

Are people really using modern contraceptives and how much do they pay for them?

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ABSTRACT

Objectives: There is an urgent need to achieve universal access to contraceptives in Nigeria. The paper presents new information about the level of use and expenditures on modern contraceptives in Nigeria. It also presents socio-economic and geographic differences in the use and expenditures on contraceptives.

Methods: A cross-sectional quantitative study was undertaken in six states of the country. In each state, an urban and a rural area were selected for the study. Hence, there were a total of six urban and six rural sites from the six states. The number of respondents that were interviewed was 770 per state. A pre-tested interviewer-administered questionnaire was used to collect information from females in the randomly selected households. Data was on the current level of utilization and payments for different contraceptives of respondents were collected. Data was also collected on the demographic structure and the socioeconomic characteristics of the population. The data was examined for links between socio-economic status (SES) and geographic location with the key variables.

Findings: A minority of the respondents (23.2%) stated that they had ever used any modern contraceptive method. Male condoms followed by oral contraceptive pills and injectables were the contraceptives that were mostly used by the respondents. Only 25.2% of the respondents had paid for any contraceptive within six months to the date of the interview. Male condoms followed by oral contraceptive pills were the most common contraceptives that people paid for. The highest average amount of expenditure on contraceptives was made for a unit of injectables. For only those that incurred expenditures, per unit monthly expenditures for the different contraceptives were US\$ 0.79 for male condom; US\$2.65 for female condom; US\$1.29 for oral contraceptive pills; US\$3.68 for injectables; US\$13.51 for implants; and US\$7.85 for IUD.

Conclusion: There was low level of use of most modern contraceptives. However, people are spending a lot of money on contraceptives through mostly out-of-pocket expenditure. The poorest SES groups and rural dwellers were mostly adversely affected by expenditures on the contraceptives. Decision makers should find ways to reduce cost so as to increase affordability and develop payment mechanisms that will help to decrease the financial burden on the consumers and increase access to and utilisation of the modern contraceptives.

Key words: Modern contraceptives; inequities; use; expenditures

INTRODUCTION

Inadequate reproductive health care has contributed immensely to worldwide burden of diseases (UNFPA. 2004). Nigeria has the highest number of maternal mortality in Sub-Saharan Africa and the second highest in the world with 20-40% maternal death due to illegal abortion (WHO. 2004). Ninety percent of unsafe abortion-related mortality and 20% pregnancy-related morbidity and deaths, could be prevented with the use of modern contraceptives (Williams et al. 2009). These findings led to the adoption of a strategy during the 57th World Health Assembly to reduce maternal morbidity and mortality and a major part of that strategy been the increased provision and use of modern contraceptives (WHO. 2005).

There is a need to scale-up the provision and utilization of modern contraceptives in Nigeria for improved reproductive health and health outcomes of the citizens. This will also help to ensure universal access to sexual reproductive health services in the country and facilitate the achievement of Millennium Development Goals, especially Goal 5. The level of use of modern contraceptives in Nigeria is low (NPC and ICF

Macro. 2009). Although slight increases exist in the use of modern contraceptive methods over time; in 1990, 3.5 percent of currently married women aged 15–49 were using a modern contraceptive method, compared with 8.2 percent in 2003 and 9.7 percent in 2008 (NPC and ICF Macro. 2009).

Accessibility and use of contraceptives depend to a large extent on the level of financial and physical access to modern contraceptives in the geographic context. Consumers mostly use contraceptives and family planning services that they have knowledge of and which are available to them. However, non-use of modern contraceptives is sometimes associated with fear of side effect, objection from partners, conflict with religion, and unplanned sexual debuts (Abiodun and Balogun. 2009; Okpani and Okpani. 2000; Amazigo et al. 1997).

High levels of payments, especially through out-of-pocket expenditures can limit financial access to the modern contraceptives by deterring consumers, especially the most poor from purchasing and using the services. Hence, spending on contraceptives reduces the level of

usage (Cooksey and Mamdani. 2004). Studies in the Philippines, Malawi and Nigeria also showed that the high cost of contraceptives discouraged use by women (Darroch et al. 2009; Hennik and Madise. 2005; Oye-Adeniran et al. 2005). A study Nigeria has shown that many of the respondents spent money on contraceptives obtained from private sector drug retailers in Nigeria (Oye-Adeniran et al. 2005).

