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Knowledge and Contraceptive Practices Among Mothers Attending Antenatal Clinic in Enugu State University Teaching Hospital, Enugu, Enugu State, Nigeria

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Abstract

Introduction: *Among the 1.9 billion women of Reproductive Age group (15-49 years) worldwide, 1.1 billion have a need for Contraceptive. When births are separated for two years, infant mortality rate is reduced by 45%.*

Objective: *To assess the knowledge and contraceptive practices among mothers that attend antenatal clinic in Enugu State University Teaching Hospital, Enugu, Enugu State, Nigeria.*

Methodology: *This study was a descriptive cross-sectional study that assessed the Knowledge and contraceptive practices among mothers attending antenatal clinic in Enugu State University Teaching Hospital, Enugu, Enugu State. Data was presented in tables. Summary statistics such as mean, frequency and proportion were used to represent quantitative data. Chi-square was used, at 95% confidence interval, and P-value was set at 0.05.*

Results: *Most of the mothers (87.2%) had good knowledge of contraceptives, while 12.8% had poor knowledge. However, majority of the respondents (80.6%) had poor contraceptive practice while only 19.4% of them had good practice. The factors that affected the respondents' contraceptive practice were: objection from spouse, cultural and religious belief, and difficulty in accessing most contraceptive methods.*

Conclusion and Recommendations: *The respondents had good knowledge, but poor contraceptive practice. Therefore, misconceptions about contraceptives should be debunked through continuous health education of the general population. Contraceptives should also be made readily available to the users.*

Keywords: Knowledge, Practice, Contraceptive, Antenatal, Family Planning, Enugu State.

Introduction

Among the 1.9 billion women of Reproductive Age group (15-49 years) worldwide in 2019, 1.1 billion have a need for Contraceptive; 842 million are using contraceptive methods, 270

million have an unmet need for Contraceptive [1, 2]. Failure to plan a pregnancy remains a common problem in many resources limited settings, mostly due to limited access to modern family planning services [3]. Unintended pregnancies are a global public health concern and contribute significantly to adverse maternal deaths and neonatal mortalty [4]. The likelihood of infants dying before their first birth day has been demonstrated to be far greater if the infant was born less than one year after the end of their mothers' last pregnancy than those born after a longer interval [5, 6]. Improved outcome of infants is noted to be better, if the mothers waited for 18 to 23 months after a full-term birth before conceiving again [7]. Also, when births are separated for two years, the infant mortality rate is 45%, and 60% lower when births are four or more years apart [8].

Most countries with the highest maternal, infant and child mortality rates and highest fertility rates are in Africa, and these are associated with lower spacing period before conception [9]. With use of contraceptives, a woman can control the spacing of her children, the number of children she wants to give birth to and can also attain any level of education and also increase her employment chances [10].

Knowledge of family planning is the first step towards the adoption of contraceptive method [11]. Though knowledge of contraceptive is universal, and most women attend maternal and child health services, contraceptive use remains low among women after delivery [12-15]. Contraceptive use prevalence in Nigeria ranges between 5% to 15% [16,17]. This is extremely low when compared to what is obtained in developed countries like Britain where contraceptive use among sexually active women is more than 90% [18, 19]. There is high level of awareness of contraceptive methods among Nigerian women (76%-95%) but the unmet need for contraception in our environment ranges from 13.3% to 87.5% [20-22]. Misconceptions, fears and inadequate information are the reasons attributed to this trend. Other major factors that limit usage of contraceptives are; Unavailability of contraceptives (especially among young people, unmarried people, and the poor); limited choice of contraceptive methods; side-effects or fear or side-effects; spousal disapproval; religious concerns; and bias from healthcare providers [23].

Methodology

This study was carried out in Enugu State University Teaching Hospital, a state tertiary health institution located in Enugu, Enugu State, Southeast geo-political zone of Nigeria. Enugu State is located between latitude 6o 30' N and longitude 7o 30' E within an area of 7,161 square kilometers. The estimated population of Enugu State based on the 2006 Nigeria's census, and a growth rate of 2.33% is 4,411,100. Females constitute 50.1% of the population of Enugu State, while women of reproductive age (15 to 49 years) constitute 26% of her population [24].

