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Research Article

Knowledge, Attitude and Willingness Towards Vasectomy Among Married Couples of Rubavu District, Western Province of Rwanda

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Abstract

Contraception is an essential part of the strategy to increase the country's economy. The Ministry of Health's targets in its third Health Sector Strategic Plan was to raise the prevalence rate of FP among married couples from 52 percent in 2010 to 62 percent in 2015. The present study aimed to assessing the knowledge, attitude and willingness towards vasectomy among married couples of Rubavu District. Across-sectional study was conducted to determine the level of knowledge, attitude and willingness towards vasectomy and factors associated to vasectomy related knowledge. Simple random sampling technique was applied to select 360 legally married couples as sample size from the target population who were 45,350 married couples in Rubavu district. Data collectors used structured questionnaire to interview study participants. Data was analyzed using Statistical Package for Social Scientist (SPSS) version 21. The study findings showed that 60.60% of the couples had 0 - 3 range number of the children and the majority of them 54.40% reported that their marriage age ranged between 1 - 7 years. The study revealed that the majority of participants 73.10% had good knowledge but 58.60% of them had negative attitude towards vasectomy and only 3.60% of the participants reported that they were willing to use vasectomy in the future. Although, this study revealed that the couples with 4-6 range number of children were more likely to have knowledge towards vasectomy [AOR = 1.573; 95% CI = 0.921 - 2.688; P = 0.02] compared to couples with 0 to 3 range number of children. It is concluded that the range of number of children, age of marriage, occupation of husband and ubudehe category were factors strongly associated with the level of knowledge related to vasectomy.

Keywords: *Knowledge; Attitude; Willingness; Vasectomy; Married Couples; Rubavu District*

Introduction

The International handbook for providers published by World Health Organization stated that satisfying sexual life is among the basic needs of adult human being and access to safe, quality and affordable sex is human rights and wellbeing for both women and men [1]. However, [2] mentioned that Sex has been worrisome among married couples after the policies and strategies of many counties that are targeted on reduction of reproduction rate as well as lessening of child and maternal mortality associated to the pregnancy risks. He added that family planning has been established as a crucial component of child and reproductive health care globally as it has proven that family planning has saved and protected the health to the billions of women and children all over the world [2]. Worldwide family

planning programs focus on the role of women rather than men. [3] mentioned that it is not mainly caused by the fact that many methods are applicable to women but it was revealed that most men reflect vasectomy as a castration, difficult procedure, being neglected by their wives and peer men or think that they will be fat or become weak, less masculine, or less productive and that they will take long term hospitalized after the procedure.

According to WHO, some men also believe that during vasectomy procedure testicles are removed, sexual drive is decreased, that a man's erection is soft and doesn't last long and that their ejaculation will not be the same as it was before [1].

In Africa, data regarding Vasectomy itself are lacking. However, ts trends can be identified by looking to the United Nations report of 2015.The United Nations report mentioned that in Africa, Islands, North of the continent and Southern Africa of Cap Verde, Mauritius and Reunion has more than 50% of family planning. In 2015, Eastern African countries had family planning prevalence of 50% or more. On the other hand, Family planning prevailed at 20% in seventeen African countries. Among them is the crowded country of Nigeria, where vasectomy prevalence was below 50% the level in Ethiopia (16% and 36%, respectively). Less than 10% of married couples were using vasectomy as family planning in Chad, Guinea and South Sudan in 2015 [3].

The Rwandan government has incorporated contraception as a central component of its development. Beyond the spacing, timing and limiting the number of children, FP is a vehicle to improved health status, decrease maternal, infant and child mortality in Rwanda. In Rwanda Family Planning information are available and accessible to all citizens from cities to rural areas. It is for this reason that contraception use in Rwanda increased from 17% to 53% over the period of ten years. However, the rate of vasectomy is still low in Rwanda [4].

According to the Ministry of Health (2012) report, the most commonly used modern methods are injectable (26%), followed by pills (7%) and implants (6%). It is important to see that all of these methods are applied to female while the only male method mentioned in the report was condom use that was at 3%. This shows how vasectomy prevalence is very low. The Ministry of Health's targets in its third Health Sector Strategic Plan (HSSP III,2012-18) was to rise the prevalence rate of FP among married couples from 52 percent in 2010 to 62 percent in 2015 [5]. However, this was not achieved since it was on 53% in 2015 (Schwandt,2018). Therefore, the Ministry of Health has been promoting vasectomy as an option for men, and demand for the procedure is increasing. It was therefore good to assess the Knowledge, attitude, willingness and factors associated with vasectomy related knowledge among married couples especially in Rwanda.