Limited physical access to the services, resulting from sub-optimal location of healthcare providers that provide modern contraceptives can also limit access and use of the services. Hence, the location of public and private health facilities could affect an individual's decision to access services from them (Oye-Adeniran et al. 2005). Other factors can also limit physical access to the services even when distance is not a problem. A study showed that a certain group of people, unmarried persons and persons whose religion discourages the use of modern contraceptives choose to use the private sector as a source of purchasing contraceptives due to the privacy they get and confidentiality of information given to them at these facilities (Oladapo. 2005).

In addition to general use, inequity in the use of modern contraceptives results in differentials in burden of reproductive diseases (Creanga et al. 2011). This inequity exists when people are unjustly denied access to the use of modern contraceptives in order to protect themselves from unwanted pregnancy (Gillespie et al. 2007). Inequity in the use and access is consequential and it increases the challenges faced by women in developing countries and in poor socio-economic classes, more than those in the developed countries (Gillespie et al. 2007). Some of these consequences include increased birth rate and unwanted pregnancy (Gillespie et al. 2007).

This paper contributes to our knowledge about the level of use and expenditures on modern contraceptives in six geopolitical regions in Nigeria. It explores the socio-economic status (SES) and geographic differences in usage of modern contraceptives. It also explores the different levels of expenditure people that belong to different SES and residence of different geographical areas incur in using modern contraceptives.

STUDY METHODOLOGY

Study area

The study took place in states from the six-geopolitical regions of the country: the Federal Capital Territory (FCT or Abuja), Kano state, Lagos state, Enugu State, Adamawa state and Rivers state. In each state, an urban and a rural area were selected for the study. Hence, there were six urban and six rural sites from the six states. The modern contraceptives investigated were oral contraceptive pills (OCP), injectables, male and female condoms, intra-uterine devices (IUDs) and implants.

Study design and study tools

The study was a cross-sectional quantitative study. Adequate sample size per state was determined, using a power of 80%, confidence level of 95% and utilization rate of contraceptives of 10%. This gave a minimum sample size of 350 per urban and rural site. However, in order to control for refusals and incomplete questionnaires, the number of respondents to be interviewed was increased to 385 per site, yielding 770 per state.

A pre-tested interviewer-administered questionnaire was used to collect information

from randomly selected householders. The questionnaire consisted of different sections. Different sections of the questionnaire were used to collect data on socio-demographic characteristics of the respondent, collect data on respondent's use of different contraceptives; ranging from male and female condom use, IUD, Implant, Injectables and Oral contraceptives; and to collect data on the amount of payments made on the different contraceptives in different states in the past six months, broken down into different types of contraceptives. The targeted respondent in each of the selected household was a female primary care giver of child bearing age (usually the wives), or in her absence, another female household member of child bearing age, and in her absence after two repeated visits, the male head of household. However, all attempts were made to ensure that the respondent was the primary female member of the household. The questionnaire was pre-tested in an urban and rural area.

Data analysis

Data was collected across the six urban and six rural areas from the six selected states to yield urban and rural data sets. Tabulations and charts

were used as data analytical tools to analyze quantitative data. Chi-square charts, cross tabulation, and non-parametric tests, was used to compare the key variables across different socio-economic and geographic groups. In analyzing the uses and expenditure on modern contraceptives, data was categorized by whether a household used any or all of the different modern contraceptives. It was recognized that recall period for self reported use is one month prior to the interview, but was a weakness as many households may not have used any of the modern contraceptives one month prior to the study. Expenditure data set was categorized on the incidence of payment for different contraceptives, one and six months prior to the survey.

