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USE OF MODERN CONTRACEPTIVES: WILLINGNESS, ATTITUDE AND PREDICTORS AMONG RURAL CHILDBEARING WOMEN IN RIVERS STATE IN SOUTHERN NIGERIA

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ABSTRACT

Background: Willingness to use modern contraceptives is key to the decision-making process for the use of any method of contraception. This study looked at the willingness of rural women in Rivers State, Nigeria to use modern contraceptives. **Method**: A descriptive cross-sectional study involving 236 rural women of childbearing age selected through a multistage sampling method in Rivers State. Participants gave information on socio-demography, reproductive history, attitudes towards, willingness to use and reasons for unwillingness to use modern contraceptives. Data were analyzed with IBM SPSS Statistics 22 and presented using summary statistics. Predictors of willingness to use modern contraceptives was determine using Chi-square test of independence and logistic regression at *P*-value < 0.05. **Results:** Most respondents (n= 184; 78.0%)) had positive attitude towards use of modern contraceptives. Of these, 104 (56.5%) showed willingness to use modern contraceptives in the future. Number of living children, male (P = 0.0324), female (P = 0.0353), level of education (P = 0.012) and positive attitude towards modern contraceptives (P < 0.0001) were associated with willingness to use modern contraceptives. Attitude towards modern contraceptives (OR = 8.135; 95% CI = 3.281 - 20.169) and tertiary education (OR =27.038; 95% CI = 1.173 - 623.394) were also found to predict willingness to use modern contraceptives. **Conclusion**: Nearly half of the respondents indicated willingness to use modern contraceptives. Positive attitude and acquisition of tertiary education by respondents were predictor factors. Governments and program managers should implement strategies to improve partners participation and self-efficacy of women to practice family planning.

KEYWORDS: Modern contraceptive use, willingness, attitude, predictors, rural women, Rivers State Nigeria.

INTRODUCTION

The increase in world population has become a discourse of global public health concern. An estimated 7.3 billion people currently inhabit the earth, three quarters of these people live in developing countries.[1-4] Growth rate in these developing countries is high, largely due to high fertility.[5] In Nigeria, for instance, the population growth rate is put at 2.53% and fertility rate at 5.5%.[3,6] In developed countries however, a reduction in aggregate fertility have been achieved with a consequent slowing of population growth rate through the adoption of family planning services by women of reproductive age, amongst other factors.[5]

Though studies show that awareness of modern contraceptives (MC) is high, even among rural women in less developed countries, its acceptance and use is still low.[7] Studies conducted in Nigeria have reported modern contraceptive prevalence of 7% and 17% among rural and urban Nigerian women of reproductive age, respectively.[8] These levels are in sharp contrast to results obtained in developed countries such as China and the United Kingdom where at least 80% of women of childbearing age (15 - 49 years) were reported to be using a method of MC.[9] The remarkably low contraceptive use in Nigeria as well as in other developing countries has been attributed to poor or negative contraceptive attitude among women and men of reproductive age.[10–12] Contraceptive attitude, a predisposition to accept contraception or not, is however acquired through previous experiences with family planning, socialization and formal education.[13–16] For instance, formal education generally increases an individual's awareness on health and availability of social services. It also changes the individual's perceptions on negative cultural beliefs and practices regarding fertility; thus, couples are enabled to make informed decisions on issues concerning their reproductive health.[4,15,17,18] Studies have also documented fear of side effects of MC as one reason for not using MC. Such fears, especially among rural women of reproductive age, which may arise from rumors or bad

experiences of friends, have contributed to the negative attitude and low acceptance of MC.[13,17]

Nevertheless, studies have reported a disparity in the proportion of women who have positive contraceptive attitude and actual use.[19] In Nepal, 64% of the earthquake displaced women of childbearing age had positive attitude towards family planning while 34.7% had used a contraceptive method. Similarly, over 95% of Jordanian women had positive attitude towards contraception and 37% had ever used a method. Also 66.2% of the women in a rural community in Southern Nigeria had positive attitudes towards family planning whereas only 42.3% use it.[18,19] This disparity has been attributed to other influencing factors including cultural practices, spousal communication and approval of MC, number of living children particularly male children, and other socioeconomic variables.[3,4,12,20] These factors may possibly influence the subjective demand for or willingness to use MC by women of reproductive age and consequently their use of MC, in developing countries.