Study Design

The study was a facility based, descriptive cross-sectional study.

Study Population

The study population was mothers who attended antenatal clinic in Enugu State University Teaching Hospital, Enugu, Enugu State and who had parity one or more.

Sample Size Determination

The sample size was determined using the Fisher's formula for sample size determination for cross sectional study [25]. The total number of participants was 211.

Sampling Technique

Systematic sampling technique was used to select the participants. In the first stage, the number of mothers who attended antenatal clinic at the facility in 3 months using the facility register was calculated to be 720. In the second stage, the average monthly attendance was calculated by dividing 720 with three 720/3=240. Therefore, the sampling frame was 240. In the third stage the sampling interval was calculated by dividing the sampling frame which was 240 with the estimated sample size which was 211. 240/211 = 1. The sampling interval was 1. In the fourth stage, the index participant was selected by simple random sampling technique by balloting, and the remaining participants were selected using the sample interval which was 1 until the sample size (211) was met. The study period for this study was one month. It was done in the month of July, 2025.

Study Instruments

This was a pretested, semi-structured, interviewer administered questionnaire adapted from World Health Organization guidelines and questionnaires.

Outcome Measures

The scoring system was adjusted to reflect mothers' responses. As regards Knowledge, a score of zero to seven (0 – 7) was considered poor knowledge, and eight to sixteen (8 – 16) was considered good knowledge. The participant's practice level was graded: Zero to four (0 – 4) as Poor practice and five to eight (5 – 8) as good practice.

Statistical Analysis

The SPSS (Statistical Package for Social Sciences) statistical package version 28 was used for data entry and analysis. Data was collected and edited manually same day to detect omissions and to maintain uniform coding. Data was presented in tables and charts. Summary statistics such as mean, frequency and proportion were used to represent quantitative data. Chi-square test of significance was used to test any relationship between variables. The analysis of data was done at 95% confidence interval. P-value was set at 0.05.

Ethical Considerations

Ethical approval and informed consent process for the study was obtained from Enugu State University Teaching Hospital, Enugu, Enugu State ethical committee. All information from this study was confidential and no individual who participated in this study was linked to any information The participants were allowed to withdraw at any point during the study without any consequences to them.

Limitations

This study was a descriptive cross-sectional study and therefore did not draw conclusions about causality. Knowledge and Contraceptive practices are sensitive amongst mothers and therefore some mothers would not want to participate in the study or would not be honest with their responses.

Results

This study involved a total of Two hundred and eleven (211) mothers that attended antenatal clinic at Enugu state university teaching hospital, Enugu, Enugu state.

Table 1: Socio demographic and economic characteristics of respondents.

Table 1a: Socio demographic data of respondents.

Variables	Frequency (n =211)	Percentage (%)
Age of respondents Mean ±SD = 29±5.5 < 20 21 – 30 31 – 40 41 – 50 50 – 60	6 123 77 4 1	2.8 58.3 36.5 1.9 0.5
Religion Christians Islam	208 3	98.6 1.4
Marital status Single Married Divorced/separated	22 185 4	10.4 87.7 1.9
Educational level Primary level Secondary level Tertiary level	6 35 170	2.8 16.6 80.6
Ethnicity n=207 Igbo Hausa Yoruba Tiv Ijaw Ikwerre	192 2 7 1 4 1	91 0.9 3.3 0.5 1.9 0.5

Table 1a showed that the mean age of the respondents was 29 years. Many of the respondents (58.3%) were within the ages of 21- 30. Most of them were Christians (98.6%) and were married (87.7%). Majority of the respondents (80.8%) attained tertiary level of education, and Many of them are from Igbo ethnic group (91%).

Table 1b: Economic status of respondents.

