

## CONTRACEPTIVE PRACTICES AND DETERMINANTS OF CURRENT CONTRACEPTIVE USE IN BORNO STATE, NIGERIA.

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### INTRODUCTION

Nigeria is the most populous country in Africa with a population of over 140 million people<sup>1</sup>. It also has a fertility rate of about 5.7-lifetime birth per woman and annual rate of population growth of 3.2%<sup>1,2</sup>. As the statistics above indicate, Nigeria is a country with a rapidly growing population. It is known that population has an effect on the well-being and quality of life of all nations and regulating fertility goes along with socioeconomic development. Therefore, this trend is not good for a country that has poor health and social indexes like high level of poverty, illiteracy, unsafe abortion and maternal mortality and infant mortality ratios<sup>2, 3</sup>. Contraception has become an acceptable means of controlling family size worldwide. The use of safe and effective methods of contraception allows couples to determine the number and spacing of their pregnancies. The 1994 International Conference on Population and Development (ICPD) a forum in which countries committed to work toward achieving the goal of universal access to reproductive health services, including access to effective contraceptives<sup>4,5</sup>, deemed access to such methods a fundamental human right. However, Nigeria has one of the lowest rates of contraceptive utilisation the world over<sup>6</sup>. Indeed, the prevalence of contraceptive utilisation varies widely in Nigeria from 7% to 11.1%<sup>2,7</sup>. Poor utilisation is particularly prevalent in northern Nigeria<sup>7</sup>. Improving the use of effective contraception contributes to reducing the burden of reproductive ill health by decreasing maternal and infant mortalities. Furthermore, increasing contraceptive use reduces fertility, which, in turn, can play a crucial role in poverty reduction. Hence improving contraception use will help in the attainment of the millennium development goals<sup>8</sup>. It is therefore important to identify the determinants of contraception use and to utilise this in the process of advocacy. This will help policy makers and program planners in the design of future family planning strategies in our environment.

### ABSTRACT

**Background:** Contraceptive use is poor among women in northern Nigeria, but it is agreed that regulating fertility goes along with socioeconomic development. It is therefore important to identify the determinants of contraceptive use in Borno state and utilise this for planning and advocacy.

**Method:** The subjects were women of reproductive age living in urban as well as rural settings in Borno State, northeastern Nigeria. Questionnaires were administered enquiring about their socio-demographic characteristics and contraceptive practices. Logistic regression analysis was used to construct a model for significant determinants of contraceptive use.

**Results:** There were 532 respondents, with a mean age of 29.5±7.9 years and a mean parity of 3.4±3.0. Although 77.6% were educated, 68.4% were unemployed. One hundred and seventy five participants (32.9%) had 4 or more living children while 15.4% had no living child. In 15% of the cases, the husbands have no formal education. Eighty (33.8%) of the respondents were married into polygamous setting out of which 36 (20%) have 3 co-wives. The prevalence of current contraceptive use was 29.1% and majority of the clients (38.7%) used pills. Previous contraceptives counselling and education were found to be the strongest determinants of contraceptives use.

**Conclusion:** Making contraceptives counselling routine in all our gynaecological consultation and women empowerment through girl child education may help in the improvement of contraception utilisation. Further research is needed to address the men and co-wives issue with regard to family planning in our environment.

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### OBJECTIVES

The objective of this study was to identify the contraceptive practices and determinant of current contraceptives use in our environment.

**METHOD**

The subjects were married women of reproductive age living in urban (Maiduguri) as well as rural settings (Gwoza, Madgali and Konduga) in Borno state, Northeastern Nigeria. The survey was carried out in houses already numbered for primary health care activities in the selected locations. A total 150 households were used in Maiduguri (the urban area) and 70 households in each of the rural areas. The survey was conducted as a face-to-face interview with married women of reproductive age in these households using a pre-tested Questionnaire that enquire about their demographic characteristics, family characteristics and contraceptives utilisation. One of the researchers and trained research assistants administered the questionnaire.

