

Determinants of Modern Contraceptive Use Among Women Attending Antenatal Clinic in a Tertiary Hospital in Northeastern Nigeria; A Cross-Sectional Survey

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1. ABSTRACT

1.1. Background: Low contraceptive uptake exposes women to unintended pregnancies and often the resultant obstetric complications. The immigrant communities especially from countries with low contraceptive use present a unique challenge. The main objective of the study was to describe modern contraceptive use and its associated factors among women attending antenatal clinic in Damaturu, Northeastern Nigeria.

1.2. Methods: A hospital based cross sectional survey was conducted from June to September 2024. Using consecutive sampling, 350 respondents were recruited after informed consent.

Data was collected using interviewer administered questionnaires on contraceptives use.

Data was entered in to excel sheet and analyzed using SPSS version 26, Logistic regression analysis was used to determine the factors associated with the use of modern contraceptives.

1.3. Results: Majority of the participants (30%) were 25 years to 29 years, with a mean age of 26.6 years \pm 6.0 years. Two hundred and ten respondents (60%) had formal education. Three hundred and twenty-one (91%) respondents desired to have five or more children.

One hundred and fifty-seven (44%) of the respondents had five or more living children. Only 56% of women used modern contraceptives, of which 40% used oral pills, 26% condoms and 23% injectables. Tertiary educational status, previous use modern contraceptives and desire for spacing of more than two years were independently associated with the current use modern contraceptives.

1.4. Conclusion: The Contraceptive prevalence rate among women attending Antenatal clinic in Damaturu was 29%. Majority of the respondents were using short acting contraceptive methods. Attaining tertiary education, previous use of modern contraceptives, health worker as a source of information of contraceptive and desire to space for more than two years were associated with current use of modern contraceptives.

There is a need for improvement of girl child education, contraceptive awareness and male involvement to increase contraceptive uptake in this community. Research looking at attitude of this community towards the use of long-term contraception is recommended.

2. Keywords: Modern contraceptives use; Antenatal clinic; Damaturu

3. INTRODUCTION

Africa has the fastest-growing population in the world and is expected to have over 1.8 billion people by 2035 [1]. This ought to be a crucial resource for the continent's development since it provides resources for the production and consumption of goods and services [2,3]. However, uncontrolled population growth largely results in a rise in demand for food, water, energy, social amenities, [4,5] and infrastructures necessitating the need for keeping the population at appropriate levels [6]. Family Planning (FP) is seen globally as a great public health intervention and its acceptance is rising; however, this is not the case in many African countries [7]. FP has been placed among the cost-effective, and feasible interventions with immediate and long-term benefits for individuals, families, and the nation at large [8]. A study has identified rising population growth in many African countries as a militating factor to why set developmental goals of eradicating poverty and hunger and reducing maternal and infant mortality are not yet achieved [6]. FP protects women from high-risk pregnancies, unwanted pregnancies, unsafe abortions, and sexually transmitted infections including HIV/AIDS using the various contraceptive method available [6-9]. Contraception is not just about limiting family size and spacing of birth, it is about promoting and maintaining the well-being of the mother, child, and that of the family. The use of effective contraceptive methods is of utmost relevance in improving reproductive health and preventing the risk of unwanted pregnancies. This has necessitated its inclusion in most strategies initiated by the international community, aimed at improving maternal health globally.

Globally, more than one in ten married women or those in union have an unmet need for FP. This represents those that have the intention to stop or delay childbearing but are not using any form of contraception to prevent pregnancy and it is highest in Africa. This unmet need has been attributed to the growing population of the world and inadequate FP services. There is a postulation that if the unmet need for modern contraceptive is reduced, several unintended pregnancies, unsafe abortions and unplanned births will be prevented. In developing countries, an approximate 81% of these unintended pregnancies occur among women who have an unmet need of modern contraception.

4. METHODS

4.1. Study design

A hospital based cross-sectional study.

4.2. Study site

The study was carried out in the antenatal clinic of State Specialist Hospital in Damaturu District of Northeastern Nigeria.

4.3. Data collection

4.3.1. Main outcome variable: Data on modern contraceptive use among currently pregnant women attending antenatal clinic in specialist hospital Damaturu were collected. The women were asked if they used any

contraceptive to delay or avoid conception. Modern contraceptives methods included pills, female and male sterilization, Intrauterine Device (IUD), injectables, implants, male and female condom, diaphragm and emergency contraception.

4.3.2. Sample size calculations: For this study, the sample size was calculated using Fisher's formula for sample size determination for cross-sectional studies [7]. Using a contraceptive prevalence of 26.3% obtained in a previous study in North-Western Nigeria, [6] the calculated minimum sample size was 298. To compensate for non-response, an adjustment factor of 15% was used as make-up, [10] bringing the total number of respondents to 350. Antenatal clinics in the facility run twice a week, with Monday being the booking day, and follow-up visits on Wednesday. Only clients who presented in the clinic on Mondays were recruited for the study. The average attendance at each booking clinic in the previous four weeks before the onset of data collection was 74 clients. The sample was spread over 12 weeks, and simple random sampling (using balloting) was employed in selecting respondents on every clinic day till the allotted sample proportion for the day was met. This process was repeated till all the data were collected. A semi-structured interviewer-administered questionnaire was deployed to determine respondents' sociodemographic characteristics, fertility pattern, awareness, and prevalence of contraceptive use.

4.3.3. Statistical analysis: Data were entered in Excel sheet and exported to SPSS version 26 for analysis. Descriptive analysis was done by calculating mean and standard deviation for continuous variables and proportion for categorical variables. To identify factors associated with modern contraceptive use, bivariate logistic regression between outcome variable (modern contraceptive use & non-use) and independent variables (age, education of respondent) were analyzed.

