

Full Length Research Paper

Predictors of discontinuation of contraceptive use among Nigerian women: Results of 2013 Nigeria Demographic and Health Surveys

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Unintended pregnancy is a major public health problem that affects not only the individuals directly involved but also the society indirectly. The best approach to reduction of unintended pregnancies is the use of contraceptives. This study used a secondary analysis of data from 2013 Nigeria Demographic and Health Survey dataset. Only the 29,990 women who were in a union were included. Data were analysed using Stata data analysis software Version 12.1, and some basic characteristics of the women were explored. Frequencies and percentages were also displayed in tables. Binomial logistic regression was used to determine the predictors of discontinuation of contraceptives among the women. Among the 29,990 women who participated in the study, 4,080 reported contraception discontinuation, giving a contraception discontinuation rate of 13.6%. The commonest method discontinued was the withdrawal method (18.53%) and the least discontinued method was the diaphragm (0.07%). The commonest reason for discontinuation was the intention to get pregnant (49.58%), followed by occurrence of pregnancy while using a contraceptive method (16.18%). The predictors of contraception discontinuation were: the women's age, the women's residence (urban/rural), education, number of children < 5 years, marital duration, the women's occupation, the men's occupation and wealth index. In conclusion, understanding the predictors of contraception discontinuation will help in planning of interventions to reduce contraception discontinuation, while trying to increase uptake of contraception and reduce unmet need for contraception. We recommend further studies to find out the direction of the effect of the predictors of contraception discontinuation.

Key words: Predictors, discontinuation, contraceptives, Nigeria.

INTRODUCTION

While current challenges to health throughout the world are many and serious, the need to control one's own fertility probably touches more lives than any other health issue. It is crucial to people's well-being, particularly that

of women—and fundamental to their self-determination (WHO, 2011). The only way to be in control of one's fertility is the use of one or more methods of contraception. Unintended pregnancy is a major public

health problem that affects not only the individuals directly involved but also the society indirectly. Most couples who want to avoid pregnancy, practice contraception methods (Trussell and Vaughan, 1999)

Advantages of birth control to the society include: fewer unplanned pregnancies, more educational opportunities, more economic opportunities, improved maternal health, improved infant health, greater family well being, reduced public spending, etc (The National campaign to prevent teen and unplanned pregnancy, 2017). However, studies have shown that sometimes women who were on contraceptives discontinue the contraceptives for one reason or the other. Several studies have tried to find out the different types of contraceptives discontinued and the reasons for discontinuation. A study done in the United States of America reported that the probability of discontinuation of contraceptive method within six months is 31%; within 12 months, 44%; and within 24 months, 61%. Also the probabilities of discontinuing use within six months ranged from a low of 6% for the implant to a high of 51% for the sponge (Trussell and Vaughan, 1999).

Analyses of Demographic and Health Survey (DHS) data indicate that 38% of women with an unmet need for modern contraception have used a modern method of contraception in the past but have chosen to discontinue use (Castle and Askew, 2016). This phenomenon, called contraceptive discontinuation, is defined as starting contraceptive use and then stopping for any reason while still at risk of an unintended pregnancy (Castle and Askew, 2016). Discontinuation for reasons other than wanting to become pregnant contribute to unwanted fertility and can lead to pregnancies that may be terminated through unsafe abortion. Not all discontinuation is necessarily problematic. Some women discontinue a particular method because it is difficult to use or its use is unacceptable to the woman or her partner (for example, due to side effects) and subsequently switch to another method—one that is more suitable to them and often times more effective.

The decision to continue or discontinue use of a contraceptive involves multiple factors, primarily the acceptability of contraceptive options, affordability and fertility desires. High rates of contraceptive discontinuation for reasons other than the desire for pregnancy are a public health concern because of their association with negative reproductive health outcomes (Blanc et al., 2001).

Surveys from several countries also show that most of the discontinuations are due to side-effects (such as changes in menstrual patterns, headaches, nausea and less frequently vomiting), health concerns and false rumours about health problems (Khan, 2001).

