

Myths, misinformation, and communication about family planning and contraceptive use in Nigeria

Augustine Ankomah¹
Jennifer Anyanti¹
Muyiwa Oladosu²

¹Society for Family Health, Abuja, Nigeria; ²MiraMonitor Consulting Ltd, Abuja, Nigeria

Background: This paper examines myths, misinformation, factual information, and communication about family planning and their effects on contraceptive use in Nigeria.

Methods: A nationally representative sample of 20,171 respondents from two waves of a multiround survey (one in 2003 and the other in 2005), was analyzed at the bivariate level using Chi-square tests and at the multivariate level using logistic regression.

Results: Key myths and misinformation about family planning having significant negative effects on contraceptive use included: “contraception makes women become promiscuous”, “it is expensive to practice family planning”, and “family planning causes cancer”. Factual information having significant positive effects on contraceptive use includes the messages that family planning methods are effective and not against religious teaching. The type of people with whom respondents discussed family planning had a significant effect on use of contraception. Respondents who discussed family planning with their spouse, friends, and health workers were more likely to use contraception than those who discussed it with religious leaders. Other significant predictors of contraceptive use were region of residence, gender, and socioeconomic status.

Conclusion: Family planning programs should focus on eliminating myths and misinformation, while strengthening factual information. Contraception programs should factor in the role of significant others, particularly spouses and friends.

Keywords: contraceptive use, family planning, logistic regression, misconceptions, myths

Introduction

Modern contraception methods have yet to gain popular acceptance in many sub-Saharan African countries. However, it is a proven fact that effective and consistent use of modern contraception enables couples to achieve desired birth intervals and fertility, ideal family size, and consequently, a decline in fertility.¹⁻³ Evidence in the literature suggests that family planning programs lowered the number of births in developing countries by 40% between 1995 and 2000.⁴ The challenge is how to increase and sustain modern contraceptive use in a number of countries, especially those of sub-Saharan Africa.

In addition to fertility decline and its economic implications, family planning has numerous cost benefits for most sub-Saharan African countries at this stage of their development and in light of their commitment to achieve the millennium development goals by 2015.⁵ Family planning has positive effects on the sexual and reproductive health of women, including a reduction in rates of unplanned pregnancies and abortion.⁶⁻¹⁰ The numerous benefits of family planning make it a critical factor in development, especially in Nigeria, which accounts for about one-quarter of the entire population of sub-Saharan Africa.

Correspondence: Augustine Ankomah
Society for Family Health, 8 Port
Harcourt Crescent, Garki, Area 11,
Abuja, Nigeria
Tel +23 480 8233 8720
Fax +234 9461 8823
Email aankomah@sfnigeria.org

Poor education and illiteracy, which fosters high fertility and low contraceptive use, has been a feature of most sub-Saharan Africa countries, especially in the rural communities.¹¹ This has raised doubts about whether the ideal of small family size can ever gain popular acceptance and support in the region. Some authors point to cultural norms, particularly those relating to reproductive decision-making, as key impediments to the achievement of smaller family size.^{9,12,13} Yet other evidence suggests that rural communities in a similar cultural context can in fact be receptive to new ideas and innovations if interventions are introduced in a culturally appropriate and sensitive way.^{14,15}

Nigeria's fertility has remained high, with total fertility rates reducing only marginally from 6.0 in 1990 to 5.7 in 2008.¹⁶ The notion of ideal family size is a key pointer to how childbearing is enmeshed in cultural norms. The 1990 Nigeria Demographic and Health Survey showed that 61% of women gave a non-numeric response (ie, "up to God") when asked about their ideal number of children.^{17,18} This figure reduced to 18% (22% for men) in 1999,¹⁹ and further to 11% (16% for men) in 2003.¹⁶ In 1990, modern contraceptive use among all women was only 4%,¹⁷ increased to 9% in 1999,¹⁹ stayed the same (9%) in 2003, and rose slightly to 11% in 2008.¹⁶ The consistently low figures for uptake of contraception over the past 20 years, despite the existence of family planning programs, indicates a need to examine some of the obstacles to modern contraceptive use in Nigeria with a view to improving the situation.