An asset-based socio-economic status index was created and was used to divide the different households into five groups (quintiles). The SES groups ranged from the highest SES group, the least poor group (Q5) to the poorest group (Q1). Others were very poor (Q2), average (Q3) and fairly poor (Q4). The SES was used to compare the difference in use and expenditure on different contraceptives. Chi-square for trend analysis was used to determine the statistical significance of the

differentiation of the dependent variables in the SES quintiles. Data set comparison of urban to rural was used to examine geographic difference in the variables. Q1:Q5 and urban:rural ratios for the different variables were computed as measures of equity. Note: 150 Naira = US\$1.

Ethical considerations

All respondents gave informed consent before proceeding with an interview. Ethical clearance for the Study was obtained from Ethical Committee of University of Nigeria.

FINDINGS

Socio-demographic distribution of the respondents in the six states

The response rate was more than 95%. A total of 4517 questionnaires were analysed. Most of the respondents were either household wives or adult female household representative and were married. Most of the people also had some form of formal education and the commonest completed educational levels were senior secondary school. The average number of years that the respondents spent in school was 11 years. The average age of the respondents was 31 years. Inclusive of urban areas, the most common occupation of the respondents was petty trading/artisan, followed closely by unemployment.

Use of different contraceptives and level of payments

Only 1,048 of the respondents (23.2%) from the combined data stated that they had ever used any contraceptive. Out of the number that used contraceptives, the most common contraceptive that respondents used one month prior to the survey was male condom (40.3%). The rate of use of other contraceptives was: 25.9% (OCP); 20.2%

(injectables); 7.2% (IUD); 4.2% (Implant); and 2.3% (female condom).

From the combined data, 25.2% of the respondents had paid for any contraceptive within six months to the date of the interview. Out of the consumers that paid for contraceptives, male condom (36.4%) followed by OCP (29.4%) and injectables (22.4%) were the most common contraceptives that people paid for. Female condoms (2.7%) and implants (3.9%) were the contraceptives that were least paid for. Using the whole sample, the average payments (per unit) that were made for different contraceptives were; Male condom (49.8 Naira); Female condom (11.6 Naira); OCP (69.1 Naira); injectables (137.3 Naira); Implant (86.8 Naira); and IUD (66.8 Naira).

For only the people that incurred expenses, the highest average amount of expenditure on units of contraceptives was made for a unit of injectables. Male and female condoms had the least average expenditures. Also, for only those that incurred expenditures, the unit monthly expenditures for the different contraceptives were US\$0.79 for male condom; US\$2.65 for female condom; US\$1.29 for oral contraceptive pills; US\$3.68 for

injectables; US\$13.51 for implants; and US\$7.85 for IUD. In addition, for the people that incurred expenses in a six-months period, the highest average amount of expenditure on all contraceptives were US\$3.4 for male condom; US\$7.6 for female condom; US\$3.8 for oral contraceptive pills; US\$6.62 for injectables; US\$13.8 for implants; and US\$8.1 for IUD.

For the full sample (people that incurred and those that did not incur expenses) the highest average amount of expenditure on units of contraceptives was made for a unit of injectables at US\$0.91 based on the combined data for the full sample (including those that did not incur the expenses). Male and female condoms had the least average expenditures at US\$0.33 and US\$ 0.08 respectively