It has been reported that intention to act is a very strong determinant of behavior.[21] Willingness or intention to use MC is a 'behavioral intent' that favors the eventual or actual use of MC. It is a fundamental stage in the decision-making process for the practice of family planning.[12,21-23] A study reported that only 46% of women in 13 West African countries expressed their willingness to use contraceptives.[23]

Governments in Nigeria and particularly Rivers State have made concerted effort to improve access to family planning services (supply side) yet the demand for these services among the rural community dwellers is still low. A previous study had reported that only 36.8% of rural women in Rivers State used any form of MC despite finding a high level of knowledge.[24] An examination of the underlying attitudinal dispositions, and other personal and social influences would help in better understanding the current and future actions that women would take when they are offered contraceptive services, which often are in short supply in these settings. This paper reports the attitude, and willingness regarding use of MC and their relationship among women of reproductive age in rural communities in Rivers State, Nigeria in the bid to provide information required to strengthen family planning program designs and implementation towards improving MC use among this subpopulation.

MATERIALS AND METHODS

Study Setting and Design

This study was part of a larger community-based survey that was carried out in August 2013 among 380 women of child-bearing age selected by probability sampling from 20 Local Government Areas (L.G.A.) identified as rural of the 23 LGAs in Rivers State, South-South Nigeria.[24] Details of the study design, sample size determination and sampling procedure have been earlier reported.[23]

Inclusion criteria

All the women of childbearing age (15-49 years) numbering 236, who were neither pregnant nor currently using any modern method of contraception in the larger community-based survey were included in this study.

Statistical analysis

Participants responded to structured, interviewer-administered questionnaire and provided information on their socio-demographic and reproductive characteristics, attitude and willingness to use MC as well as reasons for not willing to use MC.

'Willingness to use MC' was taken as respondents who expressed a decision to use MC in the near future.

'Attitude towards MC' was measured using an attitudinal scale of a set of 11 positive and negative statements that explored three attitudinal dimensions: MC information, perceived need for consistent use of MC and advocacy for MC.[14] The responses to each statement was graded on a 3-point Likert scale, which summed up to a total ranging from 11 – 33 points. The median value of 22 points was taken as a cut-off point for categorizing the responses as negative attitude (sum score < 22) and positive attitude (sum score ≥ 22).[13]

IBM SPSS Statistics 22 was used to analyze the collected data. The results were presented using frequency tables and summary statistics. Chi-square test of independence and logistic regression were used to determine predictors of willingness to use MC at a set *P*-value < 0.05.

Ethical approval

The Ethics and Research Review Board of the University of Port Harcourt Teaching Hospital, Port Harcourt gave ethical approval for the study. Respondents were duly informed of the objectives and confidentiality of the study, that participation was voluntary and that they can freely withdraw from the interview at any point if they so feel. Respondents consequently signed the consent form.

RESULTS

Table 1 shows that majority of the respondents were young adults aged 25 – 34 years (n = 105; 44.5%), 186 (78.8%) are married while 139 (58.9%) had secondary level of education. The predominant occupation was farming (n = 80; 33.9%) and trading (n = 78; 33.1%). Approximately half of their partners (n = 122; 51.7%) had secondary education.

Table 1: Socio-demographic characteristics of respondents.

Variables (n = 236)	Frequency	Percent
Age of respondents		
15 – 24	31	13.1
25 – 34	105	44.5
35 – 44	80	33.9
>44	20	8.5
Marital status		
Married	186	78.8
Unmarried but cohabiting (divorced/seperated)	50	21.2
Religious denomination		
Catholic	53	22.5
Protestant	61	25.8
Pentecostal	112	47.5
Muslim	1	0.4
Traditional	9	3.8
Respondent's highest level of education		
Primary	59	25.0
Secondary	139	58.9
Tertiary	27	11.4
None	11	4.7
Partner's highest level of education		
Primary	37	15.7
Secondary	122	51.7
Tertiary	56	23.7
None	21	8.9
Occupation		
Farming	80	33.9
Fishing	3	1.3
Trading	78	33.1
Public Servant	33	14.0
Unemployed/Housewife	42	17.8

Table 2 shows that majority (n =112; 47.5 %) of the respondents have 2 – 4 children who were alive, 100 (42.4 %) have 2 - 4 male children and 97 (41.1%) have 2 - 4 female children. Approximately 13% of the respondent gave no response on their reproductive characteristics.

Table 2: Reproductive characteristics of respondents.