Major obstacles to the adoption of modern contraceptive behavior include myths and misinformation passed from one or more persons to others.²⁰ Myths and misinformation are usually unfounded concerns about perceived side effects or perceived future infertility.²⁰⁻²³

Rumors and misinformation have been found to affect contraceptive use in Egypt and Kenya.^{20,23} Findings from studies in Nigeria also link myths and misinformation to perceived health concerns about long-term infertility, and fear of side effects is reported to be a major reason for not using modern contraception.^{6,21} In the same way that myths and misinformation have negative consequences, factual information may have a positive effect on uptake of contraceptive use. Results from a study of couples living in the Enugu, Lagos, and Kano states in Nigeria suggest that favorable attitudes towards family planning are based on factual information about the health benefits

from using contraception.²⁴ Another key obstacle within the context of misinformation and rumors is the role of spousal communication and decision-making concerning contraceptive use, as well as the powerful role of significant others, including spouses, friends, parents, and religious leaders.^{4,14,23-25} Several studies suggest a strong positive effect of spousal communication on contraceptive use.²⁴⁻³¹ Other background indicators that affect contraceptive use include sexual behavior,^{8,32,33} differences in demographic characteristics,³⁴ such as urban-rural residence, age, gender, and education.^{9,1,30} This paper examined the effect of myths, misinformation, and communication about family planning on modern contraceptive use within the context of selected background characteristics.

Methods and materials

The data used in this study were a combination of two data sets of the National HIV/AIDS and Reproductive Health Survey (NARHS) undertaken by the Nigeria Federal Ministry of Health using the same methodology across all the 36 states and the federal capital territory in Nigeria. Given the low uptake of modern contraceptive methods, the combination of the two surveys gave us a large sample size to allow detailed multivariate analysis. A total of 20,171 respondents was included, comprising 10,090 from 2003 and 10,081 from 2005.^{35,36}

A multistage sampling technique was used at three levels in the two consecutive surveys, ie, the state level, the enumeration area level, and the individual level. The first level included the selection of rural and urban localities. Localities were classified into rural and urban, with settlements less than 20,000 inhabitants classified as rural. Localities were then grouped in geographic order according to size. The first three big towns in a state were grouped as a stratum and called "major" towns; all other urban settlements were grouped to form another stratum and called "medium" towns. The third stratum included all rural localities in the state. One "major" town, one "medium" town, and three rural localities were selected from each of the strata with probability proportion to size. The second stage involved the selection of a total of five urban enumeration areas (clusters), and three rural enumeration areas from each state using the updated sampling frame from Nigeria's National Population Commission. Three enumeration areas were systematically selected from the "major" urban town, and two from the "medium" town.

For the rural localities, three separate enumeration area lists were formed, from which an enumeration area was selected at random from each list. Each of the three rural enumeration areas selected formed a cluster of households and eligible individuals. The third stage involved selection of individual respondents. The sample sizes for the urban and rural clusters were predetermined. A probability sampling technique was used to select respondents at the individual level. The sample was later weighted to reflect the actual size of the population of each state. Eligible respondents were defined as women aged 15–49 years and men aged 15–64 years.

Dependent variables

The main dependent variable in this study was use of contraception methods, measured in two ways, ie, whether a respondent had ever used any method of contraception (1 = no/do not know vs 2 = yes) and whether the respondent was currently using a method at the time of survey (1 = not using vs 2 = using).