The Ethical Committee of the University of Maiduguri Teaching Hospital approved the study. Here education is defined as having completed at least primary school and employment defined as any kind of work (trading, civil service etc) that bring financial gain to the parson. Number and simple percentage were use to report the socio-demographic and family characteristics as well as contraceptives practices of the study population. Logistic regression was used for multivariate analysis to construct a model for significant determinants of current contraceptives. Logistic regression analysis is a technique that evaluates the performance of multiple variables in a diagnostic model. It gives the relationship of the dependent variable with a predictor after holding the other variables constant thereby removing any confounding effect. For the regression analysis, the dependent variable (current contraceptive use) was dichotomized and coded 1 for current contraceptive use and 0 for non-contraceptive use. Independent variables or background characteristics were selected for inclusion in the analysis based on their hypothesized association with contraceptive use. P value of < 0.05 was considered significant. The

statistical software SPSS version 13 (SPSS, Chicago, ILL, USA) was used for statistical analysis. Sample size for the study was obtained using the formula for the calculation of sample size for proportion  $n = (Z 1-\alpha / \delta)^2 p (1 - p)$  base on the reported prevalence of contraceptive use in Nigeria of 8.0%<sup>2</sup>. This yielded a sample size of 325, which was increase to 550 to take care of possible attrition and increase power.

**RESULTS**

The interview was attempted in 550 married women, out of whom 532 responded, giving a response rate of 96.7%. There were 10 (1.8%) non-responses in the urban area and 8

(1.5%) non-responses in the rural areas.

Table 1 shows the demographic characteristics of the respondents. The mean age was  $29.5 \pm 7.9$  years and 54.1% were 25-34 years old. Their mean parity was  $3.4 \pm 3.0$ , with 60.9% being Para 1-4. Although 77.6% were educated, 68.4% were unemployed. One hundred and forty four (27.1%) leave in the urban area.

Table 2 depicts the family characteristics of the study population. One hundred and seventy five (32.9%) had 4 or more living children, 15.4% had no living child, while 29.3% and 35.7% had no male child and no female child respectively. Eighty (15%) of the respondents have husbands that did

**TABLE 1**  
**DEMOGRAPHIC CHARACTERISTICS OF THE 532 RESPONDENTS**

CHARACTERISTICS	NUMBER	PERCENTAGE
Age group (years)		
15-24	135	25.4
25-34	288	54.1
=35	109	20.5
Total	532	100
	Mean= $29.5 \pm 7.9$	Range = 15-50
Parity group		
0	65	12.2
1-4	324	60.9
=5	143	26.9
Total	532	100
	Mean= $3.4 \pm 3.0$	Range=0-15
Religion		
Islam	427	80.3
Christianity	105	19.7
Total	532	100
Education		
Educated	413	77.6
Uneducated	119	22
Total	532	100
Occupation		
Employed	168	31.6
Unemployed	364	68.4
Total	532	100
Place of residence		
Rural	388	72.9
Urban	144	27.1
Total	532	100

TABLE 2

## FAMILY CHARACTERISTICS OF THE 532 RESPONDENTS

CHARACTERISTICS	NUMBER	PERCENTAGE
<b>No. Of living children</b>		
0	82	15.4
1-3	275	51.7
=4	175	32.9
Total	532	100
<b>No. of living male children</b>		
0	156	29.3
1-3	272	51.2
=4	104	19.5
Total	532	100
<b>No. of living female children</b>		
0	190	35.7
1-3	236	44.4
=4	106	19.9
Total	532	100
<b>Husband's education</b>		
Yes	452	85.0
No	80	15.0
Total	532	100
<b>Husband's living children</b>		
0	74	13.9
1-4	254	47.8
=5	204	38.3
Total	532	100
<b>Husband's male children</b>		
0	135	25.4
1-4	270	50.8
=5	127	23.9
Total	532	100
<b>Husband's female children</b>		
0	159	29.9
1-4	280	52.6
=5	93	17.5
Total	532	100
<b>Family type</b>		
Monogamy	352	66.2
Polygamy	180	33.8
Total	532	100
<b>No. of co-wives</b>		
1	92	51.1
2	52	28.9
3	36	20.0
Total	180	100

not have a formal education and 38.3% of the husbands' have 5 or more living children. One hundred and eighty (33.8%) of the respondents were married into polygamous settings out of which 36 (20%) have 3 co-wives. One hundred and thirty six (75.6%) of the co-wives had 4 or more children, 82 (45.6%) had 4 or more male children and 25 (13.9%) had 4 or more female children. Although 17.1% of the respondent did not desire any more children, 39.3% desired to have 3 or more additional children.

Table 3 details the contraceptive practices of the study population. The prevalence of contraceptive use was 29.1%, majority of the clients (38.7%) uses pills, and only 1.3% had bilateral tubal ligation. Two hundred and fifty eight (48.5%) had contraception counselling in the past and in 120 (46.5%) of them the counselling was obtained in a secondary health care facility. Only 12.4% of the husband's have ever used any form of contraceptive before and in the polygamous settings, 19.6% of the co-wives had ever use contraceptives.

