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ORIGINAL RESEARCH

Prevalence and determinants of current contraceptive use among married women in Jada Local Government Area, Adamawa State, Nigeria

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Abstract

Background: Family planning is a cost-effective intervention in the prevention of maternal, infant and child mortality. However, its uptake has been hamstrung by a myriad of factors in Northern Nigeria and sub-Saharan Africa as a whole.
Objective: To determine the prevalence as well as determinants of current contraceptive use in Adamawa State, northern Nigeria.
Methods: The study was a descriptive cross-sectional in design. The participants were married women of reproductive age in Jada Local Government Area of Adamawa State. Participants were selected by multistage sampling technique. An interviewer-administered structured questionnaire was used for data collection.
Results: Five hundred and eighty married women participated in the study. The mean age of the respondents was 30.9±6.6 years. Five hundred and eleven (88.4%) were aware of contraceptives. However, the current rate of contraceptive use was 31.4%. The predictors of contraceptive use included the level of education ($p = 0.006$) and discussion with husband ($p<0.001$). The commonest reason cited for non-use of contraceptives was the fear of side effects among 144 (41.6%) women.
Conclusion: The prevalence of contraceptive use among married women was higher than the national average. High educational status and discussion of family planning with husband were the predictors of contraceptive use.

Keywords: Adamawa, Birth control, Contraceptives, Family planning, Married women.

Introduction

Family planning is one of the most cost-effective ways of preventing maternal, infant and child mortality. [1] It can reduce maternal deaths by reducing the rates of unplanned pregnancies, the need for unsafe abortion, and the proportion of high-risk

births. [1-3] As many as 3 out of 10 maternal deaths could be prevented with family planning. [4, 5] It can also lower infant mortality by about 10%, through the prevention of un-spaced and ill-timed pregnancies and births. [6] The infants of mothers who die from childbirth also have a higher risk of death and poor health. [2] Also, family planning offers a host of other benefits such as slowing the spread of HIV, promoting gender equality, reducing poverty, accelerating socio-economic development, and protecting the environment. [1,2]

Little wonder, increasing the prevalence rate of contraceptive use and reducing unmet needs for family planning were two important indicators that were used for tracking progress in improving maternal health in the defunct Millennium Development Goals (MDGs) 5 by the year 2015. However, while progress was made in other regions of the world, especially in Asia and Latin America, the story was different in sub-Saharan Africa. Worldwide, the use of modern contraception moved slightly from 54% in 1990 to 57.4% in 2015. [2] Between 2008 and 2015, the proportion of women of reproductive age who reported the use of a modern contraceptive method rose from 23.6% to 28.5% in Africa. In Asia, it increased slightly from 60.9% to 61.8% and in Latin America and the Caribbean, it remained stable at 66.7%. [2] In Nigeria, the Nigeria Demographic and Health Survey (NDHS) 2018 reported that only 17 per cent of married women of reproductive age were using any contraceptive. Twelve per cent of currently married women reported using a modern method, and five per cent used other methods of contraception. [7] Across regions, the North East had the lowest prevalence rate of contraceptive use at 3%, with 4% for Adamawa State. [7] Yet, moving away from the MDGs, targets 3.7 and 5.6 of the Sustainable Development Goals (SDGs) hope to ensure universal access to sexual and reproductive healthcare services including family planning by the year 2030. [8] For this to be achieved, there is a need for high-quality data that will enable governments to know where there are gaps in services and which areas are in the most need.

Various reasons have been adduced for the low contraceptive uptake in Nigeria and other developing countries. These include fewer choices of methods, low access to contraception, perceived and real fear of side effects, cultural or religious disapproval, poor quality of available services, users' and providers' bias and gender-based barriers. [2,3,5,9,10] In Nigeria, the government's efforts to address some of these challenges in the past included the removal of cost barriers so that even the poor can have unlimited access to contraceptives. This has led to the approval and distribution of free family planning supplies in public facilities and an increased commitment to reproductive health programmes. [7] However, the effects of these interventions on contraceptive prevalence rate needs to be assessed. Also, it is important to know the current contraceptive prevalence and possible barriers limiting the uptake in northern Nigeria. Therefore, this study assessed the prevalence and determinants of current contraceptive use in a local government area in North-eastern Nigeria- the region with the lowest contraceptive prevalence rate in Nigeria.

Methods

Study Location and Design

This was a community-based, descriptive cross-sectional study conducted in Jada Local Government Area (LGA) of Adamawa State, Nigeria from August to December 2018. Jada is one of the 21 LGAs of the state and it is located in the southern part of the state. It was created in 1991 and has a landmass area of 2,794 square kilometres. The Nigeria 2006 population census put the population of the LGA at 168,445 with 82,882 males and 85,563 females while a 2016 projection estimated it to be 225,100. [11] The major occupation of the people is peasant farming. There is a General Hospital located in Jada town, the administrative headquarters of the LGA. Also, there are 20 Primary Health Care clinics spread across the 11 wards in the LGA. All these facilities provide family planning services to members of the populace.