According to [4] survey conducted in Rwanda, the Rwandan Government has an aggressive approach to a goal of reaching middle-income country status by 2024. Contraception is an essential part of the strategy to increase the country's economy required to reach this level. The Ministry of Health's targets in its third Health Sector Strategic Plan was to rise the prevalence rate of FP among married couples from 52 percent in 2010 to 62 percent in 2015. However, this was not achieved since it was at 53% in 2015 [4]. Therefore, the Ministry of Health has been promoting vasectomy as an option for men, and demand for the procedure is increasing. Even though vasectomy is an effective, simple and permanent procedure with more than 99% success rate with low risk medical complications husbands in the married couples only 0.2% of Rwandan married couples use vasectomy in family planning [6]. No data that was available on vasectomy or other methods of Family planning in Rubavu District. Little was known on the factors influencing underutilization of vasectomy contraception method among married couples. Therefore, this study was conducted in order to assess the knowledge, attitude, willingness and factors associated with vasectomy knowledge among married couples of Rubavu District.

Methods

Study design

This research study was a descriptive and analytical cross-sectional study. A cross-sectional study was chosen since it takes a population in a single point in time and it helps to remove assumptions, it was cheap and quick which was the design required for this study.

Target population

Target population of this research study was 45,350 married couples in Rubavu district. Rubavu district is found in Western Province of Rwanda. It has 12 sectors with 388.3 Km^2. Rubavu district has 403,662 populations among of which 45,350 are married couples [6].

Sample size and sampling procedure

The participants were obtained via a stratified method of sampling that was conducted in three different stages called strata. In stratum number one, random sampling of all 6 Sectors of Rubavu district was used to give a total of all 360 couples to be used as study participants. The six sectors obtained randomly are Gisenyi, Kanama, Nyamyumba, Nyundo, Rubavu and Rugerero. 60 participants were selected from each Sector. In the stratum number two, in each Sector, three Cells were also randomly selected by tossing the names of all cells in the Sector. Therefore, each cell provided 20 participants. In the last stratum, those 20 participants were conveniently selected according to the arrangement of their homes in the first two villages of the selected cells according to alphabetic order of the village names.

Data analysis and ethical consideration

The data recorded on the questionnaire during data collection were entered and coded into the Microsoft Excel Data base. After then they were exported into Statistical Package for the Social Studies (SPSS) software version 21, in order to analyze them statistically. Frequency statistics of demographic characteristics were calculated and results were displayed in Tables. Participants knowledge level were categorized into "no knowledge", "fair knowledge", and "good knowledge" based on the total knowledge score.

Participants attitude toward vasectomy were computed and the percentage of positive and negative attitude were mentioned. Frequency distribution of the participants' willingness of using vasectomy were calculated, Pearson chi-square test was done and P-value less than 0.05 was considered as statistically significant and finally multivariate analysis of demographic characteristics of population was performed to determine the factors associated with vasectomy related knowledge.

The ethical committee of Mount Kenya University (MKU) gave the ethical clearance for this study. The Executive Secretary of Rubavu district authorized the green light for data collection in their District. Data collection was done to only voluntarily participation of married couples after signing their consent. The confidentiality, respect; integrity and dignity of the data were safeguarded. Locks and keys were bought for draws for hard copies of the questionnaires and passwords of folders of database software were created. Participants' names were used.

Results

Demographic characteristics of respondents

The participants of this study were 360 legally married couples obtained from six Sectors randomly selected from twelve sectors of Rubavu district. Those Sectors are Gisenyi, Kanama, Nyamyumba, Nyundo, Rubavu and Rugerero. Each sector provided 60 couples surveyed. Demographic findings of this study are summarized in the table 1 below.

