



Knowledge and Attitudes towards family planning in Rural Rwanda

KEYWORDS

Knowledge, Attitudes, family planning.

NAHAYO Sylvere

Research Scholar, Centre for Population Studies, Annamalai University.

Introduction

The United Nations and other governmental and nongovernmental organizations clearly say that if any country controls the population through family planning programmes, the level of poverty will be reduced significantly (Allen2007). Similarly, failure to sustain family planning programs will lead to increased population growth and consequent poverty and poorer health especially among the poor. As far as Rwanda Economy is concerned, family planning plays a pivotal role in population growth, poverty reduction, and human development

The relationship between population and poverty of Rwanda has been a major concern of different authors in last decades. Many studies have been conducted on the role of family planning in poverty reduction at the international and national levels. Major studies related to the family planning of Rwanda was mainly conducted by Niwemahoro, E. Musabangaji and L. Banamwana (2011), EICV1 (Republic of Rwanda, 2002, 2007, 2009, 2010 and Niwemahoro2010. The findings of the studies showed that promotion of family planning in countries with high birth rates has the potential to reduce poverty, hunger, maternal deaths and childhood deaths. Promotion of family also found to contribute substantially to women's empowerment, achievement of universal primary schooling, and long-term environmental sustainability.

In Rwanda, women still have, on an average, about six children each, and surveys show that the unmet need for FP services is high (37.9 per cent of married women of reproductive age want to space or limit births but are not currently using any method of family planning). If access to family planning services was increased, this unmet need could be met, therefore slowing population growth and reducing the costs of meeting the MDGs. Meeting the need for family planning can reduce population growth and make achieving the MDGs more affordable in Rwanda, in addition to directly contributing to the goals of reducing child mortality and improving maternal health. Even though the average fertility

rate drops of 5.5 children per woman from 6.1 in 2005, it still remains a massive burden to the economy and if it continues unchecked could be ruinous.

Data and Methodology

The present study is based on primary data collected by multistage stratified sampling method from 650 rural households. Sample size was fixed at an error margin of 5 percent, level of confidence of 99 percent and response distribution set at 50 percent. As the study is explorative in nature, in the first stage of survey design, Muhanga district was deliberately selected as it is one of successful districts for implementing family planning programs. In the next stage five rural sectors were selected at random. In the third stage twenty six cells were selected. From each cells twenty five samples respondents were selected and interviewed with the help of pre tested structured questionnaires.

The information collected covers details about the socio-economic and demographic characteristics of respondents and details about institutions which are involving family planning promotion activities in those areas. In the secondary data was collected from books, journals, leaflet, pamphlet, research reports, reports issued by Rwanda government and reports issued by family planning department of the concerned sectors in Rwanda. Descriptive statistics, t-test, F-test, multiple regressions and multiple classification analysis were used for analyzing the primary data.

Results and Discussion

The analysis of total number of respondents who have known and who have not known the selected contraceptive gives a Chi Square value of 1785.285 with a degrees of freedom (d.f.) = 7 and significance level of 0.000, which is less than 0.05. The result indicates the variation in the level of knowledge of the sample about different contraceptive methods is significant. In short sample has different level of knowledge about different contraceptives.

Table 1 Characteristics-wise distribution of sample by knowledge about contraceptives and test of significance

Characteristics		Condoms	Abstinence	Pills	Implant	Withdrawal	Injections	IUD	Rhythm	Chi-square*
Age of wife	Up to 30	92.51	92.51	93.05	88.77	91.98	90.37	88.24	21.93	3.859 (1.000)
	31-40	100.00	97.08	94.15	90.64	90.64	87.72	78.95	22.81	
	41-50	90.96	92.02	90.43	87.23	82.98	84.57	79.79	26.06	
	Above 50	94.23	92.31	86.54	84.62	84.62	82.69	82.69	25.00	
Age at marriage of wife	Less than 21	90.91	92.61	89.20	84.09	85.80	80.68	81.25	11.93	18.364 (0.626)
	21-25	93.79	94.44	91.50	91.50	86.60	89.87	82.68	29.41	
	26-30	98.50	93.98	92.48	82.71	90.23	84.21	79.70	22.56	
	Above 30	100.00	88.57	100.00	100.00	100.00	100.00	97.14	40.00	