Study population, sample size and selection

The study population comprised only married women within the reproductive age (15-49 years) living in Jada. The minimum sample size of 377 based on 5% margin of error, 95% confidence level, response distribution rate of 50% and 20,000 estimated population was derived using the Raosoft online sample calculator. [12] However, to increase the power of the study, a total of 580 participants were studied. The participants were selected using a multistage sampling technique. In stage 1: three wards out of 11 - Jada 1, Jada 2 and Danaba were purposively selected to cover both urban and rural settings, the first two being the only urban setting in the LGA. In stage 2: four settlements from each of the three wards were selected using simple random sampling. In stage 3: households within a settlement were randomly sampled to identify and interview eligible respondents until the target number in a settlement was reached. If there was no eligible woman in a household, the immediate next one was recruited.

Data collection and ethical considerations

A structured, interviewer-administered questionnaire developed by the researchers from previous studies, [3,13] was employed to obtain data relevant to the study objectives. The questionnaire comprised questions on socio-demographic characteristics, awareness of contraception, utilization of contraceptives and reasons for non-use. The data were collected by two resident doctors from the Federal Medical Centre, Yola and four health care workers from the General Hospital, Jada. The data were stored in a computer system with confidentiality maintained. The Ethics Committee of the Adamawa State Ministry of Health, Yola approved the study. Permission to conduct the study was also obtained from the District Head of Jada LGA. Informed consent obtained from the research participants and assurance of confidentiality with all information volunteered was given to participants.

Data Analysis

Data analysis was done using Epi info Statistical software (version 7.2.1 CDC Atlanta Georgia). The results were presented with the use of frequency tables and percentages. Bivariate analysis was done using the Chi-Square test or Fisher's Exact Test, where appropriate, to compare proportions of categorical variables. Multivariate analysis, using binary logistic regression alongside Odd ratio (OR) and 95% Confidence Intervals (CI) was carried out with IBM SPSS software version 20 to determine the predictors of contraceptive use. The level of statistical significance was set at p values less than 0.05.

Results

The age of the 580 women ranged from 15 to 49 years with a mean of 30.9±6.6 years. A majority of the participants (374; 64.7%) were young adults aged 20-34 years. The Fulani ethnic group constituted the highest proportion of participants, (37.7%) followed closely by the Chamba (25.5%). Four hundred and two (69.5%) were Muslims while slightly more than half of the respondents completed at least secondary school education: 142 (41.6%) and 69 (11.9%) had secondary and tertiary levels of education respectively. Just above half, (51.9%) were grand multipara while 17 (2.9%) had 10-14 children (Table I).

Table I: Socio-demographic characteristics of the respondents

Characteristics		*Frequency*	*Percentage*
Age (Years) (n = 578)			
	<20	20	3.5
	20-34	374	64.7
	35-49	184	31.8
Ethnicity (n = 576)	Fulani	217	37.7
	Chamba	147	25.5
	Hausa	85	14.8
	Mumuye	47	8.2
	Verre	20	3.5
	Koma	17	3.0
	Others, e.g. Igbo, Kanuri.	43	7.5
Religion (n =578)	Islam	402	69.5
	Christianity	176	30.5
Education (n =578)	None	129	22.3
	Primary	142	24.6
	Secondary	238	41.2
	Tertiary	69	11.9
Place of residence (n =567)	Urban	480	84.7
	Rural	87	15.3
Type of marriage (n = 572)	Monogamy	328	57.3
	Polygamy	244	42.7
Birth Order (n = 578)	0-4	278	48.1
	5-9	283	49.0
	10-14	17	2.9

Awareness about contraceptives was high as 511 (88.4%) were aware of one form of contraceptive or the other. Despite this level of awareness, only 168 (31.4%) were currently using a modern form of contraceptive. The modern forms of contraceptives in current use included implants (39.4%), injectables (27.2%) and oral pills (24.3%) (Table II).

Table II: Awareness and current use of contraceptives

Characteristics		*Frequency*	*Percentage*
Awareness (n = 578)	Yes	511	88.4
	No	67	11.6
Source of information (n =507)	Hospital/ANC	341	67.3
	Friends	73	14.4
	Husband	49	9.7
	Radio/TV	40	7.9
	Others eg school, internet	4	0.8
Discussed with husbands (n = 534)	Yes	363	68.0
	No	171	32.0
Current contraceptive use (n = 535)			
	Yes	168	31.4
	No	367	68.6
Contraceptive type in current use (n = 168)	Implants	67	39.9
	Injectables	46	27.4
	Oral pills	40	23.8
	Condom	13	7.7
	IUCD	2	1.2

For those not using a modern form of contraceptive, the reasons included fear of side effects (41.6%) the desire to get pregnant ((26.6%), spousal disapproval (12.1%), cost (5.8%) and religious disapproval (5.2%) (Table III).