Table 4 shows the multilevel logistic regression analysis model of the variables that are significant determinants of contraception use. Previous contraceptive counselling [Coefficient=1.406, P=0.000 OR (95%CI) =4.08(2.62-6.37)] was the strongest determinant of current contraceptive use, followed by having an educated husband [Coefficient=1.399 P=0.001 OR (95%CI) =4.05(1.76-9.30). On the other hand being in a monogamous marriage [Coefficient= -1.744 P=0.000 OR (95%CI) = 0.18(0.07-0.44)] and in polygamous settings, the number of cowives [Coefficient= -1.658 P=0.000 OR (95%CI) = 0.19(0.09-0.39)] were found to have significant negative association with current contraceptives used.

## DISCUSSION

The ages of the women in this study ranges between 15-50 years with a mean of 29.5 years, which were similar to those, reported from other studies in Africa<sup>9, 10</sup>. This age distribution generally reflects the age range of

<b>Co-wives living children</b>		
0	2	1.1
1-3	42	23.3
=4	136	75.6
Total	180	100
<b>Co-wives male children</b>		
0	7	3.9
1-3	91	50.5
=4	82	45.6
Total	180	100
<b>Co-wives female children</b>		
0	43	23.9
1-3	112	62.2
=4	25	13.9
Total	180	100
<b>Number of more children desired</b>		
0	91	17.1
1-2	93	17.5
=3	209	39.3
Uncertain	139	26.1
Total	532	100

**TABLE 3**  
**CONTRACEPTIVE PRACTICE OF THE 532 RESPONDENTS**

Variables	Number	Percentage
<b>Current Contraceptives use</b>		
No	377	70.9
Yes	155	29.1
Total	532	100
<b>Contraceptives methods in use</b>		
Pills	60	38.7
Injectables	44	28.4
Safe period	14	9.1
Implants	12	7.7
IUCD	11	7.1
Male condom	11	7.1
BTL	2	1.3
Coitus interruptus	1	0.6
Total	155	100
<b>Previous contraceptive counselling</b>		
No	274	51.5
Yes	258	48.5
Total	532	100
<b>Place of counselling</b>		
Secondary HC	120	46.5
Tertiary HC	85	32.9
PHC	33	12.8
Private clinic	20	7.8
Total	258	100

married women in the study area.

The majority of women in this study (60.9%) were Para 1-4 and the 51.1% having 1-3 living children may be a reflection of this parity. This shows that fertility in the study population is surprisingly not as high as was expected, in contrast to the report of other studies in the same region<sup>9,11,12,13</sup>. This may be related to the high prevalence of contraceptive used found in this study.

Similar to the report of another study in the same region of the same country<sup>14</sup>, majority of the study population 80.3% were Muslims, because Islam is the religion practiced by predominant number of people in Northern Nigeria. Majority of the study population (77.6%) were educated but in contrast to this, 68.4% were unemployed.

Polygamy is part of the daily reality for most West Africans<sup>15</sup>. Similar to the report of another study<sup>16</sup> a third of the population (33.8%) in this study were practicing polygamy. In 6.8% of the cases, there were three co-wives and in 25.6%, the co-wife had =4 living children revealing a possible competition among co-wives to bear more children for economic and other reasons. Similar to the report of a study in Africa<sup>12</sup> majority of the women in this study (56.8%) wants more children, with 39.3% desiring to have =3 more children. Although the fertility of the study population is not high, the trend may be reversed if nothing is done about this desire to have more children.

The prevalence of contraception utilisation of 29.1% found in this study was higher than reported from other studies in Africa<sup>2,7,17</sup> and Pakistan<sup>18</sup> a developing country like Nigeria. This high contraceptive utilisation rate may not be unrelated to the composition of the study population, 77.6% being educated and a substantial proportion (48.5%) that had contraception counselling in the past. However, in contrast to the reports of other studies<sup>19,20</sup> only 12.4% of the husbands in this study ever use a contraceptive method.