Variables	Frequency	Percent
Age group of husband		
20-35	159	44.2
36-45	122	33.9
46-55	50	13.9
>55	29	8.1
Age group of wife		

20-35	132	36.7
36-45	106	29.4
46-55	32	8.9
>55	90	25.0
Age of marriage		
1-7	196	54.4
8-17	90	25
15-21	45	12.5
>22	29	8.1
Range number of children		
0-3	218	60.6
7-4	119	33.1
>7	23	6.4
Occupation of husband		
Unemployed	16	4.4
Employed	205	56.9
Agriculture/breeding	56	15.6
Business/Fishing	83	23.1
Occupation of wife		
Unemployed	37	10.3
Employed	183	50.8
Agriculture/breeding	50	13.9
Business/Fishing	90	25.0
Religion		
No religion	18	5.0
Protestant	241	66.9
Muslims	14	3.9
Other religion	87	24.2
Education of husband		
Illiterate	67	18.6
Primary	190	52.8
Secondary	79	21.9
Tertiary	24	6.7
Education of wife		
Illiterate	74	20.6
Primary	193	53.6
Secondary	82	22.8
Tertiary	11	3.1
Ubudehe category		
Category 1	53	14.7
Category 2	199	55.3
Category 3	108	30.0

Table 1: *Demographic characteristics of the study population.*

Source: *Primary data from this study, (February 2021).*

Table 1 shows that the majority of husbands (44.2%) and wives (54.4%) were aged between 20 - 35 years old. The age of marriage 54.5% of couples ranged from 1 to 7 years and the significant number 218 (60.6%) had had the number of children ranging between 0 - 3 children. Among couples, 205 (56.9%) husbands were employed while 90 (25.0%) were doing business. A number of 190(52.8%) husbands and 193 (53.6%) wives had primary level of education and 199 (55.3%) couples belonged in second category.

During the period of data collection there were four categories in Rwanda where the economic status becomes better as the category increase from the first to the fourth category. There was no one among the study participants who were in the fourth category.

Presentation of findings

The findings of this study are presented according to the four research objectives. The first objective was to find out vasectomy related knowledge among married couples, the second objective was to discover the attitude towards vasectomy among married couples, the third objective was to determine the willingness to use vasectomy among the married couples and the fourth objective was to determine the factors associated with vasectomy related knowledge among the married couples of Rubavu District.

Vasectomy related knowledge among married couples of Rubavu District.

The first objective of this study was to find out vasectomy related knowledge among married couples of Rubavu District. Different questions were asked to identify the general knowledge about Vasectomy among the study participants. The following are eleven statements with their frequencies and percentages then after used in score assessment to find out vasectomy related knowledge among married couples of Rubavu District.

Variables	Frequency	Percentage
Couple has heard about male family planning method.		
No	315	87.5
yes	45	12.5
Couple has heard about vasectomy		
No	44	12.2
Yes	316	87.8
Vasectomy is a temporary procedure?		
Yes	12	3.3
No	348	96.7
Vasectomy is a permanent procedure?		
No	42	11.7
Yes	318	88.3
Vasectomy is male castration?		
Yes	103	28.6
No	257	71.4
After vasectomy a man will lose a desire for sex?		
Yes	46	12.8
No	314	87.2
After vasectomy a man will impregnate his wife?		
Yes	31	8.6

No	329	91.4
After vasectomy a man is able to ejaculate?		
No	301	83.6
yes	59	16.4
Vasectomy prevents Sexual Transmitted Infections?		
Yes	92	25.6
No	268	74.4
Vasectomy is complicated and has many risks?		
No	229	63.6
Yes	131	36.4
Vasectomy requires a long term hospitalization?		
No	266	73.9
Yes	94	26.1

Table 2: *Vasectomy related knowledge among married couples of Rubavu District.*

Source: *Primary data from this study, (February 2021).*

Respondents were asked if they had ever heard of any male family planning method referring to condom, withdrawal as well as vasectomy and the majority of them 45 (12.5%) responded that they have heard it before whereas the remaining 315 (87.5%) responded that they don't know any male method of family planning. When asked if they had heard vasectomy before, the majority of them 316 (87.8%) said that they had heard vasectomy while another number of participants 44 (12.2%) reported that they did not.

Overall score of level of knowledge related to vasectomy among married couples of Rubavu District

In order to assess the knowledge level of the participants, scoring system was used to the responses of knowledge questions and measured the correct answers. Eleven (11) statements have been used to determine the level of knowledge related to vasectomy among married couples of Rubavu District and all were positive. Overall score on vasectomy related knowledge was 11 and the score mean of 6.88. The participants with score less than mean were considered to have poor knowledge towards vasectomy and those with score greater than mean were considered to have good knowledge about vasectomy.