Independent variables

The main independent variables used were commonly held societal myths and misinformation (and some factual information) about family planning. These were presented as statements asking for a respondent's opinion, whether s/he, agreed, disagreed, or did not know, categorized as 1 = disagree/do not know vs 2 = agree. Myths and misinformation and some factual information about family planning were: "methods are effective"; "family planning encourages young unmarried people to be 'loose' (terminology for promiscuous)"; "family planning is women's business and men should not worry about it"; "family planning can lead to infertility in a woman"; "methods are not easily available"; "condoms can protect a woman from unwanted pregnancy"; and "family planning is not against religious teaching". Others were: "contraception encourage women to be promiscuous"; "condoms encourage male infertility"; "contraception can cause cancer or other diseases"; "contraception is only meant for married people"; "being sterilized for a man is equal to been castrated"; "women are the ones who get pregnant so should be the ones to get sterilized"; and the last was in a form of a question asking whether unsafe abortions can prevent a woman from having children in the future (1 = no/do not know vs 2 = yes).

Another key independent variable in our model was discussion about family planning. Respondents were

asked separate questions on whether they discussed family planning with their parents, spouse, other relatives, health care workers, friends, religious leaders, and school teachers. Responses were categorized as 1 = no/not applicable, and 2 = yes. Background characteristics included as predictors of contraceptive use were: age measured in groups, education, religion, marital status, socioeconomic status measured by grouping respondents according to the number of amenities and possessions in the household, and ideal number of children categorized as 1 = no number, 2 = 5 or more, and 3 = 4 or less. Data were analyzed at univariate, bivariate, and multivariate levels.

Results

Sample description

The background characteristics of the respondents are presented in Table 1. Nigeria is divided into six geopolitical zones. Twenty-two percent of our respondents were from the North-west zone, 15% from the North-east, 17% from North-central, 19% from South-west, 12% from South-east, and 15% from South-south zones of the country. The majority of the sampled population was from the rural areas (67%), and included slightly more males than females (51% vs 49%). Over 69% were aged 34 or younger, 57% had primary or secondary education, and 51% were Christians. Fifty-six percent were of low, 33% were of medium, and 11% were of high socioeconomic status. The majority (58%) of the respondents were married or living with a partner. Forty-seven percent of the sample were sexually active at age 18 years or older, 31% at age 17 years or younger, and 22% were not sexually active. The majority (65%) of respondents had been sexually active in the previous 12 months, and 12% of these had more than one sexual partner. Contraceptive use was found to be low. Only 12% of women and 19% of men were using modern contraceptives. It was also found that discussion about family planning with relatives and significant others was generally low (Table 1). Only 21% of respondents discussed family planning with their spouse, 25% with friends, and 17% with a health worker.

The views of respondents on myths and misinformation are presented in Table 2. The key ones mentioned here include the misinformation that family planning makes unmarried people "loose" (46%), encourages female promiscuity (39%), is for married couples only (35%), encourages male infidelity (34%), and leads to infertility in women (33%).

Table 1 Percentage distribution of respondents according to background characteristics and discussion about family planning

	Percent (%)
Background characteristics	
Age at first sex	
Never	22.0
17 or younger	31.2
18 or older	47.2
Geopolitical zone	
North-west	22.1
North-east	15.0
North-central	17.2
South-west	19.0
South-east	12.2
South-south	15.0
Residence	
Rural	67.0
Urban	33.0
Gender	
Female	49.0
Male	51.4
Age (years)	
15–24	42.0
25–34	27.2
35–44	18.0
45–64	14.0
Education	
No education	24.0
Koranic only	9.4
Primary	22.0
Secondary	35.3
Higher	9.4
Religion	
Islam/traditional	49.0
Protestant	37.0
Catholic	14.1
Socioeconomic status	
Low	56.1
Medium	33.0
High	11.0
Ideal number of children	
No number	40.0
Five or more	37.3
Four or less	23.1
Marital status	
Never married/other	42.5
Married/living together	57.5
Sexually active in last 12 months	
Never/not currently sexually active	35.2
Currently sexually active	65.0
Sex partner in last 12 months (n)	
Not sexual	35.5
Only one	53.0
Two or more	12.0
Discussion about family planning	
Discussed with parents	
No/not applicable	93.0
Yes	7.2

(Continued)