Education of wife	Illiterate	100.00	93.65	85.71	87.30	80.95	87.30	60.32	44.44	25,699 (0.218)
	Primary	93.49	93.28	91.60	88.03	87.18	85.50	82.77	23.53	
	Secondary	96.55	96.55	96.55	89.66	96.55	93.10	91.95	17.24	
	Ordinary+	87.50	87.50	87.50	87.50	87.50	87.50	100.00		
Income	Low income	93.45	92.00	86.55	83.64	79.27	79.64	85.09	10.55	35,289 (0.001)
	Medium income	94.96	93.70	95.38	91.60	94.12	91.60	81.51	32.77	
	High income	94.89	96.35	94.89	91.24	94.16	92.70	78.83	35.04	
Children living	<= 3	92.71	91.32	90.97	87.85	89.58	86.11	76.74	30.56	13,492 (0.488)
	4-6	96.06	94.62	92.11	87.46	87.10	86.74	87.46	19.71	
	>=7	93.98	97.59	91.57	91.57	84.34	89.16	85.54	14.46	

Source: Primary data *Figures in the parenthesis are significance level

In order to group the contraceptive methods according to level of knowledge, Chi-Square (χ^2) test was carried out in a special format. At first, the contraceptive methods were arranged in descending order by the percentage of knowledge. The first two highest known methods, namely condoms and abstinence were subjected to χ^2 test. The test revealed a significance level greater than 0.05 which accepts the null hypothesis that there is no significant variation in the level of knowledge between condoms and abstinence. So, the knowledge level of pills is also used for χ^2 analysis along with condoms and abstinence. In this case also, the significance level is found to be greater than 0.05, indicating similarity of levels of knowledge. But, when implant was included to the χ^2 analysis along with condoms, abstinence and pills, the χ^2 value is found to be 22.371 with a significance level of 0.000. The result indicated when the level of implants was added those of condoms, abstinence and pills; the result rejects the null hypothesis of equality of knowledge about the component method. So, it can be inferred that condoms, abstinence and pills are homogenous as far as level of knowledge is concerned, and implant has different level of knowledge. In short, it can be said that condoms, abstinence and pills are the very highly known contraceptive methods in the rural Rwanda.

To find out the second homogenous group of highly known contraceptive methods, the step wise χ^2 tests were carried out by initially taking implants and withdrawal. The final result indicates that implants, withdrawal and injections are a homogenous group of contraceptive methods which attract high level of knowledge from Rwandan rural people.

Knowledge about condoms, abstinence and pills are very high among these people. Knowledge about implants, withdrawal and injections are high and knowledge about form IUD is medium and that of rhythm is very low.

Knowledge about contraceptive is significantly related to the income level of the respondents. The high income group is found to have higher knowledge about all contraceptives except IUD. The low income group has comparatively lower knowledge about all contraceptive method except IUD. The natural methods like Rhythm and withdrawal were unknown to the lower income group in higher proportion. The knowledge of medium income group is found to be medium. The knowledge about contraceptive is found to increase with the level of income of the respondents.

Table 2 Distribution of sample by knowledge about contraceptive

Level of knowledge	Methods	Knowledge				χ^2 at acceptance	χ^2 at rejection
		Have		Have not			
		N	%	N	%		
Very high	Condoms	613	94.31	24	3.69	4.479 (0.107)	
	Abstinence	608	93.54	25	3.85		
	Pills	595	91.54	38	5.85		
High	Implants	573	88.15	58	8.92	1,059 (0.589)	22,371 (0.000)
	Withdrawal	571	87.85	62	9.54		
	Injections	564	86.77	69	10.62		
Medium	IUD	536	82.46	35	5.38	-	8,966 (0.030)
Very low	Rhythm	155	23.85	422	64.92	-	537,779 (0.000)

Source: Primary data

From Table 3 it can be seen that Radio/Television was the major source for all contraceptives followed by doctors. Contributions of health workers friends, newspapers, films, posters and relatives are comparatively lesser. IUD and pills are found to be the most important contraceptive methods known to the respondents from Radio/TV and doctors. Condoms, Injections, Implants and rhythm are the other contraceptive methods propagated by Radio/TV and doctors. Health workers propagate knowledge about pills and condom in comparatively in higher proportion. The maximum knowledge dissipated by friends, newspapers, films, posters and relatives is about IUD and Injections.

