



Factors Influencing the Uptake of Modern Family Planning Methods among Women of Reproductive Age in A Rural Community in Lagos State

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Authors' contributions

This work was carried out in collaboration between all authors. Author EOO did the study design and wrote the protocol. Authors YAK and BAO did the statistical analysis and literature searches while an analysis of study was by authors OOG and MRA. All authors read and approved the final manuscript.

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ABSTRACT

Aims: Pregnancies which are too many, too early and too frequent result in maternal/child morbidity and mortality. Delivery of effective family planning services has a direct impact on maternal/child wellbeing. Though awareness of modern contraceptive methods was high, the uptake rate remained low in Agbowo Ikosi, like in many rural communities of the country. This study was therefore conducted to determine the knowledge, prevalence and factors influencing the uptake of modern family planning among women of reproductive age in Agbowo community in Lagos state.

Study Design: A cross-sectional descriptive.

Place and Duration of Study: The study was conducted among women of reproductive age group in Agbowo community, Epe Local Government area of Lagos State, Nigeria, between February and July 2013.

Methodology: A household survey of 220 women aged between 15-49 years was undertaken at Agbowo community in Lagos, Nigeria, to determine their knowledge, practice and factors influencing the use of modern family planning methods. Data was collected using a pretested, structured, interviewer-administered questionnaire.

Results: The ages of study participants ranged from 15-49 years with a mean age of 28.42±7.5 years. The majority 192 (87.3%) were married, and 183 (83.2%) were aware of family planning. The commonest source of information about contraceptives was from health workers 68 (30.9%). Despite the high level of awareness of modern family planning methods, the prevalence of contraception among the respondents was low (38.6%). The most popular contraceptive method known by respondents was the male condom 118 (64.5%). Overall, 5 (2.7%) of the respondents had good knowledge, 102 (55.8%) had fair and 76 (41.5%) had poor knowledge of family planning. The main reasons given for non-use were fear of side effects (56.3%), lack of spousal consent (48.9%) and desire for more children (48.9%). The significant socio-demographic determinants of contraceptives uptake were marital status, religion and nature of work ($p < 0.05$).

Conclusion: Contraceptives usage remains poor despite high level of awareness. Effective educational and counseling interventions are required to improve women's knowledge and subsequent uptake of contraceptive usage.

Keywords: Prevalence; determinants; uptake; modern family planning; rural community; reproductive age – group; women.

1. INTRODUCTION

Nigeria is the most populous state in sub-Saharan Africa, with the 2006 Census counting 140 million people and a growth rate of approximately 2.4 percent per annum [1,2]. The population has been projected to reach 250 million by the year 2015 [3]. Fertility has declined only slightly recently, from a total fertility rate (TFR) of 6.3 births per woman in 1981–82, to 6.0 in 1990 and 5.7 in both 2003 and 2008 [4]. Population levels such as these can cause a reduction in the 'carrying capacity' of the ecosystem, overexploitation, depletion and pressure on natural resources, thus threatening public health. In the event of overpopulation, consequently there will be water and food shortages, deforestation, environmental pollution, damage of coastlines, changing biodiversity and global adverse climatic changes [5].

In Nigeria, It has been reported that only 15.1 percent of married women of reproductive age were using any contraceptive. Ten percent of currently married women reported using a modern method, and 5 percent use other methods of contraception [6]. In addition, there is a significant unmet need for family planning in Nigeria with 16 percent of married women having an unmet need for family planning [7]. From past demographic surveys, it is known that urban women were more likely to use a method of

family planning compare to rural women [4]. Many couples use contraceptives inconsistently and this is in spite of a high awareness of contraception reported in the country [8]. Fertility in rural areas is three times higher than that of urban areas, which can be attributed to a variety of social and economic factors [3,9]. The persistently high fertility in Nigeria despite family planning programmes in place suggests that there are yet undetermined factors associated with contraception that has been rendering previous strategies less effective [10]. The large increase in size of the population is mostly a function of past and present levels of fertility and mortality in the country. In Nigeria, child spacing or the timing of every birth, including the first and last, can improve the likelihood of survival and of good physical and emotional health for the entire family at all stages of life [11]. Available research evidence indicates that effective family planning methods, would prevent 23 million unplanned births, 22 million abortions, 1.4 million infant deaths, 142,000 pregnancy related deaths and 505,000 children losing their mothers due to pregnancy related deaths [12].