Table 1: Differences in level of use of different contraceptives by SES

Variable	Q1 n(%) N = 904	Q2 n(%) N = 904	Q3 n(%) N = 903	Q4 n(%) N = 903	Q5 n(%) N = 903	Q1:Q5 ratio	X2 (p-value)
Differences in level of use of different contraceptives ever used by SES							
Male condom	121(13.4)	164(18.1)	190(21)	252(28)	272(30)	0.4	100.1(0.000)
Female condom	3(0.3)	3(0.3)	8(0.9)	15(1.7)	17(1.9)	0.2	19.0(0.001)
IUD	41(4.5)	15(1.6)	26(2.9)	32(3.5)	33(3.7)	19	17.1(0.004)
Implants	14(1.5)	6(0.7)	6(0.7)	10(1.1)	7(0.8)	17	9.1(0.084)
Injectables	58(6.4)	90(10.0)	59(6.5)	108(12)	80(8.9)	90	29.3(0.000)
Oral Control pill	160(18)	85(9.4)	49(5.4)	137(15.2)	101(11.1)	1.6	80.8(0.000)
Differences in level of use of different contraceptives in the past one month by SES.							
Male condom	49(5.4)	74(8.2)	86(9.5)	98(11)	115(12.7)	0.42	326(0.000)
Female condom	4(0.4)	3(0.3)	3(0.3)	10(1.1)	4(0.4)	1	23.7(0.00)
IUD	13(1.4)	10(1.1)	8(0.9)	23(2.5)	21(2.3)	0.6	12.1(0.017)
Implants	5(0.6)	5(0.6)	3(0.3)	10(1.1)	7(0.8)	14	10.8(0.056)
Injectables	16(1.8)	31(3.4)	30(3.3)	82(9.1)	18(2.0)	35	87.2(0.000)
Oral Control pill	34(3.8)	56(6.2)	68(7.5)	54(6.0)	59(6.5)	0.6	12.3(0.015)

SES and geographic differences in use and number of people that incurred expenditures on contraceptives

Table 1 shows that the higher the SES, the higher the use (ever used) of different contraceptives, with the exception of implants where the most-poor SES used it most. However, in the month prior to the interview, the higher the SES, the

more the level of use of different contraceptives, including implants. Table 2 shows that the urban dwellers used most contraceptives more than the rural dwellers, with the exception of oral contraceptives and injectables, where the use was similar between urban and rural dwellers.

Table 2: Differences in level of use of different contraceptives ever used by geographic area

Variable	Urban n(%) N = 2204	Rural n(%) N = 2313	Urban:Rural ratio	X2 (p-value)
Male condom	518(24)	481(21)	1.1	4.8(0.028)
Female condom	29(1)	17(1)	1.7	3.8(0.052)
Oral contraceptives	319(1)	340(15)	0.9	0.0(0.830)
Injectables	249(11)	236(10)	1.1	1.4(0.235)
Implant	37(2)	23(1)	1.6	4.0(0.045)
IUD	102(5)	64(3)	106	11.0(0.001)

Table 3: Incidence of expenditures by socio-economic status (SES)

Variable	Q1 n(%) N = 904	Q2 n(%) N = 904	Q3 n(%) N = 903	Q4 n(%) N = 903	Q5 n(%) N = 903	Q1:Q5 ratio	X2 (p-value)
Whether some money was spent on contraceptives in past 6 months by SES.							
Spent money	135 (15.0)	196(22.0)	222(25.0)	240(26.6)	248(27.5)	0.5	52.0(0.000)
Number of people that spent money on different contraceptive in past six months by SES.							
Male condom	54(6.0)	77(8.5)	94(10.4)	98(10.9)	92(10.2)	0.6	17.4(0.002)
Female condom	2(0.2)	5(0.6)	5(0.6)	12(1.3)	7(0.8)	0.3	8.9(0.063)
IUD	8(0.9)	11(1.2)	6(0.7)	17(1.9)	18(2.0)	0.4	9.6(0.047)
Implants	4(0.4)	5(0.6)	4(0.4)	9(1.0)	5(0.6)	0.8	16.9(0.005)
Injectables	42(4.6)	58(6.4)	55(6.1)	57(6.3)	43(4.8)	1.0	5.1(0.276)
Oral Control pill	38(4.2)	64(7.1)	81(9.0)	74(8.2)	78(8.6)	0.5	19.7(0.001)

The number of people that incurred expenditure on contraceptives increased as SES increased and this was statistically significant ($p > 0.05$) (Table 3). Specifically, as SES increases, the expenditure on male condom increased ($p > 0.05$) (Table 4). Also, SES was related to the number of people that spent money on other contraceptives, although some of the trends were not monotonic.

Compared to their share of the total population, relatively more rural dwellers (22%) compared to urban dwellers (23%) spent money on contraceptives, although there was no statistical difference across the geographic areas ($p > 0.05$). However, there were some geographical differences in incidence of payments on different contraceptives (Table 4).