Table 3 Distribution of Respondents by Source of Knowledge for Contraceptives

Methods	No. having knowledge N	Source of Knowledge*							
		Doctor		Health workers		Radio, TV		Others	
		n	%	n	%	n	%	n	%
Injections	564	232	41.13	70	12.41	363	64.36	93	16.49
Implants	573	224	39.09	75	13.09	356	62.13	84	14.66
Condoms	613	255	41.60	91	14.85	390	63.62	87	14.19
Withdrawal	571	216	37.83	74	12.96	354	62.00	73	12.78
Rhythm	155	25	16.13	14	9.03	56	36.13	6	3.87
Pills	595	293	49.24	94	15.80	384	64.54	81	13.61
IUD	536	294	54.85	69	12.87	335	62.50	91	16.98

Chi Square = 29.738, df. = 18, Sig. = 0.040

Source: Primary data*Multiple Choice

Table 4 indicated that out of the total sample 90.77 per cent of the sample approved using of family planning methods and 2.77 per cent disapproved using of family planning methods. The percentage of those who did not express any opinion on using of family planning methods is 6.46. The chi-square test indicates that the status of approval of family planning vary significantly among different characteristics. In the case of age of wives, the percentages of approval are significantly lower among higher age groups. As far as age at marriage of wives is concerned, percentage of approval is lowest among those who married before 21 years. Similarly approval rates are lower among low educated and low income groups. Among those who have more than six children also found to have significantly lesser approval rate. Age, age at marriage and education of wives, and family income have positive relationship with the approval of family planning while, number of children is have negative relation.

Table 4 Characteristic-wise distribution of sample by their status of approval of family planning

Characteristics		Approve		Not approve		Chi-square	Sig.
		N	%	N	%		
Age of wife	Up to 30	179	95.72	8	4.28	30.300	0.000
	31-40	166	97.08	5	2.92		
	41-50	159	84.57	29	15.43		
	Above 50	86	82.69	18	17.31		
Age at marriage of wife	Less than 21	146	82.95	30	17.05	26.947	0.000*
	21-25	295	96.41	11	3.59		
	26-30	116	87.22	17	12.78		
	Above 30	33	94.29	2	5.71		
Education of wife	Illiterate	50	79.37	13	20.63	14.813	0.002*
	Primary	433	90.97	43	9.03		
	Secondary	85	97.70	2	2.30		
	Ordinary+	22	91.67	2	8.33		
Income	Low income	236	85.82	39	14.18	18.361	0.000
	Medium income	219	92.02	19	7.98		
	High income	135	98.54	2	1.46		
Children living	<= 3	266	92.36	22	7.64	39.649	0.000
	4-6	264	94.62	15	5.38		
	>=7	60	72.29	23	27.71		
Total Sample		590	90.77	60	9.23		

Better standard of living is the reason expressed by 86.61 per cent of sample followed by better education and care for children (74.58 per cent) and better health for mother and child (74.24 per cent). Avoiding disintegration of property got the least preference of 65.42 per cent.

The main reason for the disapproved family planning methods is that it is being considered as *immoral* (55.56 per cent). The other reasons are being *unnatural* (33.33 per cent), *it will reduce strength of community* (33.33 per cent) and *children*

are the source of assets (33.33 per cent). All respondents who disapprove family planning methods were of the opinion that possibility of getting more income is the advantage of large family. Equal number (77.78 per cent) of respondents who disapprove family planning methods believed that large family could provide old age dependence and create social dominance.

Opinions on the advantages of small and large families had been respectively sought from those who approved and disapprove family planning methods.

Analysis showed that 92.37 percent of respondents who approve family planning methods cited that advantage of small family is that it proved better living condition. Possibility of getting better education for children (73.39 per cent) and better health for mother and child (68.64 per cent) are the other important advantages expected by the respondents who approve family planning methods.

All respondents who disapprove family planning methods were of the opinion that possibility of getting more income is the advantage of large family. Equal number (77.78 per cent) of respondents who disapprove family planning methods believed that large family could provide old age dependence and create social dominance.