Nigeria has relatively high maternal and infant mortality rates usually resulting from complications related to pregnancy, childbirth and puerperal conditions [13]. Maternal death rates for young women aged 15 to 19 are twice as high as for older women and research

suggests that girls aged 10 to 14 are five times more likely to die of maternal causes than women aged 20 to 24 years [14]. The loss of a woman in a family however is not only a personal tragedy, but infants who are abruptly weaned may not survive; other siblings may become malnourished, sick or may die due to lack of adequate care and nourishment. Family planning is hailed as one of the great public health achievements of the last century, and yet over 200 million women worldwide who want to use contraceptives don't have access to them [15].

Family Planning (FP) refers to the use of various methods of fertility control that will help individuals (men and women) or couples to have the number of children they desire and when they want them in order to ensure the wellbeing of children and the parents. Family planning simply means preventing unwanted pregnancies by safe methods of prevention. This is considered to be part of the basic human rights of all individuals or couples as it was endorsed by the International Conference on Population and Development in Cairo in 1994 [16]. Over the last 30 years, as women in the developing world have increasingly desired smaller families, contraceptive use has risen and fertility rates have fallen. In spite of these, demographic surveys indicate that the actual family size in most developing countries remains greater than the desired family size. This gap between the real and the ideal persists even in Sub-Saharan Africa, which still retains a preference for larger families and has the highest fertility rates in the world [17].

Family planning services are defined as "educational, comprehensive medical or social activities which enable individuals, including minors, to determine freely the number and spacing of their children and to select the means by which this may be achieved [18]. It provides benefits of good health and wellbeing of women and families throughout the world. This keeps the prospective parents healthy and without a child until a time of their choice. Family planning also includes teaching teens and children about sexuality and reproduction to keep them from having children before they are ready and providing contraception [16]. Family planning is an important part of efforts to improve infant and child survival. Delaying and spacing births helps women bear children during their healthiest years and enables them to have their desired number of children [19]. International health experts now believe that the healthiest interval between a

woman's previous birth and her new pregnancy is at least two years and by preventing closely spaced births, FP could save the lives of more than 2 million infants and children annually. It has also been shown that babies born less than two years after the next oldest sibling are more than twice as likely to die in the first year compared to those born after an interval of three years [20]. Like many other developing nations, majority of Nigeria's population (about 70%) live in the rural communities, these rural communities have very high fertility rate with low contraceptive prevalence rate (CPR) 8% as compared with 18% in the urban areas in Nigeria as many rural women are reluctant to accept artificial method of contraception [21,22]. This study was carried out to determine the prevalence and factors influencing the uptake of modern family planning methods among women of reproductive age in Agbowo community in Lagos state.

2. MATERIALS AND METHODS

2.1 Study Area

Agbowo town is one of the commercial centres of Epe LGA of Lagos State, Nigeria. It is situated within the Ikosi-Ejirin LCDA, located 59 kilometres north-east of Lagos along the Ikorodu-Itoikin road and covers an estimated area of about 68 square kilometres. It is a fundamentally rural community though it is gradually being transformed by continual urbanization. The predominant ethnic group is Yoruba mostly Ijebus.

The study was a descriptive cross-sectional study conducted among women of reproductive age group in Agbowo community between February and July 2013. Two hundred and twenty women were recruited using a multi stage sampling method. At the first stage, one rural LGA (Epe) was selected from the list of the four rural local government areas that existed in Lagos state. At the second stage, Ikosi-Ejirin was selected by balloting from the list of the three Local council Development Area (LCDA) in Epe LGA. The third stage involved selection of a community from the list of eighteen communities in the LCDA and Agbowo was selected by balloting. Agbowo community has two political wards (E1 and E2) with 25 and 20 streets respectively and an average of 50 households each. The study respondents were selected proportionately from the two political wards in the community. Data was collected by trained

interviewers using a pretested, structured questionnaire.