Variables (n = 236)	frequency	percent
No. of living children		
0	1	0.4
1	38	16.1
2-4	112	47.5
>4	55	23.3
Non-response	30	12.7
No of male children		
0	31	13.1
1	65	27.6
2-4	100	42.4
>4	9	3.8
Non-response	31	13.1
No. of female children		
0	40	16.9
1	64	27.1
2-4	97	41.1
>4	4	1.7
Non-response	31	13.1

Table 3 shows that in the attitudinal domain on MC information, respondents who desired to know more about MC methods were 184 (78.0%); in the domain on advocacy, those who agree that 'if two people are having sex and are not ready to have a child, it is very important that they always use modern contraceptives' were 180 (76.3%) while in the domain on perceived need for MC, 138 (58.5%) disagree with the statement 'I occasionally have sex and don't think that I require any form of contraceptive'.

Table 3: Attitude of respondents towards MC.

S/No	Variable (n = 236)	frequency	Percent
	MC information		
1	**I desire to know more about modern contraceptive methods**		
	Yes	184	78.0
	No	16	6.8
	I don't know	36	15.2
2	**More people should be aware of the importance of contraceptives**		
	Yes	183	77.5
	No	11	4.7
	I don't know	42	17.8
3	**I think that the health benefits of modern contraceptives outweigh the negative effects**		
	Yes	140	59.3
	No	33	14.0
	I don't know	63	26.7
4	**Modern contraceptives can cause infertility or harm to the body**		
	Yes	61	25.8
	No	99	42.0
	I don't know	76	32.2
	Advocacy for MC		
5	**If two people are having sex and are not ready to have a child, it is very important that they always use modern contraceptives**		
	Yes	180	76.3
	No	19	8.1
	I don't know	37	15.6
6	**I advise my friends to use any modern contraceptive method**		
	Yes	141	59.7
	No	75	31.8
	I don't know	20	8.5
7	**Only those who are married should use contraceptives**		
	Yes	65	27.5
	No	121	51.3
	I don't know	50	21.2
8	**I discuss modern contraceptive methods with my sex partner**		
	Yes	143	60.6
	No	73	30.9
	I don't know	20	8.5
9	**Contraceptives are not as important as some people say**		
	Yes	43	18.2
	No	142	60.2
	I don't know	51	21.6
	Perceived need for consistent use		
10	**I occasionally have sex and don't think that I require any form of contraceptive**		
	Yes	47	19.9
	No	138	58.5
	I don't know	51	21.6
11	**I just don't like to use contraceptives**		
	Yes	71	30.1
	No	130	55.1
	I don't know	35	14.8

Table 4 shows that 184 (78.0%) of the respondents have positive attitude towards MC. Nearly half (n = 113; 47.9) of the respondents were willing to use MC in the near future however, among respondents who have positive attitude towards MC, a little over half (n =104; 56.5%) were willing to use MC.

Table 4: Respondents' attitudes and willingness to use MC.

Variables	frequency	percent
Attitude towards MC (n = 236)		
Positive	184	78.0
Negative	52	22.0
Willingness to use MC among all the respondents (n = 236)		
Yes	113	47.9
No	123	52.1
Willingness to use MC among those with positive attitude (n = 184)		
Undecided/ unwillingness to use MC	80	43.5
Willingness to use MC	104	56.5

Table 5 shows that among respondents who were either undecided or indicated unwillingness to use MC, the fear of side effects of MC was the most reported reason for their unwillingness to use MC (n = 46; 37.4%) followed by 'My partner disapproves of its use' (n = 28; 22.8%) and 'It is not easy to use' (n = 28; 22.8%).

Table 5: Reasons for unwillingness to use MC.

Reasons for unwillingness to use* (n =123)	frequency	percent
I fear its side effect	46	37.4
My partner disapproves of its use	28	22.8
It is not easy to use	28	22.8
The fear of infertility	28	22.8
I can't afford to buy it	21	17.1
I do not know about it	17	13.8
I fear being seen by someone who knows me (societal disapproval)	13	10.6
Religious opposition (it is a sin)	13	10.6
It is not effective in preventing pregnancy/STIs	12	9.8
I do not know where to get contraceptive	12	9.8
I feel embarrassed buying contraceptives	11	8.9
My preferred method is not available	10	8.1
The health workers may embarrass me	6	4.9
My preferred source is far	6	4.9
My partner will become unfaithful	3	2.4

*multiple options

Table 6 shows that there is a statistically significant association between the willingness to use MC by respondents and their number of male children ($P = 0.0324$), number of female children ($P = 0.0353$), level of education ($P = 0.012$) and attitude towards MC ($P < 0.0001$).