Rates of contraceptive discontinuation, even among women who want to avoid pregnancy, remain high and are increasing in some countries where family planning efforts have decreased (Choe et al., 1999). In a country-wise DHS survey, the percentage of women who

discontinued a contraceptive method in the first year of use for any reason ranged from 20% in Zimbabwe to 48% in Bangladesh and the Dominican Republic. In every study country wise, the commonest reasons cited were the desire to get pregnant, contraceptive failure and side-effects/health concerns, though the order varied across countries (Central Bureau of Statistics, Kenya, 2004). The objective of this study was to determine the commonest types of contraceptives discontinued, the reasons for discontinuation and the predictors for discontinuation.

The Demographic and Health Surveys (DHSs) are nationally-representative household surveys that provide data for a wide range of monitoring and impact evaluation indicators in the areas of population, health, and nutrition for low and middle income countries (The National campaign to prevent teen and unplanned pregnancy, 2017).

METHODOLOGY

This study used Nigeria Demographic and Health Survey 2013 dataset that comprises of 31,482 females between the ages of 15 and 49 years. However, only the women who were in a union as of the time of data collection were included in the study. Women who were in a union included those that were currently married and those that were co-habiting with a male partner, and they were 29,990 in number. Data were analysed using Stata data analysis software Version 12.1. Some basic characteristics of the women were explored including: the age of the women, the highest educational level they attained, their place of residence (urban/rural), occupation, wealth quintile, method of contraception discontinued and reasons for discontinuation. Frequencies and percentages were displayed in tables. Furthermore, Binomial logistic regression was used to determine the predictors of discontinuation of contraceptives among the women. The dependent variable was contraception discontinuation, and this variable was grouped into two possible outcomes: discontinued contraceptives and others. The independent variables were: educational level, age of the women, place of residence (urban/rural), number of Children <5years, women's occupation, husbands' occupation, marital duration and wealth index. The p-value was set at 0.05.

RESULTS

Table 1 shows the socio-demographic characteristics of the women. The commonest age group was the 25-29 years age group which makes up 28.05% of the women. A greater proportion of the women were living in the rural area (67.38%). Also, only 6.17% of the women had tertiary education. The commonest occupation was sales

Table 1. Socio-demographics.

Age (in years)	Frequency	Percentage (%)
15-19	1,317	4.39
20-24	5,646	18.83
25-29	8,411	28.05
30-34	6,729	22.44
35-39	4,781	15.94
40-44	2,245	7.49
45-49	861	2.87
Total	29,990	100.0
Residence		
Urban	9,782	32.62
Rural	20,208	67.38
Total	29,990	100.0
Educational level		
No formal education	14,438	48.14
Primary	6,075	20.26
Secondary	7,628	25.44
Tertiary	1,849	6.17
Total	29,990	100.0
Occupation		
Housewife	8,618	28.74
Professional/technical/managerial	1,103	3.68
Clerical	93	0.31
Sales	11,488	38.31
Agricultural-self employed	237	0.79
Agricultural-employee	3,325	11.09
Household and domestic	30	0.10
Services	1,367	4.56
Skilled manual	3,522	11.74
Unskilled manual	13	0.04
Others	41	0.14
Missing	153	0.51
Total	29,990	100.0
Wealth index		
Poorest	6,924	23.09
Poorer	7,035	23.46
Middle	5,797	19.33
Richer	5,475	18.26
Richest	4,759	15.87
Total	29,990	100.0

(38.31%) followed by house wives (28.74%). The commonest wealth index class was the “poorer” (23.46%), followed by “the poorest” (23.09%).

Table 2 shows the methods of contraception discontinued by the women. The commonest method discontinued was the withdrawal method (18.53%) and the least discontinued method was the diaphragm (0.07%).

Table 3 shows the reasons for discontinuation of contraceptives. The commonest reason was the intention to get pregnant (49.58%), followed by occurrence of

pregnancy while using a contraceptive method (16.18%).