Table 5 presents distribution of Sample by frequency of discussion to partner about Family Planning. Majority (56.46 per cent) had discussed to their partner about Family Planning. More than 23 per cent discussed once or twice and 19.85 per cent never discussed with their partners about Family Planning.

Table 5 Distribution of Sample by frequency of discussion to partner about Family Planning

Frequency	N	Per cent
Never discussed	129	19.85
Discussed once or twice	154	23.69
Discussed more often	367	56.46
Total	650	100.00

Table 6 presents distribution of sample according to the status of discussion with partner about cost of children. From the table it can be seen that 88.00 per cent of respondents discussed with partner about cost of children.

Table 6 Distribution of Sample according to the status of discussion with partner about cost of children

Status	N	Per cent
Discussed with partner about cost of children	572	88.00
Not discussed with partner about cost of children	78	12.00
Total	650	100.00

As per Table 7 more than half of the respondents (58.62 per cent) are non-users family planning methods. The Chi Square test indicates that practice of family planning method depends on the characteristics of the sample. The percentage use of family planning methods found to decrease with the increase in the age and increase with the increase in age at marriage. Percentage use of family planning methods is found to be high among medium educated women and lowest high educated women. Family income is found to have positive impact on the level of acceptance of family planning methods. Among high income groups, use of family planning methods is found to be about double of that of the low income group. Number of living children and percentage use of family planning methods is found to have inverse relationship. Women with lesser number of living children are found use family planning methods in higher proportion.

Table 7 Distribution of non-users and users of family planning methods by their selected characteristics

Characteristics		Non users		Users		Total		c ² Value	Sig.
		N	%	N	%	N	%		
Age of wife	Up to 30	89	47.59	98	52.41	187	100.00	59.057	0.000
	31-40	79	46.20	92	53.80	171	100.00		
	41-50	122	64.89	66	35.11	188	100.00		
	Above 50	91	87.50	13	12.50	104	100.00		
Age at marriage of wife	Less than 21	128	72.73	48	27.27	176	100.00	22.674	0.000
	21-25	172	56.21	134	43.79	306	100.00		
	26-30	64	48.12	69	51.88	133	100.00		
	Above 30	17	48.57	18	51.43	35	100.00		
Education of wife	Illiterate	46	73.02	17	26.98	63	100.00	21.546	0.000
	Primary	265	55.67	211	44.33	476	100.00		
	Secondary	47	54.02	40	45.98	87	100.00		
	Ordinary+	23	95.83	1	4.17	24	100.00		
Income	Low income	199	72.36	76	27.64	275	100.00	38.098	0.000
	Medium income	120	50.42	118	49.58	238	100.00		
	High income	62	45.26	75	54.74	137	100.00		
Children living	<= 3	110	38.19	178	61.81	288	100.00	95.170	0.000
	4-6	199	71.33	80	28.67	279	100.00		
	>=7	72	86.75	11	13.25	83	100.00		
Total Sample		381	58.62	269	41.38	650	100.00		

The most prevalent family planning method is IUD (27 per cent) followed by Pills (20.82 per cent), abstinence (20.45 per cent) and condoms (11.52 per cent). The natural method like Rhythm and withdrawal are used by only 3.38 and 0.37 per cent respectively.

The Chi-square test indicates that pattern of contraceptive use is dependent upon the age of the wives. The temporary artificial methods are abundantly used by young couples. The percentage distribution of users of temporary natural methods and permanent methods are almost normally distributed over the age groups of wives. Highest percentages of users of these methods belong to the age group (31- 40).

Table 8 Distribution of Couples by Family Planning Method Used

Groups	Family Planning Methods	N	Per cent	
1	Users of Permanent Method	32	11.90	
2	Users of Temporary Methods	Natural	65	24.16
		Artificial	172	63.94
TOTAL		269	100.00	

From Table 8 it can be seen that temporary contraceptive methods are found to use in higher percentages by wives married between the age 21 to 25 followed by the age group (26-30). Percentage of temporary methods is least among wives whose age at marriage is above 30 years. The permanent method of contraceptive is used in higher percentage by wives whose age at marriage is less than 21 years and

those whose age at marriage is higher than above 30 years. The percentage distribution of users of permanent method is found to be in the shape of concave upward, while those of users of temporary methods in the shape of convex upward.