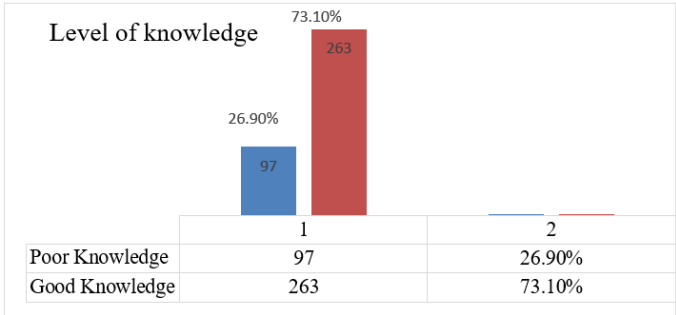

Figure 1: *Level of knowledge related to vasectomy among married couples of Rubavu District.*

Source: *Primary data from this study, (February 2021).*

The study results presented in figure above shows that 97 (26.90%) participants had poor knowledge to words vasectomy and 263 (73.10%) of them had good knowledge about vasectomy.

The attitude towards vasectomy among married couples of Rubavu District

The second objective of this study was to determine the attitude towards vasectomy among married couples of Rubavu District. Fifteen (15) statements were developed to estimate whether a given couple had negative or positive attitude towards vasectomy and the participants were asked to state whether they agree or disagree with it.

For the statement which was asking if lifetime sterilization methods should be only for females, 47.2% of the participants agree with that and 52.8% of them disagreed. Asked whether Vasectomy make men prone to becoming promiscuous 26.1% of them agreed and 73.9% participants disagreed with that. Only 55.5% approved the use of vasectomy as method of family planning. More than a half (66.4%) of the participants disagreed when asked if husband should not take part in family planning stating that it must be restricted to their wives.

Variable N=360		
Statement	**Agree**	**Disagree**
Lifetime methods are for wives.	170 (47.2%)	190 (52.8%)
After vasectomy a man is prone to be promiscuous.	94 (26.1%)	266 (73.9%)
Vasectomy is a method of family planning.	198 (55.5%)	162 (44.5%)
Vasectomy is effective method than other methods.	116 (32.2%)	244 (77.8%)
Husbands should not take part in contraception.	121 (33.6%)	239 (66.4%)
Vasectomy is forbidden according to your religious belief.	149 (41.4%)	211 (58.6%)
Vasectomy is against our culture.	218 (60.5%)	142 (39.5%)
After Vasectomy peer men will not consider a husband as a man.	237 (65.8%)	123 (34.2%)
Men loose his sexuality after Vasectomy.	150 (41.7%)	190 (35.3%)
Men do not get sexual pleasure after Vasectomy.	147 (40.8%)	213 (59.2%)
Vasectomy is for poor families who fears to give birth.	179 (49.7%)	181 (50.3%)
Vasectomy is for white people not good for Rwandans/Africans.	172 (47.8%)	188 (52.2%)
Men with a vasectomy lose their authority in the family.	253 (70.3%)	107 (29.7%)
Vasectomy is not good for family with few children.	176 (48.9%)	184 (51.1%)

Table 3: *Attitude towards vasectomy among married couples of Rubavu District.*

Source: *Primary data from this study, (February 2021).*

When asked if vasectomy is an effective form of family planning than other methods only 32.2% of the participants agreed with the statement, 41.4% of the participants approved that permanent sterilization procedure such as vasectomy is forbidden according to their religious belief and more than a half (60.5%) of them agreed that vasectomy is against their culture. 65.8% of the respondents reported that their fellow husbands will not consider them as normal men in their community after performing a vasectomy procedure. 40.8% of the participants agreed that a husband will not still enjoy the sex and benefits its pleasure after performing vasectomy while almost a half of them (49.7%) agreed that vasectomy is deserved for only poor families who have fears of giving birth. 47.8% of the participants agreed that vasectomy is not good for Rwandan and Africans, 70.3% of them agreed that a husband will lose authority in their families after performing vasectomy and 48.9% agreed that vasectomy is not good for families with few children.