There was a significant association between ethnicity and current contraceptive use (p = 0.003). The proportion of Fulani and Hausa women who used contraceptives were the least: 42 (22.5%) and 24 (22.5%) respectively. In a similar vein, religion was also associated with contraceptive use (p<0.001) as a higher proportion of Christians (74;

42.5%) used contraceptives compared to Moslems (94; 26.1%). Level of education was also significantly associated with contraceptive use (p<0.001). Only 20 (20.6%) women who had no education were using contraceptive as compared to 37 (53.6%) who had post-secondary level education.

Table III: Reasons for not using contraceptives

Reasons	*Frequency*	*Percentage*
Fear of side effects	144	41.6
Desire to become pregnant	92	26.6
Spouse's disapproval	42	12.1
Cost	20	5.8
Against my religion	18	5.2
Other reasons	28	8.1
No reason	2	0.6

Multiple reasons were allowed

There was also a statistically significant association between place of residence and marriage type with contraceptive use (p = 0.032 and p = 0.002 respectively). A higher proportion of women who lived in urban areas (32.7%) used contraceptives compared to the proportion of rural dwellers (20.3%). Contraceptive use was also higher among women in monogamous families (36.8%) compared to those in polygamous families (24.1%). The discussion of contraception with husband was significantly associated with its use (p<0.001) as a higher proportion of those who discussed contraception with their husbands (42.2%) used it compared to those who did not discuss it with their husbands (6.6%). However, there was no significant association between age and parity with contraceptive use (Table IV).

Multivariate analysis showed that predictors of contraceptive use included educational qualification of the respondents and discussion of contraception with their husbands. Women who had tertiary education were 2 times more likely to use modern contraceptives than those who had no formal education (OR = 2.3, C.I = 1.27 - 4.25, p = 0.03). Similarly, women who had discussed contraception with their husbands were 12 times more likely to use contraceptives than those who did not (OR = 12, C.I = 5.67 - 24.30, p<0.001) (Table V).

Discussion

The level of current contraceptive use is the most commonly used index of the success of family planning programmes. [7] This study revealed that 31.4% of the participants were currently using a modern contraceptive method. This is slightly higher than 29.1% reported from Borno State and 26% from Bauchi State in same north-eastern Nigeria, as well as 26.4% in Edo State and 13.1% from Osogbo, Osun State in southern Nigeria. [6,9,13,14] The prevalence is also higher than 12% reported from the 2018 NDHS and exceeds the national target of 27% by 2020. [7,15] Though lower than figures reported from Indonesia (61.4%), Egypt (59%), Kenya (53%), Rwanda (48%) and even in some states in southern Nigeria, [7,16-18] it is still an appreciable improvement from a region that recorded 4% prevalence in a 2013 survey. This uptick can be explained by the fact that

the present study was conducted in only one Local Government Area, compared to the NDHS which sampled the whole state. It should equally be acknowledged that between the last survey and now, several efforts have been made by both government and Non-Government Organisations in increasing the uptake of contraceptive services in the region.

Table IV: Relationship between socio-demographic characteristics and current contraceptive use

Background characteristics	*Contraceptive use*	*Contraceptive Non-usage*	*χ^2 (p-value)*
	n (%)	n (%)	
Mother's age (years)			
15-19	72 (70.7)	174 (29.3)	2.08 (0.352)
20-34	84 (32.1)	177 (67.8)	
35-49	10 (38.5)	16 (61.5)	
Ethnicity			
Fulani	42 (22.5)	145 (77.5)	19.57 (0.003)
Chamba	53 (38.1)	86 (61.9)	
Hausa	24 (22.5)	59 (71.1)	
Mumuye	15 (32.7)	31 (67.4)	
Verre	9 (45.0)	11 (55.0)	
Koma	9 (60.0)	6 (40.0)	
Others	16 (38.1)	26 (61.9)	
Religion			
Islam	94 (26.1)	266 (73.9)	14.66 (<0.001)
Christianity	74 (42.5)	100 (57.5)	
Education			
No education	20 (20.6)	77 (79.4)	27.31 (<0.001)
Primary	39 (29.1)	95 (70.9)	
Secondary	71 (30.5)	162 (69.5)	
Tertiary	37 (53.6)	32 (46.4)	
Place of residence			
Urban	147 (32.7)	302 (67.3)	4.62 (0.032)
Rural	15 (20.3)	59 (79.7)	
Marriage type			
Monogamy	110 (36.8)	189 (63.2)	9.65 (0.002)
Polygamy	55 (24.1)	173 (75.9)	
Parity			
0-4	72 (29.3)	174 (70.7)	2.09 (0.352)
5-9	84 (32.2)	177 (67.8)	
10-14	10 (38.5)	16 (61.5)	
Discussed FP with husband			
Yes	153 (42.1)	210 (57.9)	67.19 (<0.001)
No	11 (6.6)	155 (93.4)	

