion | | | |
| Christian | 144 | 90.0 | |
| Muslim | 16 | 10.0 | |
| Total | 160 | 100 | |
| Educational level | | | |
| Level | 100 | 40 | 25.0 |
| Level | 200 | 41 | 25.62 |
| Level | 300 | 35 | 16.25 |
| Level | 400 | 26 | 16.25 |
| Level | 500 | 18 | 11.25 |
| Total | 160 | 100 | |

The result in table showed that majority of respondents (90%) had the knowledge of contraceptive while (10%) did not have with regards to the respondents source of information about contraceptive friends were major source of information about contraceptive to the respondents. About 29.2% of the respondents received their information from friends which 24.30% obtained information from health workers.

Table 2: Knowledge and source of information about contraceptive methods

| Variables | Frequency | Percentage |
|-----------------------------------|-----------|------------|
| Knowledge of contraceptive method | | |
| Yes | 144 | 90.0 |
| No | 16 | 10.0 |
| Total | 160 | 100 |
| Source of information | | |
| Friends | 42 | 29.2 |
| Health workers | 35 | 24.30 |
| Radio | 10 | 6.94 |
| Print media | 16 | 11.11 |
| Television | 17 | 11.8 |
| Church | 9 | 6.25 |
| Parents | 14 | 9.72 |
| Others | 1 | 0.69 |
| Total | 144 | 100 |

Table 3. below shows that the some of respondents (31.3%) used oral contraceptive pills while condom/diaphragm (22.9%) came second on the list of contraceptives usage.

Table 3: Contraceptive Methods and types used

| Variables | Frequency | Percentage |
|-----------------------------------|-----------|------------|
| Types of contraceptive | | |
| Intra uterine device (IUD) | 6 | 7.3 |
| Implant | 8 | 9.6 |
| Injectible contraceptive | 10 | 12.0 |
| Patches | 2 | 2.5 |
| Condom/diaphragm | 19 | 22.9 |
| Oral pills | 26 | 31.3 |
| Periodic abstinence (sufepierod) | 8 | 9.6 |
| Withdrawal method | 4 | 4.8 |
| Total | 83 | 100 |

Table 4, shows that (51.8%) of the respondent used contraceptives to prevent pregnancy, while 27.7% used the contraceptive for health reason with regards to reason for non-usage the respondents stated lack of wider knowledge on the choice of contraceptive method (20.8%) while the fear of side effects was the major reason (24.4%).

Table 4: Reason for use and non-use of contraceptive

| Reasons for use and non –use variables | Frequency | Percentage |
|--|-----------|------------|
| To prevent pregnancies | 43 | 51.8 |
| Lack of wider knowledge | 17 | 20.8 |
| Fear of side effect | 23 | 27.4 |
| Total | 83 | 100 |

Table 5 presents the energy and nutrient intakes of women using oral contraceptive (OC). The diet of OC users was almost identical to that of none oral contraceptive users. Calcium content of the diet was positively associated with the level of protein ($n = .27$; $P < .03$). The mean iron intake in both groups was slightly lower than 1989 recommended dietary allowance (RDAs) but not because of the effect of the oral contraceptives. The subjects mean intake of B₆ exceed the RDA.

Table 5: Energy and nutrient intake of women using oral contraceptive (n -34)*

| Dietary variables | Intake | Recommended intake |
|--------------------|--------------|--------------------|
| Energy (kcal) | 2204.4 ± 270 | 2,000 |
| Protein (g) | 9.10 ± 1.4 | 8.4 |
| Carbohydrate (g) | 240 ± 33 | |
| Fat (g) | 91 ± 16 | |
| Thiamin (mg) | 1.32 ± 0.41 | 0.8 |
| Ribofalarin (mg) | 1.87 ± 0.57 | 1.0 |
| Niaan (mg) | 20.4 ± 4.0 | 14 |
| Pipidoxine (mg) | 2.0 ± 0.6 | 1.6 |
| Vitamin A (RE) | 1,070 ± 844 | 800 |
| Ascorbic acid (mg) | 104 ± 32 | 30 |
| Calcium (mg) | 956 ± 189 | 700 |
| Iron (mg) | 14.0 ± 2.8 | 13.50 |

* Mean ± standard deviation

Table 6, shows the factors influencing, the respondent choice of contraceptive. The reversibility (25.10%), and advice from health workers (24.30%) has the highest influence on the respondent choice of contraception method.

Table 6: Factor influencing their choice of contraceptive method

| Factors | Frequency | Percentage |
|----------------------------|-----------|------------|
| Advice from parent | 4 | 4.82 |
| Advice from health workers | 20 | 24.10 |
| Availability /Access | 6 | 7.23 |
| Convenience | 8 | 9.64 |
| Reversibility | 21 | 25.30 |
| Spouse/friends influence | 12 | 14.46 |
| Satisfaction with method | 7 | 8.63 |
| Religion advice | 5 | 6.02 |
| Total | 83 | 100 |

Discussion

The result of the study revealed that the age range of respondents was 17years and above indicating that at 17 years and above indicating one can be a university that at 17 years and above, one can be a university student and sexual active. And being a university student is prone to radical sexual intercourse due to the liberal atmosphere of the university environment mostly the younger ones in between 17-21 years, who may not have proper knowledge of contraceptive and this in turn may lead to unwanted pregnancies and the predicament of dealing with the unfolding problems.

The finding in this study agrees with the findings of Black, *et al.*, (2012) [2] that teenage pregnancies, especially among young teens in universities are at greater risk of adverse outcomes including early birth, low birth weight and death or the infant in the absence of contraceptive. Therefore, high level of contraceptive awareness is a necessity as agreed with the findings of Lavin and Cox (2012) [5] that comprehensive sex education and access to birth control are effective in decreasing pregnancy rates in this age group. In the same vein, martial status, educational level in the university and religion does not influence the practice of contraceptive.

It is seen from the results of these study that contraceptive, whether with a good understanding or not, have been known right from the time immemorial, and this agrees with the findings of Cuomo, (2012) where he said that the use of horney, acacia leaves and lint were methodically placed in the vaginal to block sperm passage. And this again agrees with that of Lipsey, *et al.*, (2005) [6] where they maintained that in ancient Greece, silphium, was used as birth control which due to its effectiveness and desirability was harvested into extinction.

The finding in this study shows that friends were the major means by which the students got to know about contraceptives. It shows that many families in Nigeria hardly discuss sex matters with their children. In some cultures in Nigeria it is taboos to discuss the topic; especially the use of contraceptives. Also, in the findings, most of the students did not use contraceptives due to certain reasons. This is in line with the findings of Oye-Adenison and Isaac (2004) [9], who stated that the low usage of contraceptives led to high rate of unwanted pregnancy. In the report of WHO (2012) [12] that part of the reason that many woman are without birth control is that many countries limit access due to religion or political reasons, while Rush (2011), attributed it to poverty and taboos.

This study did not show any influence of contraceptive on the appetite or nutrient intake of the contraceptive usage. The fear of the ill effect of the usage to their health was not found, base on the nutrient analysis compared with the recommended RDA. Food intake of oral contraceptive users did not significantly differ from the standard set from the recommended Dietary, Allowance.

Contrary to reports reported by Canadian investigators O'leary and Lee (1975) [7] the mean calcium intake of the woman in the present study was adequate.

In conclusion, the data reported, suggest that women need more information about contraceptives of various types many of them do not use contraceptives. The usage of contraceptive never affected their dietary intake or influenced by the contraceptives. The government should make it mandatory to incorporate sex education and contraceptive methods in schools.

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