2.2 Sample Size Determination

The sample size determination for the study was derived from the formula below;

$$n = \frac{Z^2 P (1-P) [23]}{d^2}$$

Where

- n = the desired sample size
- Z = the standard normal deviate usually set at 1.96 which corresponds to 95% confidence level.
- P = prevalence of current use of any FP method (married women 15-49) in Nigeria = 15% (NDHS 2008) [24].
- D = degree of accuracy desired set at 0.05

Substituting the figure, the minimum sample size calculated was 196 but a total of two hundred and twenty questionnaires (220) were used for the study to cater for a 10% non-response rate.

The study instrument was a structured pre-tested, interviewer's administered questionnaire which was designed in English language and translated into Yoruba language because of those that didn't speak English and translated back to English to ensure accuracy.

The questionnaire comprised of three different sections with forty-three questions in all. The first section collected information on the socio-demographic characteristics of the respondents such as age, education, marital status, religion and parity. The second section sought information on the respondent's knowledge of contraception while the third section assessed the respondent's practice of contraception and factors that prevent contraceptive use among the women.

Analysis was done using Statistical Package for Social Sciences (SPSS) version 16. Findings were presented in frequency tables and cross tabulations. The Chi square test was used for comparisons while Fisher's exact was used where appropriate. Test of significance was performed using a 95% confidence interval, and the level of significance set at 0.05. To assess knowledge, correct answers to questions were awarded a score of one, while wrong answers attracted a score of zero. The total score for the knowledge section was then calculated by

adding all the scores and these were converted to percentages. A knowledge grade was assigned to each respondent based on their total percentage score as follows: poor knowledge 0-49%, fair knowledge 50-74% and good knowledge 75%-100%. Knowledge grade was a scale of performance previously used by studies carried out in Lagos [25,26].

3. RESULTS

Two hundred and twenty women were recruited into the study. All the respondents completed the questionnaire satisfactorily as it was interviewer administered. Most of the respondents 93(42.3%) were in the age group 25-34 years. The mean age ± of respondents was 28.42±7.5 years (range 15-49 years). The majority of the respondents 192 (87.3%) were married and most 127 (66.1%) were in a monogamous type of marriage. More than half 140 (63.6%) were Christians of which most 110 (50.0%) were of pentecostal origin. Most 137 (62.3%) of the respondents had secondary education while the majority 148 (67.3%) were self- employed and over half 125 (56.8%) were of Yoruba tribe.

Contraceptive awareness was high amongst the respondents as 183 (83.2%) of them had previously heard about modern contraception. Health workers 68 (30.9%), followed by mass media 67 (30.5%) and then friends/relations 39 (17.7%) largely accounted for the sources of awareness of modern contraception.

Table 1 shows that most 118 (64.5%) of the respondents were aware of barrier method (male condom) as a method of family planning. More than half 104 (56.8%) were aware of injectable and oral contraceptives 102 (55.7%) respectively among other methods of family planning. The prevalence of modern contraceptive use in this study was 38.6% and the most commonly used contraceptives were injectable 37 (43.5%) condoms 22 (25.9%) and the pills 21 (24.7%).

Table 2 shows that most (67.7%) of the respondents had knowledge of family planning as a means of limiting children. The majority (75.4%) stated FP as a means of spacing births; 73.8% to prevent unwanted pregnancies and about half (54.1%) of the respondents had knowledge of FP as a means to reduce population. Only few (25.7% and 38.3%) knew Family Planning as a means to prevent sexually transmitted infections and promotion of women's health respectively.

Table 1. Respondents' awareness and practice of various modern family planning methods

Awareness of various modern family planning methods	Frequency (n=183)	Percentage
Natural methods	66	36.1
Barrier method	118	64.5
Oral contraceptive pills	102	55.7
Implant	21	11.5
Injectables	104	56.8
IUCD	27	14.8
Sterilization	20	11.0
Uptake of modern contraceptives (n=220)		
Yes	85	38.6
No	135	61.4
Currently used FP methods (n=85)		
Pill	21	24.7
IUCD	5	5.9
Injectable	37	43.5
Condom	22	25.9

Table 2. Respondents' knowledge on the meaning of family planning

Definition	Frequency (n=183)	Percentage
Means of limiting children	149	67.7
Means of spacing births	138	75.4
Means to prevent unwanted pregnancies	135	73.8
Means to reduce population	99	54.1
Means to prevent STIs	47	25.7
Means of promoting women's health	70	38.3

Table 3 shows that more than half of the respondents 102 (55.8%) had fair knowledge of modern family planning methods 76 (41.5%) had poor knowledge and very few 5 (2.7%) had good knowledge of modern family planning.