Table 1 (Continued)

Sexual behavior	percent (%)
Discussed with spouse	
No/not applicable	79.0
Yes	21.3
Discussed with relatives	
No/not applicable	88.4
Yes	12.0
Discussed with health worker	
No/not applicable	83.2
Yes	17.0
Discussed with friends	
No/not applicable	75.1
Yes	25.0
Discussed with religious leaders	
No/not applicable	93.0
Yes	7.2
Total	100
Discussed with school teachers	
No/not applicable	94.0
Yes	6.2
Contraceptive use (males)	
Currently not using	80.5
Currently using	19.4
Contraceptive use (females)	
Currently not using	87.6
Currently using	12.4

Bivariate analysis

Discussion about family planning vs contraceptive use

Table 3 shows that respondents who discussed family planning with significant others were more likely to have used or be currently using contraceptives. Respondents who have discussed family planning with their parents were more likely to have used contraceptives than those who had not (53% vs 24%, $P < 0.001$). Similar findings were found for discussion with a spouse (65% vs 15%, $P < 0.001$). Again, current use of contraceptives was significantly associated with discussion among relatives, health workers, friends, religious leaders, and school teachers. For example, Table 3 suggests that respondents who have discussed family planning with their parents were more likely to be using contraception compared with their counterparts who have never discussed contraception with parents (38% vs 15%, $P < 0.001$) or with a spouse (48% vs 8%, $P < 0.001$).

Myths and misinformation vs contraceptive use

We also explored the association between myths, misinformation, and factual information about family planning and contraceptive use at the bivariate level of analysis. Table 4 shows that respondents who agreed that family

Table 2 Percentage distribution of respondents according to views related to myths and misinformation about family planning

Myths and misinformation	Percent (%)
Makes unmarried people “loose”	
Disagree/don't know	54.3
Agree	46.0
Women's business, not for men	
Disagree/don't know	81.3
Agree	19.0
Leads to infertility in women	
Disagree/don't know	67.2
Agree	33.0
Encourages female promiscuity	
Disagree/don't know	61.0
Agree	39.3
Encourages male infidelity	
Disagree/don't know	66.0
Agree	34.3
Causes cancer and other diseases	
Disagree/don't know	85.0
Agree	15.2
Only for married couples	
Disagree/don't know	65.0
Agree	35.1
Sterilization equals castration for a man	
Disagree/don't know	73.0
Agree	27.0

planning is effective were more likely to have used modern contraception compared with those who did not agree (42% vs 7%, $P < 0.001$), and those who agreed that family planning methods encourage young unmarried people to be promiscuous were less likely to have used contraception than those who did not (22% vs 31%, $P < 0.001$).

Findings on the association between current use of contraceptives and myths and misinformation were similar to those for ever used. Respondents who agreed that family planning methods are effective were more likely to be using contraceptives than those who did not agree/did not know (28% vs 3%, $P < 0.001$), and respondents who agreed that family planning methods encouraged young women to be “loose” were less likely to be using contraceptive methods than their counterparts who did not agree/did not know (15% vs 14%, $P < 0.001$). Findings were similar regarding male infidelity. On the whole, belief in myths and misinformation correlated negatively with use of modern contraceptives, while having correct knowledge about contraception and family planning was positively associated with use of contraception.

Multivariate analysis

A crucial aspect of this study was the modeling of effects of each independent variable on contraceptive use, while

controlling for all other predictors. Table 5 shows the relationship between contraceptive use and some key predictors. Odds ratios were interpreted by comparing the likelihood of occurrence of each indicator variable with the corresponding reference category. In our analysis, when the odds of occurrence of an indicator variable were < 1 , there was less chance of occurrence than in the reference category. When the odds of occurrence were > 1 , it was interpreted as being more likely to occur than in the reference category, and when the odds of occurrence = 1, there was the same chance of occurrence as in the reference category. Although our bivariate results suggested a significant association between contraceptive use and most of the independent variables, some of the observed effect disappeared at the multivariate analysis level. The following sections report only significant results.