Table 6: Determinants of willingness to use MC by respondents.

Variables	Willingness to use MC		X^2	*P* value
	Yes (n = 113)	No (n = 123)		
Age of respondents				
15 – 24	18	13	7.568	0.056
25 – 34	57	48		
35 – 44	32	48		
>44	6	14		
No of living children*				
0	1	0	6.311	0.072
1	12	26		
2- 4	56	56		
>4	30	25		
No of male children*				
0	16	15	8.588	0.0324
1	22	43		
2- 4	55	45		
>4	6	3		

No of female children*				
0	14	26	8.381	0.0353
1	36	28		
2-4	49	48		
>4	0	4		
Occupation of respondents				
Farming	36	44	1.123	0.891
Fishing	2	1		
Trading	39	39		
Public Servant	17	16		
Unemployed/Housewife	19	23		
Religious denomination				
Catholic	19	34	6.789	0.079
Protestant	36	25		
Pentecostal	52	60		
Others	6	4		
Respondent's highest level of education				
Primary	24	35	10.89	0.012
Secondary	71	68		
Tertiary	17	10		
None	1	10		
Partner's highest level of education				
Primary	16	21	6.201	0.102
Secondary	58	64		
Tertiary	33	23		
None	6	15		
Attitude towards Modern Contraceptives				
Positive	104	80	24.982	< 0.0001
Negative	9	43		

$P < 0.05$ statistically significant * non-responses were excluded in calculation

Table 7 shows that attitude of the respondents towards MC (OR = 8.135; 95% CI = 3.281– 20.169) and acquisition of tertiary education by respondents (OR = 27.038; 95% CI = 1.173 – 623.394) predicted willingness to use MC.

Table 7: Logistic regression analysis of predictors of willingness to use MC by respondents.

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
								Lower	Upper
Step 1[a]	Respondent Education			6.436	3	.092			
	Primary	2.146	1.525	1.982	1	.159	8.552	.431	169.736
	Secondary	2.583	1.543	2.803	1	.094	13.237	.644	272.289
	Tertiary	3.297	1.601	4.242	1	.039	27.038	1.173	623.394
	Male children			13.292	4	.010			
	0	-22.336	17334.041	.000	1	.999	.000	.000	.
	1	-22.538	17334.041	.000	1	.999	.000	.000	.
	2 -4	-21.452	17334.041	.000	1	.999	.000	.000	.
	>4	-19.460	17334.041	.000	1	.999	.000	.000	.
	Females			5.104	3	.164			
	0	21.371	1733 4.041	.000	1	.999	191085 9932.870	.000	.
	1	22.226	1733 4.041	.000	1	.999	449257 3579.747	.000	.
	2 -4	22.366	1733 4.041	.000	1	.999	517044 8752.202	.000	.
	Positive attitude	2.096	.463	20.472	1	.000	8.135	3.281	20.169
	Constant	-4.480	1.607	7.768	1	.005	.011		

a. Variable(s) entered on step 1: Respondent's Education, Male Children, Female Children, Attitude.

DISCUSSION

This study found that three-quarter of the respondents have positive attitude towards the use of MC. This high level of positive attitude among rural women in Rivers State, Nigeria may be due to their disposition to MC. For instance, three-quarter of respondents believe that 'More people should be aware of the importance of contraceptives' and 'If two people are having sex and are not ready to have a child, it is very important that they always use modern contraceptives.' Other studies have similarly reported high level of positive attitude among rural women in South-West Nigeria and elsewhere in Nepal and Pakistan.[13,26,27] Furthermore, majority of the respondents in this study reported discussing MC methods with their sex partners. Although this study did not assess partner communications on MC as a determinant of willingness to use MC, it has been reported that partner communication on MC is vital in the decision-making process for the adoption of MC and that women who discussed family planning issues with their sex partners regularly were found to be more likely to use MC in the future.[12] Discussion of MC issues among partners influence their attitude and thus the willingness to use contraception in the future.[20] The level of partner communication in this study may also contribute to their high level of positive attitude towards MC.