Table 4 shows that more than half 135 (61.4%) of respondents were not using any method of contraception. Among the reasons given by those not using any family planning methods

include fear of side effects 76 (56.3%); husbands' disapproval 66 (48.9%) and desire for more children 66 (48.9%).

Table 5 shows that marital status and religion were statistically significant (**P=.00** and **.045** respectively) with uptake of family planning.

Similarly, cost of service, transportation and proximity of service showed a statistically significant association (**P=.00**) with family planning uptake as shown in Table 6.

Table 7 shows that perception of cost of service and knowledge of family planning methods were statistically significant with family planning uptake (**p=.00**).

Table 3. Respondents over all knowledge of family planning

Level of knowledge	Frequency (n=183)	Percentage
Poor knowledge	76	41.5
Fair knowledge	102	55.8
Good knowledge	5	2.7

Table 4. Barriers to the use of modern family planning methods

Barrier	Frequency (n=135)	Percentage
Desire for more children	66	48.9
Lack of spousal consent	66	48.9
Religion against FP	61	45.2
Culture against FP	50	37.0
Fear of side effects	76	56.3
Lack of knowledge	55	40.7

4. DISCUSSION

The pattern of socio-demographic characteristics in this study is comparable to that of other studies in rural Nigeria [10,12]. The mean number of living children reported by the respondents was 3.04±1.88. This is similar to the report of a study in a rural community in South-Western Nigeria which reported 3.4±1.8 births per woman [10]. The awareness of modern contraceptive methods was generally high among the respondents (83.2%). This may be due to the fact the study was conducted among reproductive age women who are exposed to one form of health education or the other on modern family planning methods by health

workers especially after deliveries and during routine immunization for their children at the primary health care facilities in the community. This high level of awareness has been similarly reported by previous studies within and outside Nigeria [27-29], including the most recent NDHS which reported that knowledge of any contraceptive method is widespread in Nigeria and 84 percent of all women knew of a modern method [8]. More so, this pattern is expected in the light of much enlightenment that is on-going on the issue of family planning through radio, television and various other forms of media in the country. Unlike some other studies where the media was the predominant source of information, about 31% of the respondents in this

study knew about contraception through health personnel, which is similar to the finding of a study done in Pakistan on the awareness and pattern of utilizing family planning services among women attending a health care centre [30,31]. It is also similar to a study on fertility intentions, contraceptive awareness and contraceptive use among women in three communities in Northern Nigeria where radio and health facilities were the primary sources of information [32]. This is a pointer to the importance of enhanced primary health care services in the rural communities, though the media would still need to do much more work on public enlightenment about modern family planning. Only a few number (17.7%) heard

Table 5. Relationship between socio-demographic characteristics of respondents and uptake of family planning methods

Variable	Uptake of family planning		Total (%) n=220	Statistical test
	Yes Freq.(%) n=85	No Freq.(%) n=135		
Marital status				$X^2=9.23$ P=.00
Single	2 (9.5)	19 (90.5)	21 (100)	
Married	79 (41.1)	113 (58.9)	192(100)	
Divorced	2 (50.0)	3 (50.0)	4 (100)	
Widow	2 (66.7)	1 (33.3)	3 (100)	
Religion				$X^2=7.91$ P=.045
Catholic	12 (40.0)	18 (60.0)	30 (100)	
Pentecostal	37 (33.6)	73 (66.4)	110(100)	
Islam	30 (41.1)	43 (58.9)	73 (100)	
Traditional	6 (85.7)	1(14.3)	7 (100)	

Table 6. Cost of transportation, cost of obtaining family planning methods, proximity of services and contraceptive uptake