Contraceptive use vs background characteristics as predictors

The multivariate analysis summarized in Table 5 shows that contraceptive use was significantly related to the background characteristics of the respondents. Contraceptive use varied significantly across geopolitical zones. Respondents in the South-east were 3.5 times more likely to be currently using contraceptives than those in the North-west. Similar results were observed for the North-central (2.13 times), South-west (2.16 times), and South-south (1.98 times) regions. The odds that respondents had ever used contraceptives at the time of the surveys were similar to those of their counterparts who were currently using contraceptives. For example, respondents in the South-east were 3.0 times more likely to have ever used modern contraception than those in the reference category.

Residence was a significant predictor of contraceptive use. Urban respondents were 1.31 times more likely to have ever used contraception and 1.22 times more likely to be currently using modern contraception than their rural counterparts. Gender of the respondents was another significant predictor of contraceptive use. Table 5 suggests that male respondents were 1.27 times more likely to have ever used contraceptives than females, and were 1.31 times more likely to have been using contraceptive methods at the time of the surveys. Age also showed a significant effect on contraceptive use. Respondents aged 35–44 years were 1.33 times more likely to have ever used a contraception method than those aged 15–24 years, and those aged 25–34 years were 1.22 times more likely to have ever used these methods than the reference category. In terms of use at the time of survey, only respondents aged 35–44 years had a higher odds ratio of use than the reference category (1.24 times more likely).

Table 3 Percentage distribution of respondents who ever used/were currently using contraceptives according to persons with whom respondents discussed family planning

Types of person discussed with	Ever used %	Never used %	Currently using %	Not currently using %
Discussion about				
Discussed with parents				
No/not applicable	24.0	76.1	15.0	85.0
Yes	53.0***	47.0	38.0***	62.0
Discussed with spouse				
No/not applicable	15.0	85.2	8.3	91.8
Yes	65.2***	34.3	48.0***	52.0
Discussed with relatives				
No/not applicable	22.3	78.0	14.0	86.0
Yes	57.4***	42.6	41.2***	58.8
Discussed with health worker				
No/not applicable	20.4	79.6	13.0	87.3
Yes	52.0***	48.0	36.0***	64.0
Discussed with friends				
No/not applicable	16.3	83.7	9.4	90.6
Yes	54.4***	46.0	39.0***	61.0
Discussed with religious leaders				
No/not applicable	24.0	76.0	15.4	84.6
Yes	49.0***	51.0	33.4***	66.6
Discussed with school teachers				
No/not applicable	24.4	75.6	16.0	84.0
Yes	45.0***	55.0	33.0***	67.0

Note: ***P = 0.001.

Table 4 Percentage distribution of respondents who ever used/were currently using contraceptives according to myths, misinformation, and factual information about family planning

Myths, misinformation, and factual information	Ever used %	Never used %	Currently using %	Not currently using %
Methods are effective				
Disagree/don't know	7.0	93.2	3.3	96.7
Agree	42.0***	58.0	28.0***	72.3
Makes women "loose"				
Disagree/don't know	31.1	68.9	20.0	80.0
Agree	21.1***	78.9	14.2***	85.8
Leads to infertility in women				
Disagree/don't know	30.0	70.0	18.2	81.9
Agree	24.0***	76.4	16.0***	84.0
Protects a woman from unwanted pregnancy				
Disagree/don't know	9.0	91.0	5.0	95.0
Agree	39.2***	60.8	26.1***	73.9
Encourages male infidelity				
Disagree/don't know	34.3	65.7	22.0	78.0
Agree	21.2***	78.8	14.0***	86.0
Causes cancer and other diseases				
Disagree/don't know	28.0	72.0	17.2	82.8
Agree	25.3**	74.7	17.0	83.0
Only for married couples				
Disagree/don't know	28.0	72.0	17.0	83.0
Agree	24.4***	75.6	17.0	83.0
Sterilization equals castration for a man				
Disagree/don't know	33.0	67.0	22.0	78.0
Agree	23.2***	76.8	15.0***	85.0

Notes: ***P = 0.001; **P = 0.01.