This study found a gap between positive attitude and the willingness of respondents to use MC. Nearly half of the respondents in this study were willing to use MC in the future to prevent pregnancy. This is however, a far improvement on the report among Nigerian women where only 13.8% indicated their desire to use MC and among rural pastoralist women in Northern Ethiopia and in the West African region where one-third of them were willing to use MC.[7,21,23]

MC attitude was found to be associated with the willingness to use it among women of child bearing age in Rivers State, Nigeria (P <0.0001) and more than half of the women who had positive attitude towards MC, were willing to use it. Women who had positive attitude were eight times more likely to be willingness to use MC in the future (OR = 8.135; 95% CI = 3.281 - 20.169). Korra (2002) also reported that women who disapproved of contraception were five times less likely to use a contraceptive method compared to those who approved of it use.[12]

Islam et al (2016) reported that positive attitude towards MC is influenced amongst others by the level of education of mothers.[22] Education which has been shown to correlates contraceptive use and fertility decline, is a veritable factor involved in modifying the attitude and the desire for family planning services by women of reproductive age.[23] Female education besides enhancing self-development, enables women to rationally analyze traditional values, norms and practices on fertility and contraception in order to make informed decisions on reproductive matters.[15,19] Although this study showed that level of respondent's education was association with willingness to use MC (P = 0.012), only respondents with tertiary education predicted willingness to use MC in the future. Respondents who had tertiary level of education were 27 times more likely to be willing to adopt a method of MC compared to those who have no education (OR =27.038; 95% CI = 1.173 - 623.394). Women with high level of education were reported to have more knowledge on contraception, in terms of availability of family planning programs and procedures, products and its side effects, and are thus are more willing to accept and use modern contraceptives in the future.[4,15,22]

Besides attitude and level of education of respondents, the number of male or female children a woman has was found not to predict willingness to use MC in this study (P > 0.05). However, this study showed an association between willingness to use MC and the number of living male children (P = 0.0324) as well as with the number female children (P = 0.0353) a woman has. Furthermore, almost half of the respondents in this study had at least two living male or female children. Societies in Nigeria are patriarchal, women in these societies especially in rural communities, lack the power to negotiate and take decisions on reproductive issue.[3,19,25] Consequently most couples, especially those who practice son preference culture, continue to bear children until they have the number of male children they desire before contemplating adoption of a contraceptive method.[4,7,15,16] Again it is the believed in some societies in Nigeria, that children come from God and that a woman is punished with infertility on re-incarnation if she cuts short the number of children God has for her by adopting family planning. Similarly, it has been reported in some rural communities in Nigeria that women who desire fertility titles and honour, also bear so many children.[4,28-30] Cultural practices and beliefs, personal experiences and expectations, etc therefore influence the perceptions and attitudes of rural women towards contraception. This is also thought to convert attitude into behaviour.[16] A little over one in every ten respondents in this study gave no response to questions bothering on the number of children and their sexes. Perhaps this absence of responses may also be due to these cultural beliefs forbidding the counting of children one has.[4] Rural women who hold these traditional beliefs are fatalistic on reproductive issues and therefore do not perceive the need for family planning and do not approve of the use of contraceptives.

Furthermore, maternal age, religion, age and education of their spouses were not associated with the willingness to use a modern contraceptive (P > 0.05). All the respondents in this study were not currently using any method of MC. The most frequent reason for the unwillingness to use MC among respondents was the fear of side effect. In other studies, apathy towards MC arising from the fear of side effects like infertility or

other perceived disadvantages, have also been linked to the unwillingness of women to use MC in the future.[7,18] More than half of the respondents in this study either belief that MC causes infertility or harm to the body or were uncertain about its harmful effect. Other commoner reasons given for their unwillingness was partner's disapproval and difficulty in using a method. These reasons reflect issues bothering on social support from partners and the acquisition of skills required to effectively practice family planning. These however, may account for the low willingness to use MC by rural women of child bearing age in this study.

The data analyzed were generated from responses to survey questionnaire which may be limited by information bias. Similarly, causality cannot be established because of the cross-sectional nature of the design study.

CONCLUSION

This study found that positive attitude towards MC is high and the willingness to use it in the future is low among women of reproductive age in rural areas in Rivers State, Nigeria. Although attitude, level of education of mothers and number of living male and female children couples have were key determinants, only attitude and acquisition of tertiary education predicted willingness to use a modern contraceptive method among rural women of childbearing age in Rivers State, Nigeria. Rural women with positive attitude towards MC are eight times more likely to be willing to use any method of MC in the future. The fear of side effects, partner's disapproval of MC use and difficulty of using a method were common reasons for non-use. It is recommended that governments and family planning program managers implement strategies aimed at increasing partner's participation in family planning and educational programs to increase self-efficacy of rural women to practice family planning in order to bridge the disparity in the attitude and willingness to use MC among rural women of childbearing age.

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CONFLICT OF INTEREST

Nil.

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