5. RESULTS

A total of 350 women who gave consent to participate in the study were interviewed. The mean age of the respondents was 28.6 years \pm 6.0 years and the majority 105 (30%) of the 350 respondents were aged 25 years to 29 years, with 46 (13%) being above 40 years. A total of 210 (60%) of the respondents had formal education, and majority 250 (71%) of them were not employed.

The age at marriage ranged from 8 years to 37 years (median=18; IQR=5), while 169 (48%) of the respondents married before 20 years. Almost all the respondents 348 (99.4%) were married with only one each that were divorced and widowed (Table 1 to Table 3).

Table 1: Socio Demographic characteristics of the Study participants.

Variable	Frequency (n=350)	Percentage (%)
Age		
Less than 25	69	19
25-29	105	30
30-34	91	26
35-39	39	11
\geq 40	46	13

Education status		
Informal/None	140	40
Primary	52	14
Secondary	95	28
Tertiary	63	18
Employment Status		
Housewife	250	71
Petty trader	55	15
Employed	45	41
Husband Education Status		
Informa/None	142	40
Primary	57	16
Secondary	73	20
Tertiary	78	22

Table 2: Reproductive history and fertility intentions of study participants.

Variable	Frequency	Percentage
Age at marriage		
Less than 20	169	48
20-25	155	44
26 and more	26	7
Parity		
Less than 5	193	55
5 or more	157	44
Space between children		
Less than 2	163	46
2 years	162	46
More than 2 years	25	7
Desired number of children by woman		
Less than 5	29	8
5 or more	321	91
Desired number of children by husband		
Same number	75	21
More children	49	14
Less children	226	64
Desired future spacing		
<2	19	5
2	190	54

>2	141	40
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Table 3: Awareness and ever use of modern contraceptives.

Variable	Frequency	Percentage
Aware of modern contraceptives		
Yes	289	82
No	61	17
Source of information about contraceptives		
Health talk	101	34
Radio	113	39
Friend	53	18
Family member	22	7
Previous use of modern contraceptives		
Yes	199	56
No	151	43
Methods used		
condom	53	26
Oral pills	81	40
Injectables	47	23
Implants	11	6
Intrauterine device	7	5

6. DISCUSSION

This study looked at the factors associated with modern contraceptive use among women living in Damaturu. Women with previous use of modern contraceptives, those who have attained tertiary education, those who desire child spacing of more than two years, those whose husbands desire more children and those who got the information of modern contraceptives from the health worker were more likely to use modern contraceptives. The prevalence of modern contraceptive use among married women living in Damaturu was found to be 29% that is lower than the current prevalence of the country (Nigeria) which is 39% [8]. Living in a new community may greatly improve the decision making and discussion about contraceptives amongst the couples [11-14] and yet in some cases the general practitioners are less likely to discuss contraceptive with the women.

The lower prevalence could also be explained by the small number of clients that seek for medical attention in a relatively expensive centre like ours. A significant proportion of the participants did not have any formal education or had attained only primary education. The participants who had attained tertiary education were four times higher odds of using modern contraceptives than those who had no formal education after controlling for confounders. This finding is consistent with other studies showing that educated women were more likely to use modern contraceptives than their less educated counterparts [15-17]. Formal education is likely to influence the attitudes, knowledge and access to health services. Knowledge and access are very important in determining those who will use the modern contraceptives.

Nearly three quarters of the women desired child spacing for two or more years though only 29% were currently using modern contraceptives, the remaining 39% may have had unmet need for contraception. The women who desired spacing of more than two years had higher odds of using modern contraceptives. A study done in Northwestern Nigeria showed that women with future desire for children would like to have two or more years of spacing [18]. Potential contributing factors to the high unmet need for contraceptives include failure to get husband's approval, lack of awareness about modern contraceptives, or fear of side effects according to a systematic review of studies done in Sub-Saharan Africa; male partner approval was found to negatively affect contraceptive use [19]. Another possible explanation can be the absence of the husband, where the couple may not stay together sometimes because of employment status. Majority of the participants had heard about modern contraceptives and only half of them got the information from a health worker. Participants who got the information of modern contraceptive form a health worker were independently more likely to use modern contraceptives. In a study where majority of the participants got information from television, only attitude of the participants and religious influence affected the use of modern contraceptives [20]. Information from a health worker is likely to be accurate and gives an opportunity to address any misunderstanding [21]. Participants who got their information from friends on other hand are likely to get distorted and incomplete information that hinder them from using modern contraceptives. Women who had ever used any modern contraceptive were more likely to re-use the contraceptives again in this population. The main reason for choosing a particular contraceptive was the knowledge of its side effects.

7. CONCLUSION

In this largely married population living in Damaturu, the modern contraceptive prevalence among married women were 29% with majority using short term contraceptives. The more educated women, those who had ever used contraceptives and those who desired spacings their children for more than two years had higher odds of using modern contraceptives. These women desired spacing their pregnancy for more than two years, but they were using short term contraceptive methods. The participants desired to have an average of nine children and considered that the approval of their husband was crucial before the use of the contraceptives.

8. FUNDING

The study was funded by the investigators.

9. ETHICS APPROVAL AND CONSENT TO PARTICIPATE

Ethical approval was obtained from the Research and Ethics committee of Yobe State Specialist Hospital Damaturu. Information about the study was explained to the participants and informed written consents was obtained from each of them. Participation was voluntary and participants had the right to withdraw from the study at any time.

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