Consistently, the low educational level has been implicated in the generally low utilization of healthcare services in sub-Saharan Africa. In this study, higher educational status is a strong predictor of current contraceptive use. Several studies in

other parts of Nigeria and elsewhere have also corroborated this result, showing that more educated women were using modern family planning methods compared to less or non-educated ones. [3,6,13,14,16,17] The consensus is that education empowers women, makes them more likely to be gainfully employed, and thus, more aware and proactive about their health and the health of their children. Similarly, educated women are more likely to understand the need to postpone childbirth, have a smaller family size and hence, use contraception more than uneducated women. [3,13,14]

Table V: Logistic regression model for factors associated with contraceptive usage

Factors		*OR*	*95%CI*	
			Lower	*Upper*
Ethnicity	Chamba (Reference category)	1.0		
	Fulani	0.877	0.392	1.961
	Hausa	1.479	0.593	3.685
	Koma	1.001	0.379	2.644
	Verre	0.413	0.088	1.941
	Mumuye	0.843	0.256	2.777
	Others	0.725	0.257	2.045
Religion	Christianity (Reference category)	1.0		
	Islam	0.584	0.300	1.138
Education	No education (Reference category)	1.0		
	Primary	1.022	0.453	2.304
	Secondary	1.834	0.919	2.658
	Postsecondary	2.326*	1.272	4.253
Marriage type	Monogamy (Reference category)	1.0		
	Polygamy	0.668	0.415	1.075
Place of residence	Rural (Reference category)	1.0		
	Urban	1.422	0.630	3.206
Discussed FP with husband	Yes (Reference category)	1.0		
	No	11.746*	5.678	24.301
	Constant	1.153		
	Model x^2 (p)			
	Classification accuracy			

***p < 0.05; FP – Family Planning; OR – Odd ratio; CI – 95% Confidence Interval**

Discussion of contraception with husband was another significant determinant of contraceptive use in the present study. Women who had previously discussed contraception with their husbands were twelve times more likely to use contraceptives than women who did not. This finding agrees with that from Kenya, Cameroon and Ghana as well as other parts of northern and southern Nigeria. [5,9,14,17,19,20] Unlike other health conditions that often directly affect one partner, reproductive and family health is one that invariably involves both partners. Therefore, when decisions are mutually taken on such matters, motivation and support are enhanced and the expected positive behaviour is bound to be adopted as attested to in the present study and others. [9,17,20]

The main reasons cited by most participants for non-use of contraceptive included the fear of side effects of the methods and the desire to become pregnant. The preponderance of this reason over others was not common in most of the literature reviewed. In another community in northern Nigeria, the desire for more children and the wish of the husband were the two foremost reasons for non-usage of contraceptives. [3] The fear of side effects was just next to those who gave no reason for non-usage of contraceptives in one study in southern Nigeria. [10] In yet another study, partner's disapproval and cost of contraceptives were the leading reasons for non-use of contraceptives. [14] It is noteworthy that this fear of side effects can either be real or perceived. For a region with generally low contraceptive uptake, most women who have fears of side effects are probably only reacting to the experience of a few others rather than their personal experience. In both cases, however, it may be a reflection of the quality of the counselling aspect of family planning services in an area. Good family planning services should include adequate counselling on the possibility and types of side effects which may range from mild to severe, and what to do in such cases as well as the concept of individual differences.

The generalizability of the findings in this study is limited by the non-probability method of sampling the study areas as well as the likelihood of social desirability bias in answering the questions.

Conclusion

The rate of contraceptive use among this cohort of married women in Jada LGA of Adamawa State, Nigeria was above the national average. Educational attainment and discussion of family planning with the husbands were the predictors of contraceptive use. The fear of side effects was the leading reason for non-usage of contraceptives. Improving girl child education and male involvement in family planning services may be essential to improving the uptake of contraceptives in this environment. Comprehensive family planning counselling that educates clients on possible side effects of contraceptives may also improve the use of contraceptives.

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Authors' Contributions: AS conceived the research idea while AS and BM designed the study protocol. AS, UE and EC collected, analysed and interpreted the data. AS and UE prepared the manuscript while BM and CE did a

critical review of the manuscript. All the authors approved the final version of the manuscript.

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