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**KNOWLEDGE AND ATTITUDE TOWARDS VASECTOMY AMONG
HEALTH CARE PROVIDERS IN RWANDA**

A Thesis submitted to the School of Medicine and pharmacy as a partial fulfillment for the award of the Degree of Masters of Medicine by the university of Rwanda.

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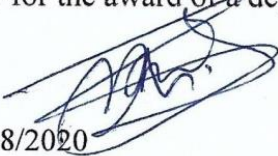
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DECLARATION

The researcher:

I hereby declare that this dissertation “**Knowledge and attitude towards vasectomy among healthcare providers in Rwanda**” is my own work and it has not been submitted by any other university for the award of a degree.

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PRECIS

The level of knowledge towards vasectomy in health providers is variable, and significantly associated with attitude. Female health workers possess more positive attitude than male.

ABSTRACT

Objective: Sterilization is one of the most effective and reliable methods of family planning. Male sterilization (vasectomy) is considered cheaper and less complicated than female sterilization but unfortunately, the rate of vasectomy use worldwide is low with rates in sub-Saharan Africa of less than 1%. The objective of this study was to determine the level of knowledge and attitude towards vasectomy as a family planning method among healthcare providers in Rwanda.

Methods: A cross-sectional study was performed of 290 healthcare providers (nurses, midwives and doctors) at Kigali University Teaching Hospital (CHUK). Participants were randomly selected in the departments of Internal Medicine, Obstetrics and Gynecology, Surgery and Pediatrics. The questionnaire included sociodemographic, knowledge and attitude variables towards vasectomy. Data analysis done with SPSS and the p value of <0.05 was considered statistically significant. Knowledge was defined as Good ($>6/9$ score) or poor ($\leq 6/9$ score) and attitude was defined as positive ($\geq 6/10$) and negative ($<6/10$).

Results: Most of the participants (92.4%) were less than 49 years old with 75% female and 80.7% married. Nurses were 53.3%, 28.7% were doctors and 18% were midwives. Overall knowledge towards vasectomy was good in 58.3% participants and 69.7% of participants had positive attitude. Men had significantly better knowledge than women (OR 2.2, $p=0.001$) but women presented with more positive attitude towards vasectomy than men (OR 1.8, $p=0.028$). Physicians had better knowledge than nurses ($p=0.015$), but no significant difference in attitude ($p=0.2$). Participants with ≤ 5 years of working experience had significant better knowledge (OR 1.7, $p=0.02$). Knowledge of vasectomy was significantly better in OBGYN and Surgery with 72.3% of OB and 63.5% of Surgery participants having good knowledge ($p=0.002$ and $p=0.043$, respectively). Apart from being a female no other significant social demographic variable association with attitude towards vasectomy.

Conclusion: The level of knowledge of healthcare providers on vasectomy as a family planning method was found to be highly variable among health care workers and their attitude was significantly associated to their knowledge. Poor knowledge within nurses and midwives at the main referral and teaching hospital can also affect the training, knowledge and attitudes of future providers. and its uptake by the general population.

Key words: Contraceptive knowledge, attitude, vasectomy, healthcare providers

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LIST OF ABBREVIATIONS

- AVSC:** ENGENDER HEALTH NON-PROFIT ORGANIZATION
- BTL:** BILATERAL TUBAL LIGATION
- CI:** CONFIDENCE INTERVAL
- CMHS:** COLLEGE OF MEDICINE AND HEALTH SCIENCES
- CHUK:** KIGALI UNIVERSITY TEACHING HOSPITAL
- DHS:** DEMOGRAPHIC HEALTH SURVEY
- FP:** FAMILY PLANNING
- OR:** ODDS RATIO
- OBGYN:** OBSTETRICS AND GYNECOLOGY
- P:** p VALUE
- RBC:** RWANDA BIOMEDICAL CENTER
- SPSS:** STATISTICAL PACKAGE FOR THE SOCIAL SCIENCES
- USAID:** UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPEMENT
- UR:** UNIVERSITY OF RWANDA

I.INTRODUCTION

Vasectomy is a safe and effective surgical procedure for permanent male contraception that simply interrupts the transport of sperm through cutting, cauterizing the vas deferens.¹ This is an important option for male contraception as has no effect on either the production or secretion of male sex hormones with over 500,000 procedures reported done each year in the United States of America.¹