Table 5 Odd ratios that respondents ever used or are currently using contraceptives according to background characteristics

Background characteristics	Ever used	Currently using
	OR	OR
Geopolitical zone		
North-west (ref)		
North-east	1.43**	1.17
North-central	2.96***	2.13***
South-west	2.27***	2.16***
South-east	3.0***	3.66***
South-south	2.11***	1.98***
Residence		
Rural (ref)		
Urban	1.31***	1.22**
Gender		
Female (ref)		
Male	1.27***	1.31***
Age (years)		
15–24 (ref)		
25–34	1.22**	1.11
35–44	1.33***	1.24*
45–64	1.04	1.0
Education		
No education (ref)		
Koranic only	0.83	0.84
Primary	1.23*	1.16
Secondary	1.57***	1.29*
Higher	2.10***	1.56***
Religion		
Islam/traditional (ref)		
Protestant	1.24**	1.08
Catholic	1.41***	1.18
Socioeconomic status		
Low (ref)		
Medium	1.40***	1.32***
High	1.25*	1.32**
Ideal number of children		
No number (ref)		
Five or more	1.14*	1.17*
Four or less	1.30***	1.31***
Marital status		
Never married/others (ref)		
Married/living together	0.35***	0.19***
Discussed with parents		
No/not applicable (ref)		
Yes	0.97	0.98
Discussed with spouse		
No/not applicable (ref)		
Yes	3.89***	4.01***
Discussed with relatives		
No/not applicable (ref)		
Yes	1.12	1.15
Discussed with health worker		
No/not applicable (ref)		
Yes	1.15	1.21*
Discussed with friends		
No/not applicable (ref)		
Yes	1.69***	1.58***

(Continued)

Table 5 (Continued)

Background characteristics	Ever used	Currently using
	OR	OR
Discussed with religious		
No/not applicable (ref)		
Yes	0.73**	0.79*
Discussed with school teachers		
No/not applicable (ref)		
Yes	0.80	0.83
Myths, misinformation, and factual information		
Methods are effective		
Disagree/don't know (ref)		
Agree	3.47***	3.71***
Makes women "loose"		
Disagree/don't know (ref)		
Agree	0.86*	0.81***

Notes: ***P = 0.001; **P = 0.01; and *P = 0.05.

Abbreviations: ref, reference category; OR, odds ratio.

Education was another important predictor. Respondents with higher education were 2.10 times more likely to have ever used than those who had no education, those with secondary education were 1.57 times more likely to have ever used than the reference category, and respondents with primary education were 1.23 times more likely to have ever used contraceptives than the reference category. For current use, respondents who had a higher level of education were 1.56 times more likely to have been using contraceptives than those who had no education, and those with secondary education were 1.29 times more likely to have been using contraceptive methods than the reference category during the surveys.

Other significant predictors of contraception behavior were religion (only for ever used), socioeconomic status, beliefs about the ideal number of children, and marital status. Respondents who were Catholic or Protestant were more likely to have used modern contraception (1.41 times and 1.24 times, respectively) than those who were Muslim/Traditionalist. Respondents of higher socioeconomic status were 1.25 times more likely to have used contraceptive methods than those of low socioeconomic status, and those of medium socioeconomic status were 1.4 times more likely to have used contraceptives than those of low socioeconomic status. Similarly, respondents of high socioeconomic status were 1.32 times more likely to have been using contraceptives than the reference category, and those of medium socioeconomic status were 1.32 times more likely to have been using methods than the reference category during the surveys.

The ideal number of children that respondents wanted to have was significantly related to contraceptive behavior.