Overall score of attitude towards vasectomy among married couples of Rubavu District

Fifteen (15) statements were developed to identify negative and positive attitude towards vasectomy and the participants were asked to state whether they agree or disagree with it. Overall score on level of attitude towards vasectomy was 15 and the score mean of 6.31. The respondents with score less than mean were considered to have negative attitude and those with score greater than mean were considered to have positive attitude.

The results show that 149 of the participants equivalent to 41.60% presented positive attitude towards vasectomy whereas 211 participants equivalent to 58.40% had negative attitude towards vasectomy.

The willingness to use vasectomy among the married couples of Rubavu District

The third objective of this study was to determine the willingness to use vasectomy among the married couples of Rubavu District. Only two questions were enough to know whether a certain couple has the willingness to use vasectomy as family planning method.

Among the total 360 married couples participated in this survey no one was ever used vasectomy as a method of family planning or for any other purpose. As it is summarized in the table 4, 61.1% of the participants responded that they were using other methods of family planning. In this study the details of other methods being used were not assessed. Only 3.6% of the participants reported that they had willing to use vasectomy in the future.

Variable N = 360		No. (%)
Couples using other methods of family planning		
	Yes	220 (61.1)
	No	140 (38.9)
Couples willingness to use vasectomy		
	Yes	13 (3.6)
	No	347 (96.4)

Table 4: *Willingness to use vasectomy among the study participants.*

Source: *Primary data from this study, (February 2021).*

Factors associated with vasectomy related knowledge among married couples of Rubavu District

Objective four was to determine the factors associated with vasectomy related knowledge among the married couple of Rubavu District. Bivariate analysis was done first to obtain variables of social demographic with statistical significant association between knowledge and vasectomy with p-value < 0.05 calculated at 95% CI.

	Level of knowledge				
Variables	**Poor knowledge**		**Good knowledge**		**P-value**
	n	**%**	**n**	**%**	
Age group of husband					
20-35	42	43.3	117	44.5	0.68
36-45	37	38.1	85	32.3	
46-55	11	11.3	39	14.8	
>55	7	7.2	22	8.4	

Age group of wife					
20-35	0	0	3	1.1	0.5
36-45	15	15.5	37	14.1	
46-55	4	2.1	19	7.2	
>55	78	80.4	204	77.6	
Age of mariage2					
1-7	48	49.5	148	56.3	0.05
8-14	27	27.8	63	24.8	
15-21	15	15.5	30	11.4	
>22	7	7.2	22	8.4	
Range of number of children					
0-3	62	63.9	156	59.3	0.01
4-6	24	24.7	95	36.1	
>7	11	11.3	12	4.6	
Occupation of husband					
unemployed	10	10.3	6	2.3	0.01
Employed	51	52.6	154	58.6	
Agriculture/breeding	14	14.4	42	16	
Business/Fishing	22	22.7	61	23.2	
Occupation of wife					0.98
unemployed	11	11.3	26	9.9	
Employed	49	50.5	134	51	
Agriculture/breeding	13	13.4	37	14.1	
Business/Fishing	24	24.7	66	25.1	
Religion					0.64
No religion	6	6.2	12	4.6	
Protestant	60	61.9	181	68.8	
Muslims	4	4.1	10	3.8	
Other religion	27	27.8	60	22.8	
Education of husband					0.002
Illiterate	27	27.8	40	15.9	
Primary	51	52.6	139	52.6	
Secondary	19	19.6	60	22.8	
Tertiary	0	0	24	9.1	
education of wife					0.007
Illiterate	30	30.9	44	16.7	
Primary	46	47.4	147	55.9	
Secondary	21	21.6	61	23.2	
Tertiary	0	0	11	4.2	
Ubudehe category					<0.001
Category 1	30	30.9	23	8.7	
Category 2	51	52.6	148	56.3	
Category 3	16	16.5	92	35	
Level of knowledge					0.46
Low level of attitude	56	57.7	155	58.9	
High level of attitude	41	42.3	108	41.1	

Table 5: *Factors associated with vasectomy related knowledge among the participants (Bivariate analysis).*

Source: *Primary data from this study, (February 2021).*

As indicated in the Table above, there was statistically significant association between Range of number of children, age of marriage, occupation of husband, education level of husband, education level of wife, Ubudehe category and the level of knowledge related to vasectomy with < 0.005 P-value calculated to 95% CI.