Variable	Uptake of family planning		Total (%)	Statistical test
	Yes Freq. (%)	No Freq. (%)		
Cost of transportation to obtain FP service				
<N500	77 (50.0)	77 (50.0)	154 (100.0)	$X^2= 28.56$
N500-N1000	7 (11.1)	56 (88.9)	63 (100.0)	P = .00*
>N1000	1 (33.3)	2 (66.7)	3 (100.0)	
Total	85 (38.6)	135 (61.4)	220 (100.0)	
Cost of obtaining FP methods				
<N500	33 (58.9)	23 (41.1)	56 (100.0)	$X^2=15.12$
N500-N1000	31 (27.9)	80 (72.1)	111 (100.0)	P= .00
>N1000	21 (39.6)	32 (60.4)	53 (100.0)	
Total	85 (38.6)	135 (61.4)	220 (100.0)	
Distance travel to obtain method of FP				
<30minutes	32 (74.4)	11 (25.6)	43 (100.0)	$X^2= 30.51$
30-60 minutes	33 (26.8)	90 (73.2)	123 (100.0)	P= .00
>60 minutes	20 (37.0)	34 (63.0)	54 (100.0)	
Total	85 (38.6)	135 (61.4)	220 (100.0)	

Table 7. Relationship between perception of cost, knowledge of family planning and family planning uptake

Variable	Uptake of family planning			Statistical test
	Yes	No	Total	
	Frequency (%)	Frequency (%)	Frequency (%)	
Perceived FP to be expensive				
Yes	31 (22.6)	106 (77.4)	137 (100.0)	$X^2=38.772$ P=.00
No	54 (65.1)	29 (34.9)	83 (100.0)	
Knowledge grade				
Good	3 (60.0)	2 (40.0)	5 (100.0)	$X^2=39.404$ P= .00*
Fair	61 (59.8)	41 (40.2)	102(100.0)	
Poor	20 (26.3)	56 (73.7)	76 (100.0)	

*Fishers exact

about contraceptives from friends and relatives, and this emphasize the need for health educators in ensuring correct and adequate information about contraceptives/family planning in the rural communities.

The prevalence of modern contraceptive use in this study was 38.6%. This prevalence is higher than expected when compared to the National average (26.6%) [8] and to the findings of other studies in rural South, North and Eastern part of Nigeria which reported current usage as low as, 29%, 2.5% and 30% respectively [29,33,34]. A study in rural Senegal reported a prevalence rate as low as 1.5% for modern contraceptives, another study among females in predominantly rural Muslim area of North India reported prevalence of 34.9% and about half were using modern family planning techniques in the study carried out among married Sudanese women [35-37]. The relatively high prevalence reported in this study can be attributable to high literacy rate among the respondents with almost two-thirds (62.3%) having post-primary school education, because education has been said to play an important role in women's lives and assists in decision-making [38]. However, there was no statistically significant association between the use of contraception and educational status in this study ($p>0.05$). The respondents in this study reported using various contraceptive methods. Injectables (43.5%) were the most used method among rural respondents followed by male condoms (25.9%) and the pills (24.7%). This may be due to the fact that in rural areas, lower accessibility to health care facilities could prompt the residents into taking relatively long acting contraceptive method such as the injectable.

The majority (75.4%) of respondents in this study knew family planning as a method of spacing births; prevent unwanted pregnancies (73.8%); reduce population (54.1%) and only few 25.7% knew family planning as a means of prevention against sexually transmitted infections. This finding is similar to the report of another study in a rural community in Nigeria [12]. It is however worthy of note that some contraceptive methods were very unpopular among the respondents. Very few (11% and 11.5%) knew about implants and permanent methods and just 15% of the respondents knew about Intra Uterine Contraceptive Device (IUCD) methods of contraception. This finding is similar to the report of the most recent NDHS in the country [8]. This could be explained by the fact that modern family planning methods like implants and IUCD were not readily available in rural health centers apart from the fact that comprehensive health centers were less common in rural areas, as most of their health facilities were mere health centers, health posts and dispensaries with inadequate resources to provide the special services and are relatively more expensive than the other commoner methods.