Respondents who wanted fewer children, ie, four or fewer, were 1.30 times more likely to have used contraceptives than their counterparts who did not enumerate a desired number of children, and those who wished to have five or more children were 1.14 times more likely to have used contraceptives than the reference category. Table 5 shows similar results for current use of contraceptives. Respondents whose ideal number of children was four or fewer were 1.31 times more likely to have been using contraceptives than their counterparts who did not give any specific number, and those whose ideal number of children was five or more were 1.17 times more likely to have been using contraceptives than their reference category during the surveys.

Marital status was another significant predictor of contraceptive use. Respondents who were married/living together were 0.65 times less likely to have been using contraceptives than their never married/other counterparts, and those who were married/living together were 0.81 times less likely to do so than the reference category.

Contraceptive use vs communication about family planning

We examined the effects of different types of discussion about family planning on the practice of contraception. Table 5 suggests that the type of people with whom respondents discussed family planning was of critical importance. Respondents who discussed family planning with their spouse were 3.89 times more likely to have ever used a contraceptive method and 4.01 times more likely to be currently using a method than those who did not discuss it with their spouse. The results also suggest that respondents who discussed contraception with a health worker were 1.21 times more likely to have used contraceptive methods during the surveys than their counterparts who did not. Also, respondents who discussed contraception with friends were 1.69 times more likely to have used contraceptives than those that did not, and were 1.58 times more likely to have used methods during the surveys than their counterparts who did not. Discussion with religious leaders had a negative effect on contraceptive use. Respondents who discussed contraception with religious leaders were 0.27 times less likely to have ever used contraceptive methods and were 0.21 times less likely to be currently using contraception than those who did not discuss with religious leaders.

Contraceptive use vs myths and misinformation

An important aspect of this study was the effects of myths and misinformation about family planning on contraceptive use.

The literature suggests that myths and misinformation can be major constraints to acceptance and use of contraceptives.²³ Each of the myths, misinformation, and factual information predictors in the study was examined, while controlling for all other predictors in the model. In general, our findings, summarized in Table 6, show that when a statement was in favor of family planning (factual information), people responded positively to contraceptive use, and when a statement was not in favor (myths and misinformation) people responded negatively. Respondents who agreed that family planning methods are effective were 3.47 times more likely to have used contraception than those who did not agree/did not know, and were 3.71 times more likely to have used contraception during the survey than those who did not agree/did not know. When respondents agreed that family planning makes women “loose”,

Table 6 Odds ratios that respondents ever used, or are currently using contraceptives according to myths, misinformation, and factual information about family planning

Myths, misinformation, and factual information	Ever used OR	Currently using OR
Methods are effective		
Disagree/don't know (ref)		
Agree	3.47***	3.71***
Makes women “loose”		
Disagree/don't know (ref)		
Agree	0.86*	0.81***
Expensive to practice		
Disagree/don't know (ref)		
Agree	0.75***	0.80**
Women's business, not for men		
Disagree/don't know (ref)		
Agree	0.81**	0.79**
Not against religion		
Disagree/don't know (ref)		
Agree	1.38***	1.41***
Encourages male infidelity		
Disagree/don't know (ref)		
Agree	1.12	0.99
Causes cancer and other diseases		
Disagree/don't know (ref)		
Agree	0.81**	0.80**
Only for married couple		
Disagree/don't know (ref)		
Agree	0.93	0.90
Sterilization equals castration for a man		
Disagree/don't know (ref)		
Agree	1.08	1.07
-2 log-likelihood	9268.84	8156.47
Model Chi-square	6355.99	5312.66
Nagelkerke R ²	0.56	0.53

Note: ***P = 0.001; **P = 0.01; and *P = 0.05.

Abbreviations: ref, reference category; OR, odds ratio.

they are 0.19 times less likely to have been using contraceptive methods than when they did not agree/did not know.