The couples with 4-6 range number of children were more likely to have knowledge towards vasectomy [AOR = 1.573; 95% CI = 0.921 - 2.688; P = 0.02] compared to couples with 0 to 3 range number of children. The couples with employed husbands and ones who were doing agriculture were more likely to have knowledge towards vasectomy [AOR = 2.162; 95% CI = 1.097 - 4.260; P = 0.02] and [AOR = 3.152; 95% CI = 1.221-8.134; P = 0.01] respectively compared to couples living with business man. Couples belonged to category one were less likely to have knowledge towards vasectomy [AOR = 0.145; 95% CI = 0.058 - 0.364; P = < 0.01] compared to couples belonged to category three.

Variables	AOR	95%CI		P-value
		Lower	Upper	
Range of number of children				
0-3	Ref			
4-6	1.573	0.921	2.688	0.021
>7	0.434	0.182	1.034	0.097
Age of marriage				
1-7	Ref			
8-14	0.802	0.43	1.495	0.487
15-21	0.806	0.26	2.500	0.709
>22	1.008	0.279	3.643	0.990
Occupation of husband				
unemployed	1.000	0.272	3.670	0.127
Employed	2.162	1.097	4.260	0.026
Agriculture/breeding	3.152	1.221	8.134	0.018
Business/Fishing	Ref			
Education of husband				
Illiterate	Ref			
Primary	0.665	0.192	2.300	0.519
Secondary	1.042	0.233	4.664	0.957
Tertiary	0.310	0.116	2.410	0.998
Education of wife				
Illiterate	Ref			
Primary	2.413	0.707	8.229	0.160
Secondary	1.130	0.272	4.696	0.867
Tertiary	0.254	0.134	0.311	0.999
Ubudehe category				
Category 1	0.145	0.058	0.364	<0.001
Category 2	0.526	0.265	1.043	0.066
Category 3	Ref			

Table 6: *Factors associated with vasectomy related knowledge among the participants (Multivariate analysis).*

Source: *Primary data from this study, (February 2021).*

Discussion of the study findings

Although different studies have been carried out in Rwanda on the use of Family Planning thus far they have focused on female methods or in the male separately and therefore this study was conducted considering only legally married couples and it is considered that the results fill the information gap in this regard.

This study was conducted to examine the knowledge, attitude and willingness towards vasectomy among the married couples of Rubavu district in Rwanda. The first objective of the present study was to find out vasectomy related knowledge among married couples of Rubavu District. Different questions were asked to identify the general knowledge about Vasectomy among the study participants and the study results presented in Figure 2 show that 97 (26.90%) participants had poor knowledge towards vasectomy and 263 (73.10%) of them had good knowledge about vasectomy.

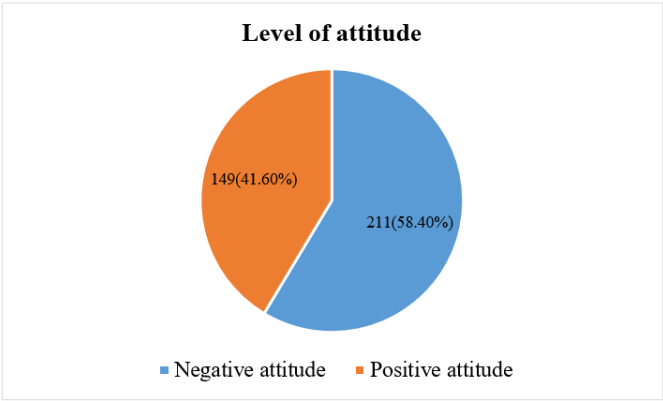

Figure 2: *Level of attitude towards vasectomy among married couples of Rubavu District.*

Source: *Primary data from this study, (February 2021).*

These study findings are in line with as several researches conducted in sub-saharan Africa where the study respondents demonstrated some basic knowledge on vasectomy. Additionally, study participants showed higher level of health literacy on family planning.

According to the United Nations, the irreversible contraceptive methods such as vasectomy are less common in term of knowledge and use in low income countries. The lower knowledge of vasectomy among population in poor resources countries are due to culture and misconceptions about the methods. Male are had poor understanding on how vasectomy work, and sometimes their family not support them on the use to this contraceptive method [7].