Table 9 Characteristics-wise distribution of sample by contraceptive methods used

Characteristics		Method used						Total		Chi-square	Sig.
		Permanent		Temporary							
		N	%	N	%	N	%	N	%		
Age of wife	Up to 30	6	2.23	12	4.46	80	29.74	98	36.43	31.588*	0.000
	31-40	12	4.46	24	8.92	56	20.82	92	34.20		
	41-50	10	3.72	22	8.18	34	12.64	66	24.54		
	Above 50	4	1.49	7	2.60	2	0.74	13	4.83		
Age at marriage of wife	Less than 21	14	5.20	9	3.35	25	9.29	48	17.84	44.049*	0.000
	21-25	7	2.60	36	13.38	91	33.83	134	49.81		
	26-30	3	1.12	20	7.43	46	17.10	69	25.65		
	Above 30	8	2.97		0.00	10	3.72	18	6.69		
Education of wife	Illiterate	2	0.74	9	3.35	6	2.23	17	6.32	4.071#	0.377
	Primary	28	10.41	45	16.73	138	51.30	211	78.44		
	Secondary	2	0.74	11	4.09	28	10.41	41	15.24		
Income	Low income	9	3.35	14	5.20	53	19.70	76	28.25	6.550*	0.162
	Medium income	15	5.58	25	9.29	78	29.00	118	43.87		
	High income	8	2.97	26	9.67	41	15.24	75	27.88		
Children living	0	0	0.00	0	0.00	0	0.00	0	0.00	>50.00*	0.000
	1-3	9	3.35	43	15.99	126	46.84	178	66.17		
	4-6	23	8.55	22	8.18	46	17.10	91	33.83		

* Greater than 80 percent cells have expected frequency greater than 5

Freeman-Halton extension of Fisher's exact test for 3x3 contingency table

All the three types of contraceptives are used in highest proportion by women with primary education followed by those having wives with secondary education. The percentage use of contraceptive among illiterate women is comparatively least. Pattern of contraceptive use is identical with respect to monthly family income. The maximum percentages of contraceptive use were found among medium income group.

Temporary methods are mostly used by couples having 1 to

3 living children.

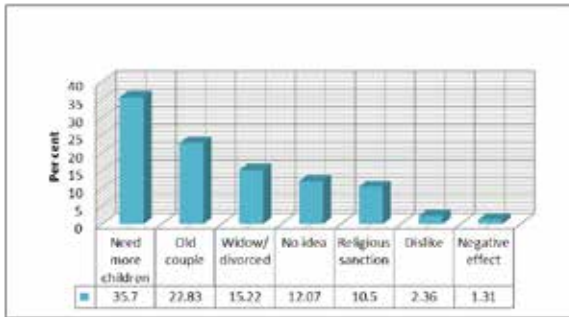


Figure 1. Percentage distribution of sample by reasons for non-use of family planning methods

From Figure 1 it can be seen that the most prominent reasons for non-use of family planning methods is the need for more number of children followed by the reason of old age. More than 15 per cent of respondents avoided family planning methods as they were either widowed or divorced. When 12.07 per cent cited no specific reasons for non-use of family planning methods, 10.5 per cent cited religious sanction as reason. When 2.36 per cent of respondents avoided family planning methods due to their dislike towards it, 1.31 avoided family planning methods due to negative effects.

The level of knowledge about family methods is low among low income group. Contributions of health workers, friends, newspapers, films, posters and relatives as source of knowledge for contraceptives are comparatively lesser. Age, age at marriage, education, income and number of children are related to the approval of family planning and use of family planning methods. Misconceptions about family planning are the reasons for disapproval of family planning. Misconceptions about the advantages large family were the main reasons for non-use of family planning.

Lack of Inter-spouse communication related to Family Planning

Limitations of the study

The sample contain only five per cent of couples accepted permanent family planning methods. So, the majority of the couple are not completed their desired family size. So, conclusions derived in relation to number of children may be lower than the actual value in the case of higher parity couples.

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