Table 4 shows the predictors for contraceptive discontinuation. The identified predictors were women’s age, residence, education, number of children less than 5 years, marital duration, women’s occupation, men’s occupation and wealth index.

DISCUSSION

Out of the 31,482 women who participated in the 2013

Table 2. Methods of contraception discontinued by respondents.

Method discontinued	Frequency	Percentage (%)
Pill	649	15.91
IUD	91	2.23
Injections	659	16.15
Diaphragm	3	0.07
Condom	634	15.54
Female sterilization	4	0.10
Periodic abstinence	465	11.40
Withdrawal	756	18.53
Others	149	3.65
Implants/Norplant	15	0.37
Lactational Amenorrhea	570	13.97
Other modern methods	77	1.89
Standard days method	8	0.20
Total	4,080	100.0

Table 3. Reasons for discontinuation of method of contraception.

Reason for discontinuation	Frequency	Percentage (%)
Became pregnant	660	16.18
Wanted to become pregnant	2,023	49.58
Husband disapproved	59	1.45
Side effects/health concerns	219	5.37
Access/Availability	16	0.39
Wanted more effective method	141	3.46
Inconvenient to use	69	1.69
Infrequent sex/Husband away	69	1.69
Cost	14	0.34
Fatalistic	3	0.07
Difficult pregnancy/Menopause	4	0.10
Marital dissolution	5	0.12
Others	70	1.72
Don't know	23	0.56
Missing	705	17.28
Total	4,080	100.0

Table 4. Logistic regression analysis of predictors for contraception's discontinuation.

Predictor	Odds ratio	p-value	95% Confidence Interval
Women's age	1.796376	<0.001	1.307531 - 2.467985
Residence	0.6824367	<0.001	0.6255588 - 0.7444862
Education	3.525	<0.001	3.086023 - 4.02642
No of Children <5years	0.9524114	0.006	0.9196129 - 0.9863796
Marital duration	1.142577	0.016	1.025312 - 1.273254
Women's occupation	1.459477	<0.001	1.235857 - 1.723561
Men's occupation	0.6897625	0.019	0.5059882 - 0.9402833
Wealth index	1.934048	<0.001	1.56599 - 2.388612

Nigeria Demographic and Health Survey (NDHS), 29,990 were in a union. Only these women who were in a union were included in this study. Women in union were those who were currently married or were co-habiting with a male partner. Among the respondents, the commonest age group was the 25-29 years age group which made up 28.05% of the women. Similarly, in a community based study in Enugu, Nigeria, the commonest age group was the 25-29 years age group (Onwuzurike and Uzochukwu, 2001). Similarly, a study in Egypt reported that the commonest age group was the 20-29 years age group who made up 36.4% of the women studied (Awadalla, 2012). Also a study done in Jimma, Ethiopia reported that the commonest age group among the women studied was the 25-30 years age group which made up 35.4% of the women (Beekle and McCabe, 2006). A study based on secondary analysis of the Tanzania Demographic and Health Survey 2010 also reported that the 25-29 years age group was the commonest age group (20.9%; Kidayi et al., 2015). In contrast, a study at an antenatal clinic at Nnewi, reported that the commonest age group was the 30-34 years age group (Igwegbe et al., 2009).

Almost half (48.14%) of the 29,990 women who participated in the present study had no education. Only 6.17% had higher education, while 25.44% had secondary education and 20.26% had primary education. In Enugu, Southeast Nigeria, 74.3% of the women studied had at least secondary education and only 2.4% of the women had no formal education (Onwuzurike and Uzochukwu, 2001). Also in Nnewi, Anambra State, Southeast Nigeria, none of the women studied had no formal education and 61.3% of the women had secondary education (Igwegbe et al., 2009). The difference in the educational level of the women in the present study and that of the cited Nigerian studies may be because of the differences in female education between the different geopolitical zones of the country.