Table 6 shows very interesting relationships between contraceptive use and other myths, misinformation, and factual information about family planning. Respondents who agreed with the statement that family planning was expensive were 0.25 times less likely to have used contraceptives than those who did not agree/did not know, and were 0.20 times less likely to have been using it during the surveys. Respondents who agreed that family planning is only women's business, were 0.19 times less likely to have used methods than their counterparts who did not agree/did not know, and were 0.21 times less likely to have been using contraceptive methods during the surveys than those who did not agree/did not know. Similarly, when respondents agreed that family planning can lead to female infertility, they were 0.14 times less likely to have used contraception methods than when they did not agree/did not know and were 0.20 times less likely to have used modern methods than those who did not agree/did not know. Another interesting result is for the statement that contraception is not against religious teaching. Respondents who agreed with this statement were 1.38 times more likely to have used contraceptive methods than their counterparts who did not agree/did not know, and were 1.41 times more likely than the reference category to have been using contraception. The misinformation that some family planning methods cause cancer was explored. Respondents who agreed were 0.19 times less likely to have ever used contraception than those who did not agree/did not know, and were also 0.20 times less likely to have been using contraception than their counterparts who did not agree/did not know.

Discussion

This study examined some of the barriers to contraceptive use, with specific reference to myths and misinformation about family planning, as well as discussion about family planning. Where people live was an important predictor of contraceptive use. Respondents who lived in the rural areas, or who lived in the northern part of the country, were less likely to be using contraceptive methods. These results suggest that more effort should be put into reducing obstacles to contraceptive use in these areas. Our findings suggest that respondents who were female, illiterate/poorly educated, or of low socioeconomic status are less likely to use contraceptives than other groups. A concerted effort needs to be made to target and reduce obstacles to use of contraception, specifically among these subgroups.

The results of this study show that respondents who did not give any specific number of ideal number of children were at the low end of contraceptive use. This finding corroborates other well documented evidence in the literature suggesting that being numerate about one's fertility desires is an essential first step to attaining small family size and eventual fertility decline.¹¹ It is important that family planning programs target this subgroup in the population with messages through effective channels of communication that have wide coverage in the different zones in the country about the benefits of family planning. Our findings also suggest that respondents in the older age group, ie, 45 years and older, and those in the younger age groups, ie, 24 years and younger, were less likely to use contraceptives. It will be necessary to increase contraceptive use among these subgroups, especially the young who constitute a substantial proportion of the population, by targeting them with messages about the benefits of contraceptive use.

Of key importance is the finding that respondents who discussed family planning with their spouse were more likely to use contraceptives, which is a well established finding in the literature.^{24,25,27-31} These findings reiterate the need to involve men in family planning and reproductive health programming at every step in order to achieve success. Likewise, respondents who discussed family planning with their friends and health workers were more likely to use contraceptive methods. Thus, the three main sources of information that affect contraceptive use in order of priority are spouses, friends, and health workers. It is important to note that while discussion with religious leaders had a negative effect on contraceptive use, respondents who perceived that religion is not against family planning were likely to use contraceptive methods. These results suggest missing links between the position of some religious leaders and factual information about family planning in the general population. Contraceptive programming needs to address these gaps to ensure that religious leaders and other key contact persons in the community have factual information about family planning and support its use.

Myths, misinformation, and factual information about family planning were key predictors of contraceptive use in this research. Our findings suggest that factual information encourages contraceptive use, while myths and misinformation discourages its use. Most important perhaps, is that we identified specific key myths and misinformation that programming should counter to achieve the desired results. Key factual information that enabled contraception included information that family planning

methods are effective, family planning protects a woman from unwanted pregnancy, and family planning is not against religious teaching. Myths and misinformation that should be countered by programming are the beliefs that family planning causes women to become “loose”, contraception is expensive, it is women’s business with no need for men to get involved, and that it leads to female infertility and causes cancer.

Conclusion

While factual information about contraceptive use should be reinforced and sustained in campaigns about the benefits of family planning, myths and misinformation should be clarified and countered by appropriate factual information. There may be a need for family planning programming that emphasizes joint responsibility of males and females in order to increase contraceptive use in the country.

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Disclosure

The authors report no conflicts of interest in this work.

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