Variables	Frequency (n =211)	Percentage (%)
Employment status n=215 Unemployed Self employed Salary employed	47 84 84	22.3 39.8 39.8
Employment status of spouse n=197 Unemployed Self employed Salary employed	3 73 121	1.4 34.6 57.3
Monthly household income # n=178 <50,000 51,000 - 100,000 101,000 - 200,000 201,000 - 300,000 301,000 - 400,000 401,000 - 500,000 >500,000	34 19 35 33 22 7 28	16.1 9.0 16.6 15.6 10.4 3.3 13.3

Marriage setting n=197 Monogamy Polygamy Area of residence N= 206 Urban Rural	192 5 172 34	91 2.4 81.5 16.1
Current number of living children n=211 0 1 2 4 >4	38 49 38 17 20	18 23.2 18 8.1 9.5
Desired number of children n=211 1 2 3 4 >4	1 14 34 122 40	0.5 6.6 16.1 57.8 19.0
Fertility decider. n=425 Husband Wife Both Husband's relatives Wife's relatives Others (multiple response)	38 210 131 5 40 1	8.9 49.4 30.8 1.2 9.4 0.3

Table 1b showed that 39.8% of respondents are both self and salary employed, while 57.3 of spouses of the respondents are salary employed. The monthly household income of majority (16.6%) of the respondents was between 101,000 – 200,000 naira. Many of the respondents (91%) are married in a monogamous setting, and 81.5% of them live in urban areas, while 57.8% desired 4 children, majority of the respondents (49.4%) had the final decision on fertility.

Table 2a: Knowledge of contraceptives

Variables	Frequency (n)	Percentage (%)
Contraceptives knowledge n =211 No Yes Unknown	16 186 9	7.6 88.2 4.3
Source of information – multiple response. n=336 Family and friends Internet Radio Television School Healthcare providers Hospitals	 66 64 32 35 34 62 43	 31.3 30.3 15.2 16.6 16.1 29.4 20.4
Modern contraceptives -multiple response. n=506 Pills Injection Female condoms Implants Intra uterine devices Female sterilization Other	 148 86 69 76 69 43 15	 70.1 40.8 32.7 36 32.7 20.4 7.1

Traditional methods - multiple response. n=311		
Withdrawal	103	48.8
Infertility period	36	17.1
Herbal	76	36.0
Breastfeeding	90	42.7
Other	6	2.8

Table 2a above showed that 88.2% of the respondents have heard of contraceptives, 7.6% have not, while 4.3% were uncertain. The source of information is mostly from family and friends (31.3%). Majority are aware of pills (70.1%), injections (40.8%), female condoms (32.7%), implants (36%), intra uterine devices (32.7%), and female sterilization (20.4%) as modern contraceptives. The traditional contraceptive methods and the proportion of respondents using them were: withdrawal (48.8%), infertility periods (17.1%), herbal (36.0%) and breastfeeding (42.7%).

Table 2b: Knowledge of contraceptives

Variables	Frequency (n=211)	Percentage (%)
Contraceptive prevents pregnancy N=211		
No	6	2.8
Yes	175	82.9
Do not know	30	14.2
Health education important use n=211		
No		
Yes	4	1.9
Do not know	168	79.6
	39	18.5
Condom prevents sexually transmitted infections n=211		
No	10	4.7
Yes	163	77.3
Do not know	38	18.0
Injection every 3 months preferred n=211		
No		
Yes	14	6.6
Do not know	107	50.7
	90	42.7
Switching methods help eliminate side effects n=211		
No	8	3.8
Yes	111	52.6
I don't know	92	43.6
Using both condom and pills is effective contraception n=211		
No	9	4.3
Yes	118	55.9
Do not know	84	39.8
Estrogen Contraceptives increase risk of cancer n=211		
No	14	6.6
Yes	87	41.2
Do not know	110	52.1

Table 2b showed that majority of the respondents (82.9%) were aware that the use of contraceptive prevents pregnancy while 79.6% believed that health education is needed for women who wanted to use contraceptive. 50.7% of the respondents reported that those using injectable contraceptives must get one every three months. Majority of the participants (52.6%) were aware that switching contraceptives might be of help to those having side effects. Using both condoms and pills is considered by 55.9% of the participants to be very effective contraceptive. 41.2% of participants perceived that using estrogen containing contraceptive increases a woman's risk of cancer.