It is known that positive perception and advance knowledge are main factors that influence the use of contraceptive including vasectomy for male. Low knowledge about vasectomy are also due to the health system factors such as lack of support from health care providers, and most of FP intervention has be focusing on female, male had few contraceptive options compared to female.

Previous studies demonstrated the importance of health care workers in improving the access to family planning services for male, specifically provision or acceptability of vasectomy. This can remove all barriers and negative attitude towards vasectomy among male partners. Health care providers need more training on the approaches that can be used to encourage men to uptake vasectomy [7].

The second objective of this study was to determine the attitude towards vasectomy among married couples of Rubavu District. For the statement which was asking if lifetime sterilization methods should be only for females, 47.2% of the participants agree with that and 52.8% of them disagreed. Asked whether Vasectomy make men prone to becoming promiscuous 26.1% of them agreed and 73.9% participants disagreed with that. Only 55.5% approved the use of contraceptive method such as vasectomy. More than a half (66.4%) of the participants disagreed when asked if husband should not take part in family planning stating that it must be restricted to their wives. The results show that 149 of the participants equivalent to 41.60% presented positive attitude towards vasectomy whereas 211 participants equivalent to 58.40% had negative attitude towards vasectomy.

The results from the study conducted by Mawira are in the same line with present findings where the respondents revealed that the use of vasectomy affect the sex life of a couple, this shows the negative perception in the community towards vasectomy. For example, men cited that after vasectomy they loss the power as a man, no longer able to have sex with his wife, a man who has vasectomy is not accepted in the society, not respected, men are not sexually satisfying their wives. All of these believe have been reported to affect the use of vasectomy.

The findings of his studies also found out that men had fears that a lowered libido would make them to be unable to adequately meet the conjugal rights of their wives [8]. The poor grasp of the procedure for vasectomy resulted in the participants assuming that vasectomy would bring about certain health risks. For example, they equated vasectomy to castration and believed that the procedure for vasectomy would have the same effect that castration has on goats. All these are similar to the study done by [9] which also revealed negative attitudes of men towards vasectomy in Edo State from Nigeria and stated that having heard about vasectomy didn't mean that they had accurate information about the procedure.

The findings of this study are contrary to the study done by [10] which showed that men had adequate knowledge and attitude about vasectomy [11].

The third objective of this study was to determine the willingness to use vasectomy among the married couples of Rubavu District. Only two questions were enough to know whether a certain couple has the willingness to use vasectomy as family planning method. Among the total 360 married couples participated in this survey no one was ever used vasectomy as a method of family planning or for any other purpose. As it is summarized in the table 4, 61.1% of the participants responded that they were using other methods of family planning. In this study the details of other methods being used were not assessed. Only 3.6% of the participants reported that they had willing to use vasectomy in the future. The study conducted from Ethiopia was contrary with the present study, where it found out that culture belief, fear of complications of procedures and fear of irreversibility were the contributing factors of low willingness to use vasectomy [12].

Objective four was to determine the factors associated with vasectomy related knowledge among the married couple of Rubavu District. Bivariate analysis showed that there was statistically significant association between Range of number of children, age of marriage, occupation of husband, education level of husband, education level of wife, Ubudehe category and the level of knowledge related to vasectomy. The couples with 4 - 6 range number of children were more likely to have knowledge towards vasectomy compared to couples with 0 to 3 range number of children and those with employed husbands and ones who were doing agriculture were more likely to have knowledge towards vasectomy compared to couples living with business man.

The present study was not in the same line with the findings from the study conducted in Tanzania, which revealed that the main contributing factor of knowledge related to vasectomy was religion belief, where preachers often used to say that vasectomy is forbidden [13].

Conclusion

The main purpose of this study was to determine the knowledge, attitude and willingness towards vasectomy among married couples of Rubavu Districts in the Western Province of Rwanda. The study revealed that the majority of participants had good knowledge but they

had negative attitude towards vasectomy and only few number of the participants reported that they had willing to use vasectomy in the future.

The study showed that there was statistically significant association between Range of number of children, age of marriage, occupation of husband, education level of husband, education level of wife, ubudehe category and the level of knowledge related to vasectomy.

The result can't be generalized for whole country in consideration of the study design, sample size and the characteristics of study population from Western Province may differ from the characteristics of people from other different areas of the country.

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