Table 4: People that spent money on different contraceptive in past six months by geographic area

Variable	Urban n(%) N = 2204	Rural n(%) N = 2313	Urban:Rural ratio	X2 (p-value)
Male condom	195(8.8)	220(9.5)	0.9	0.6(0.440)
Female condom	17(0.8)	14(0.6)	1.2	0.5(0.499)
Oral contraceptives	156(7.1)	179(7.7)	0.9	0.7(0.397)
Injectible	135(6.1)	120(5.2)	1.1	1.9(0.173)
Implant	29(1.3)	15(0.6)	1.9	23.8(0.000)
IUD	37(1.7)	23(1.0)	1.6	4.0(0.045)

DISCUSSION

The level of use of modern contraceptives was very low across Nigeria. However, the prevalence level that was found in this study was higher than the 9.7 percent that was found in 2008 in Nigeria (NPC and ICF Macro. 2009). The use differed by the types of contraceptives, probably as a result of their relative availability and acceptability with male condoms been the most commonly used. The very high level of use of male condom is a reflection of its wide availability and acceptability. However, some studies have recognised that some other factors that affect the use of modern contraceptives include geographical, educational, social, cultural and

political factors (Schoemaker. 2005; Ainsworth et al. 1996). It was shown also that some factors such as lack of knowledge, barriers to access, lack of control to seek health care, concern over side effect, high level of promiscuity and greater male control over use of male condom has reduced the usage of modern contraceptives (Williams et al. 2009).

There was strong relationship between the use of modern contraceptive and socio-economic status (SES), with the use increasing with higher the SES groups. Hence, it is possible that payments for contraceptives could have discouraged access and use by poorer consumers. It has been found

that a major factor determining contraceptive demand and use is the financial constraint (WHO. 2004; USAID. 2007; Cooksey and Mamdani. 2007). Studies have shown that people in the poor SES groups are discouraged from using modern contraceptives due to financial burden it imposes as compared to those in higher income households (USAID. 2007). In order to eliminate the barrier of high expenditure on contraceptives on intended users, several studies have found that offering contraceptives at no cost to users can increase usage particularly in rural areas where poor people reside (Ashraf et al. 2010; Gilmour et al. 2009; IDFW. 2001).

The finding that although the majority of the respondents had never used nor paid for contraceptives, many people were spending a lot of money through out-of-pocket spending on contraceptives could lead to financial inaccessibility to most people especially the poor and rural dwellers. This is buttressed by the finding that compared to their share of the total population, respondents in the poorest SES group as well as people living in the rural area spent more money on contraceptives.

Hence, the resultant health burden due to low level or non-use of use of modern contraceptives resulting from sub-optimal physical and financial access to the services will more adversely affect the poorest SES groups and rural dwellers. It has been shown that women in poor SES have increased birth rate, unwanted pregnancies and high sexually transmitted infections (STI) prevalence (WHO. 2011; Ahmed et al. 2010). It has been found that the people in the poor (SES) are discouraged from accessing and using modern contraceptives as a result of unmet family planning need compared to women in other counterparts (USAID. 2008). Expenditure made on modern contraceptives imposed greater burden on poor families in the rural areas than the high income households in the urban areas (USAID. 2007).

All in all, there was low level of use of most modern contraceptives. However, people are spending a lot of money on contraceptives through mostly out-of-pocket expenditure. The poorest SES groups and rural dwellers were mostly adversely affected by expenditures on the contraceptives. Decision makers should find ways to reduce cost so as to increase affordability and

develop payment mechanisms that will help to decrease the financial burden on the consumers and increase access to and utilisation of the modern contraceptives. These would be supportive of the notion on improving universal access to use of modern contraceptives.

Interventions that will improve the payment and services provision mechanisms should be designed and implemented to decrease the financial burden on the consumers and increase access to and utilisation of the modern contraceptives especially for the poor SES groups and rural dwellers. In order to increase equity, it has been found that using appropriate means of communicating different health messages while providing contraceptives through different health providers helps to improve equitable access and use of modern contraceptives (Lule et al. 2007; UN. 2002).

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