Table 3: Overall knowledge of contraceptives

Variables	Frequency (n=211)	Percentage (%)	Chi-square (p-value)
Good knowledge	184	87.2	116.8 (0.001)
Poor knowledge	27	12.8	

Table 3 showed that 87.2% of participants had good knowledge while 12.8% had poor knowledge of contraceptives.

Table 4: Contraceptive practices among the respondents

Variable	Frequency (n=211)	Percentage (%)
Ever-use of contraceptives		
No	131	62.1
Yes	80	37.9
Type of Contraceptive used		
withdrawal	13	6.16
emergency contraceptive	27	12.79
pills/levonogestrel	70	33.18
condom	53	25.12
implants/implanon	30	14.22
breastfeeding	5	2.37
Intra uterine contraceptive device.	8	13.79
Injection	5	2.37
Experienced side effects from contraceptive us		
No	177	83.9
Yes	34	16.1
Ever switched Contraceptive method n=211		
No	172	81.5
Yes	37	17.5

Table 4 showed only 37.9% of the respondents have used contraceptives before. Majority (33.18%) of them utilized pills. Many of the respondents (83.9%) did not experience side effects, while 17.5% switched contraceptive.

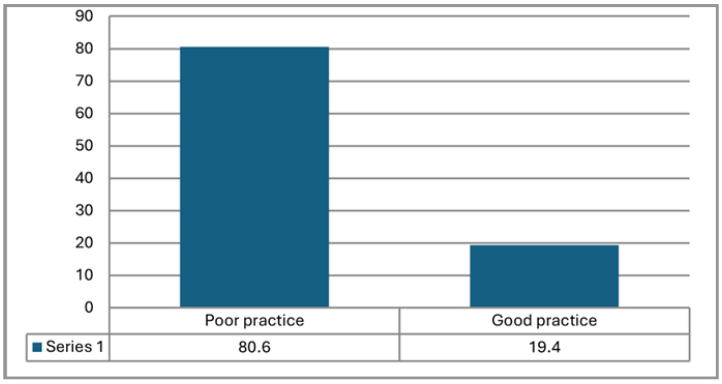

Figure 1

Figure 1 is a bar chart showing the overall level of contraceptive practice among respondents. Majority of the respondents (80.6%) had poor contraceptive practices while 19.4% of the respondents had good contraceptive practices.

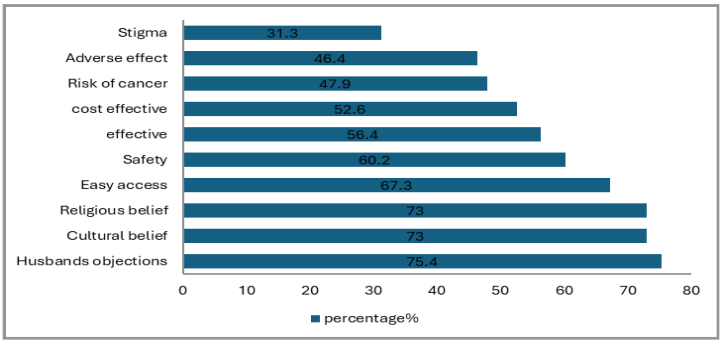

Figure 2

Figure 2 showed a bar chart showing factors affecting the practice of contraceptives among respondents. Many of the participants reported multiple factors that affected their contraceptive practice. The following factors play major roles in contraceptive practice among mothers: religious belief (73%), cultural beliefs (73%), husbands' objection to contraceptives (75.4%), easy access to family planning (67.3%), cost effectives of family planning (52.6%), adverse effects (46.4%), risk of cancer (47.9%), safety (60.2%), effectiveness (56.4%), and stigma (31.3%)