More than half (61.4%) of respondents were not using any method of contraception. This supports other international studies that reported about one in five married women of childbearing age are not on contraceptives with a higher percentage among rural women [39,40]. Among the reasons given by those not using any family planning methods were fear of side effects (56.3%); husbands' disapproval (48.9%) and desire for more children (48.9%). This is similar to what has been reported by other studies within and outside Nigeria [29,41]. A study in south-

eastern Nigeria concluded that despite the high education/literacy with the attendant high knowledge and approval rate of family planning in Nigeria, the practice of family planning is still low, especially due to partner objection [42]. The high proportion of individuals not using any method of contraception is a cause for concern. This is because these individuals are at risk of unplanned and unwanted pregnancies and its attendant complications. Therefore, more work need to be done to reduce this poor uptake of modern family planning among women in the rural communities because increase in family planning uptake is an indicator of progress toward reduction in maternal and infant mortality rate.

On the overall knowledge of family planning, more than half 102 (55.7%) respondents had fair knowledge; 76 (41.5%) had poor knowledge while only few 5 (2.7%) had good knowledge. This is contrary to the report of a study carried out in an urban community in Ibadan, South-west Nigeria which reported higher percentage of respondents with good knowledge of FP [43]. The high awareness of family planning found in this study did not translate to good knowledge, this report however is not surprising knowing well that much of the on-going enlightenment on modern family planning in the country both from the government and the non-governmental organizations has been concentrated in the urban areas. Therefore, there is a need to improve family planning educational methods presently in use and to extend the ongoing enlightenment programmes to the rural communities.

The use of family planning was found to be associated with marital status and religion in this study. The relationship between religion and family planning has been documented by previous studies and religion has been recognized as a very important determinant of contraceptive usage [29,36,44]. The significant association between religion and family planning uptake may be reasoned out with the Christians having a higher uptake of family planning methods than the Muslims in this study.

A statistically significant association was also found between number of living children and contraceptive use as most respondents with three (38.4%) and five or more children (54.8%) were more likely to use modern contraceptive methods compared to those who have two or less (32.4%) children. This result is comparable

to that of other studies [45,46]. Not surprisingly, women with 3-4 children and five or more children are twice as likely and nearly four times as likely, respectively, to use family planning methods compared to women with no living children. As women's ideal number of children increases, so does their need for spacing and family planning methods.

Also, the study showed statistically significant relationships between contraceptive use and proximity to the source of family planning services, cost of transportation and cost of obtaining methods. Perception of cost and knowledge of contraceptives was also found to be statistically significantly associated with the use of contraception. Contraceptive use has also been shown to have a strong association with availability and accessibility of FP services and there is an inverse relationship between current contraceptive use and distance or travel time to an outlet [47,48]. The use of family planning varies with socioeconomic factors. Women in rural areas are more than four times as likely as women in urban areas not to use family planning services and this could be explained by the fact that women in rural areas are most likely to be far from health facilities, poor, less educated with poor knowledge, and least aware of family planning services.

5. CONCLUSIONS AND RECOMMENDATIONS

This study revealed a high level of contraceptive awareness (83.2%) but low prevalence rate (38.4%) and a poor knowledge of modern family planning methods. The main reasons for none use of modern family planning methods were the fear of side effects, lack of knowledge, spousal's disapproval and the desire for more children. In this study, it was observed that marital status, religion, accessibility/proximity of services, cost of service and knowledge of family planning were all statistically significant with its uptake. However, the involvement of male partners on the use of family planning in Nigeria is very important. It is therefore recommended that effective educational and counseling interventions are likely to improve male involvement and consumers' knowledge which would subsequently lead to higher uptake of contraceptive usage. Religious leaders should encourage their followers on the needs for family planning use as related to their holy book. Access to contraceptives has been found as a direct intervention for lowering fertility, therefore

the Federal Government of Nigeria should increase the provision of Reproductive Health centres and services in the country especially in the rural areas. In addition, nongovernmental organizations working in the area of reproductive health should extend their programme into the rural areas instead of concentrating only on the urban areas.

CONSENT

Participation was voluntary and respondents were informed that they could withdraw from the study at any stage of the interview if they so desired without any penalty. Written informed consent was also obtained from each respondent in the study.

ETHICAL APPROVAL

Ethical clearance for this study was obtained from the Health Research and Ethics committee of the Lagos State University Teaching Hospital (Ref No: LREC/10/06/257). Permission to conduct the study was obtained from the Chairman and the Medical Officer of Health (MOH) of the local government area. Anonymity of participants was maintained at all times by not using any identifiers or personal information in the questionnaires.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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