<b>Husband's contraceptive use</b>		
No	466	87.6
Yes	86	12.4
Total	532	100
<b>Use of contraception by co-wives</b>		
No	57	31.8
Yes	36	19.6
Don't know	87	48.6
Total	180	100

**TABLE 4**  
**MULTILEVEL LOGISTIC REGRESSION ANALYSIS MODEL OF**  
**THE SIGNIFICANT DETERMINANTS OF CONTRACEPTIVES USE**

<b>FACTORS</b>	<b>Coefficient</b>	<b>Pvalue</b>	<b>OR (95% CI)</b>
<b>Age</b>			
15-24	0.044	0.014	1.05(1.01-1.08)
25-34	0.39	0.74	1.48(0.15-14.9)
=35	-	-	-
<b>Education</b>			
Educated	1.247	0.003	3.48(1.52-7.98)
Uneducated	-	-	-
<b>Occupation</b>			
Employed	0.902	0.005	1.82(1.24-2.40)
Unemployed	-	-	-
<b>Previous Con. Counselling</b>			
Yes	1.406	0.000	4.08(2.62-6.37)
No	-	-	-
<b>Family type</b>			
Monogamy	-1.744	0.000	0.18(0.07-0.44)
Polygamy	-	-	-
<b>Husband's male children</b>			
0	-0.18	0.87	0.83(0.09-7.17)
1-4	0.260	0.000	1.30(1.16-1.45)
=5	-	-	-
<b>Number of cowives</b>			
1	-0.57	0.55	0.60(0.12-3.14)
2	-1.658	0.000	0.19(0.09-0.39)
3	-	-	-
<b>Husband's education</b>			
Educated	1.399	0.001	4.05(1.76-9.30)
Uneducated	-	-	-
Educated	-	-	-
<b>Use of Con. by husband</b>			
Yes	1.079	0.001	2.94(1.58-5.48)
No	-	-	-
OR= Odd Ratio    95%CI= 95% Confidence Interval			

Majority of the women used the Pills in contrast to the reports of other studies in the same country that shows intrauterine contraceptive device (IUD) to be the most frequent used contraceptive method<sup>9,19</sup>.

Because a number of socioeconomic and family factors may influence contraceptive practice, the influence of these factors on contraception utilisation was analysed using multilevel logistic regression analysis. As many of the correlates of contraceptives use are interrelated, this model is useful in determining those variables that are independently related to contraceptives use. In this study, previous contraceptives counselling was found to be the strongest determinant of current contraceptives use implying that our women will be using contraceptives if properly informed. Female education is fundamental to her psychological will and decision-making ability<sup>21</sup>. Similar to the results of other studies<sup>7,10,13,22</sup> education was found to be a strong determinant of current contraceptives, suggesting that educated women are more likely to want to control their fertility. Similarly, women employment is considered to be an important factor in enhancing their status, involvement in household decision-making and therefore control over reproductive decisions<sup>21, 23</sup>. This study shows occupation (being employed) to be a significant determinant of current contraceptives use. The above findings suggest that one of the most important measures that can be taking to improve the use of contraceptives is women empowerment through education and employment.

Fertility and family planning research and programmes in the past had ignored the role of men focusing only on women behaviours. Men reproductive motivation largely affects the reproductive behaviours of their wives and African men play important roles in the decision about family life including fertility and family planning<sup>24</sup>. This study showed that husband's education and number

of living male children have significant influence on current contraceptives use by their wives. This finding was similar to the report of another study<sup>24</sup> but in contrast, another study showed male education and income do not significantly influence their fertility<sup>25</sup>. Interestingly and similar to the result of a previous study in the same environment<sup>26</sup> being in monogamous (compare to polygamous) marriage was found to have negative influence on current contraceptives use. It was polygamy (compare to monogamy) that is expected to have negative influence on contraceptives use but the effect of polygamy on fertility and therefore on contraception use has puzzled demographers, who are still

divided on the issue. Some studies have concluded that polygamy has no effect on contraception use and therefore on fertility<sup>15, 27</sup> whereas others have concluded that polygamy is associated with non-utilization of contraceptives<sup>17, 28</sup>. Nevertheless, in polygamous setting our study revealed that numbers of co-wives have a significant negative influence on current contraceptives use depicting a possible competition to have more children, and hence more control in household matters.

Family planning programmes are design to offer assistance in spacing and limiting children for everyone, which will go a long way in enhancing their socioeconomic development.

This study shows, previous contraceptive counselling, education and employment among others factors to have significant influence on current contraceptives use. Making contraceptives counselling a routine in all our gynaecological consultation and women empowerment through girl child education and provision of income generating occupation to the female populace will help in the improvement of contraception utilisation in our environment. Formulation of policies that will involve the men in family planning programmes will be of immense benefit. It is proposed that further research is needed to address the men and co-wives issue with regard to family planning in our environment.

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