In the current study, the commonest occupation was "sales" (38.31%) followed by house wives (28.74%). Similarly, in Enugu, Southeast Nigeria, the commonest occupation among the women studied was also sales (Onwuzurike and Uzochukwu, 2001). The situation in Egypt was different, where the commonest occupation was house wives who made up 78.6% of the women studied (Awadalla, 2012). House wives also made up the commonest occupation (80.1%) among the women studied in India (Prachi et al., 2008). In Nepal, Tuladhar and Marahatta also reported that the commonest occupational group among the women studied was housewives (63.0%; Tuladhar and Marahatta, 2008). These high rates of women in reproductive age being house wives reflect the lack of empowerment of women of reproductive age in the developing countries who are mostly unemployed because they have to take care of their children. This all the same reiterates the need for contraception to enable these women plan their

pregnancies and limit family size according to choice and not chance so as to be economically productive.

In the current study, the commonest wealth index class was the "poorer" class (23.46%), followed by "the poorest" class (23.09%). Similarly, Awadalla and Kelimeler (2013) reported that in Egypt the commonest wealth index group was the "poorest" class (21.3%). It is not surprising that a greater proportion of the women are in the lower wealth index class because the occupation of the women has shown that a good number were house wives. This equally implies that contraceptive use will be beneficial to the women because it will make them more economically productive and hence move higher in the wealth index class.

Among the 29,990 women who participated in the current study, 4,080 reported contraception discontinuation, giving a contraception discontinuation rate of 13.6%. This is far lower than the contraception discontinuation rate (46.4%) reported in Egypt (Awadalla and Kelimeler, 2013). In the United States of America, 31% of women discontinue use of a reversible contraceptive for a method-related reason within six months of starting use, and 44% do so within 12 months (Trussell and Vaughan, 1999). Evidence from demographic and health surveys in 25 countries reported the following contraception discontinuation rates: 38% discontinued by the 12th month, 55% by the 24th month and 64% by the 36th month (Ali et al., 2012).

In the current study, the commonest method of contraception discontinued was the withdrawal method (18.53%), followed by injections (16.15%) and the least discontinued method was the diaphragm (0.07%). The commonest reason for discontinuation was the intention to get pregnant (49.58%), followed by those that became pregnant while using a contraception method (16.18%) and then side effects/health concerns (5.37%). Similarly in Pakistan, the commonest reason for discontinuation was the intention to get pregnant (63.48%), followed by side effects/health concerns (16.18%; Rizvi and Irfan, 2012). In Egypt, the commonest reason for discontinuation was side effects (35.9%), followed by intention to get pregnant (32.6%; Awadalla and Kelimeler, 2013). It is understandable when a woman decides to discontinue contraceptive because she intends to take in and have a baby; however, it is of great concern and worry that a woman is forced to discontinue contraceptive because of unbearable side effects or outright failure of the contraceptive method. This calls for continued research to reduce the side effects of the different contraceptive methods and also improve their efficiency to eliminate failure.

In the current study, the predictors of contraception discontinuation include: the women's age, the women's residence (urban/rural), education, number of children < 5 years, marital duration, the women's occupation, the men's occupation, and wealth index. This calls for further research to narrow down on the direction of effect of

these identified predictors. This will further inform policy decisions and hence direct interventions in the evidence-based pathway and hence achieve better results.

Conclusion

In the current study, contraception discontinuation rate was 13.6%. The commonest method discontinued was the withdrawal method (18.53%) while the commonest reason for discontinuation was the intention to get pregnant (49.58%). The predictors of contraception discontinuation were the women's age, the women's residence (urban/rural), education, number of children < 5 years, marital duration, the women's occupation, the men's occupation and wealth index.

Recommendations

Women should be well counseled on the possible side effects of contraceptives and the differences between the minor side effects which will disappear after some time and the more serious side effects which will warrant discontinuation of a method. There should be further research into the production of the contraceptives to reduce the side effects of contraceptives and also improve the efficacy thereby reducing contraceptive failure.

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