Discussion

The mean age of the respondents was 29 years. This is almost similar to the findings from a study done in Saudi Arabia where the mean age of the participants was 32 years [26]. The near similarity might be because the participants were also childbearing women. However, majority (45.6%) of the participants in a study done at Debre Tabor town, Northwest, Ethiopia were 19 years old [27]. The disparity is probably because the study was done among housemaids and it was a community-based study. The results showed that the contraceptive knowledge rate was 88.2% with the major source of information being from family and friends (31.3%) followed by the internet (30.3%) and health care providers (29.4). Contraceptive knowledge was also observed to be high in a similar study done in University of Port Harcourt Teaching Hospital where the knowledge rate of 92.5% was observed, however antenatal clinic (79%) was the main source of information [28]. In contrast, results from a study done in Oyo State showed that 22.5% of the respondents had poor knowledge of contraceptives, 34.5% had good knowledge of contraceptives, while 43% had fair knowledge [29]. However, the respondents were adolescent mothers in a suburban community. A study done in Ghana also reported that majority of the participants (98%) had good knowledge of contraceptives [30]. The similarity could be because the study respondents were also women of reproductive age.

Similarly, a study done in Indonesia also revealed that 86.53% of pregnant women were aware of family planning methods and the source of contraceptive information obtained was mainly from health professionals 63.3% [31]. Another study done in Meghalaya India among married women attending the outpatient department of a regional hospital showed that majority of the respondents (87%) have good knowledge of contraceptives, and main source of contraceptive information is also from health worker (58.6%), and from media (42%) and social media (15.5%) [32].

Majority of the respondents (80.6%) had poor contraceptive practices while 19.4% of the respondents had good contraceptive practices, and the majority (33.18%) of them utilized pills. This finding is consistent with other research in other regions and among similar participants in Nigeria, which often notes a gap between high awareness of contraceptives and their actual, consistent use. A study carried out in University of Port-Harcourt, South South, Nigeria showed that 72.7% of attendees have not used any form of contraceptive previously. Similarly, a study done in Uyo State, South West, Nigeria showed that majority of the participant did not use any method (52.6%) and the contraceptives used mostly were condoms (60.3%) withdrawal (14.1%), and pills (13.3) [33]. In Ghana only 21% of women of reproductive age are using modern contraceptives.30 Similarly, a study done in Kathmandu teaching Hospital, Nepal showed that 62.1% of the participants have not used any form of contraceptive to prevent pregnancy, however 12.3% affirmed to the use of oral contraceptive pills, 9.5% to the use of condoms, 5.2% to the use of implants, 4.7% to use of emergency contraceptive, 2.4% to the use of withdrawal [34]. This is in contrast to the findings in a study done in India that showed that the commonest used forms of contraceptives were condoms (38.2%), oral contraceptives (27.6%) IUCD (15.8%), tubectomy (10.5%), injectable device (7.9%). This showed that knowledge of contraceptives does not translate to use of contraceptives.

From the study the following factors affected the use of contraceptives: husband's objection (75.4%), culture and religious beliefs (73%), accessibility (67.3%), safety (60%), effectiveness (56.4%), adverse effects (46.4%). This contrasts with the reasons given by participants for poor usage of contraceptives in a similar study done at University of Port-harcourt, Nigeria: fear of side effects (59.1%), completed family size (22.7%), religion (7%), fear of failures (4.6%). Another study done in Uyo State, Nigeria showed that the factors that affected the practice of contraceptive were as follows: safety (23.2%), convenience (16.6%), effectiveness (14.2%), and approval by husband (13.3%). In contrast, a study done in Cross Rivers, showed that 63.8% of women do not use contraceptive or engage in family planning because of religious beliefs, reduction of sexual pleasure, culture, need of children, lack of belief in family planning, and that it promotes infidelity [35]. The difference could be because of the fact that the respondents were rural women. While in India the reasons for lack of contraceptives practices were lack of education, cultural norms, religious beliefs, economic and political barriers [36].

Conclusions and Recommendations

The contraceptive knowledge was good, but it did not reflect on the usage of contraceptives. This low usage was largely due to poor access, cultural and religious misconceptions towards various contraceptive methods, and objections from spouses. Information about family planning can be augmented by including sex education in the school curriculum. Emphasis on child spacing and not just limiting family size should be made during antenatal clinics. The ease of access can be extended to all contraceptive methods by making them available and affordable over the counter. Misconceptions about contraceptives should be debunked by effective risk communication at various areas of contact with women including health facilities, churches, and markets. Spouses should be invited to the antenatal clinic to receive health talks to understand the benefit of contraceptives.

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