Despite a high success rate (>99%) and few complications, it is still underutilized in developing countries with a worldwide rate of 3%, and < 0.1% in Africa.^{2,3} In Rwanda, only 3035 cases of vasectomy have been recorded up to 2018.⁴

The use of vasectomy was found to be limited by fears of castration, loss of erectile function, loss of libido, and by some sociocultural factors such as the risk of sexual disability after vasectomy and a sense of degradation.²

The level of knowledge on male sterilization among population of reproductive age ranges from 10% to 50% according to demographic and health surveys from sub-Saharan Africa.⁵ In Nigeria and Ethiopia only 26.9% of all men interviewed have knowledge of male sterilization as a type of family planning.¹ Temach et al. in northwest Ethiopia revealed a level of knowledge at 44.8%.⁶ In Rwanda knowledge about vasectomy is not widespread with only 44% of Rwandans familiar with vasectomy compared to 97% familiar with some form of modern contraception.⁷ Few men in africa are using vasectomy as a contraceptive method despite its effectiveness and being less expensive.. The main reason for low level use may be low knowledge and poor attitude of healthcare providers that promotes lack of awareness about vasectomy in the general population, therefore the main objective of this study was to determine the level of knowledge and attitude towards vasectomy among healthcare providers.

II.MATERIAL AND METHODS

We did a cross-sectional study of doctors, nurses and midwives allocated in four major clinical departments (obgyn, internal medicine, pediatrics and surgery) using a self-administered questionnaire at Kigali University teaching hospital (CHUK), a public referral hospital located in Nyarugenge District of Kigali city from 15th November 2019 to 15th February 2020.

The questionnaire contained eleven questions on socio-demographic characteristics of participants, nine questions for assessing their knowledge and ten for attitude towards vasectomy as a contraceptive method.

The questionnaire was developed by the study authors referring to similar studies and validated by two experts from different specialties. A pilot study was conducted before this survey. The sample size was determined as 290 using Cochran's formula adjusted for small populations, based on the fact that knowledge about vasectomy was around 44% among the general population.⁷

Doctors, nurses and midwives were approached for participation, and the purpose of the study was well explained to them in detail. We obtained written consent from those willing to participate. Out of a total of 393 staff, 290 participated in the study, a response rate of 73.7%.

The study was approved by the institutional review board of the college of medicine and health sciences with a secondary approval from the ethics committee of Kigali University teaching Hospital. The inclusion criteria were to be a doctor, nurse or midwife and to be working in the department of Obgyn, Surgery, Internal Medicine or Pediatrics.

We used a simple random sampling of participants and data collected with a structured questionnaire with only few participants responded through an online version. Scores were assigned according to responses to the question or statement and each given one point. For knowledge, the total score was nine and hence $>6/9$ was rated good knowledge and ≤ 6 rated as poor knowledge. For attitude statements, the high score is ten and hence $\geq 6/10$ rated positive attitude and $<6/10$ negative attitude. Collected data were entered into Epidata version 3.1 for database creation and then exported to SPSS version 25 for analysis. Descriptive data were presented using frequencies and percentages in tables accordingly. Logistic regression was used

to study the relationship between the outcomes (knowledge and attitude) and possible risk factors. Statistical significance for associations was taken at the level $p < 0.05$.

III.RESULTS

Two hundred ninety providers consented to participate, most (92.4%) were less than 49 years old (equally distributed between the age groups of 20 to 35 years and 36-49 yrs). The majority of participants were women (70.3%) and 81.4% were married. We also found that 53.3% of participants were nurses, 18% were midwives and 28.7% were doctors. Sociodemographic characteristics are shown in Table 1.

Most participants (96.9%) knew vasectomy as family planning method, whereby 96.6% defined it as permanent method and 3.4 % said it is a temporary method. Most respondents (89%) said no loss of urge and desire for sexual activity post vasectomy as opposed to 11% who said a man develops this dysfunction. More than a half (52.8%) of providers reported that a man cannot impregnate his partner in the first week post vasectomy. The time it takes for an ejaculate to be without sperm was at least six weeks or more in 50% of providers. Only 56.6% participants were able to tell that non scalpel vasectomy is more effective than scalpel vasectomy and around 10% of participants said that the tendency develop prostatic cancer increases after vasectomy. In addition, 14% of our participant did not define vasectomy as a surgical procedure that interrupts the movement of sperm as per its definition (Table 2).

The overall knowledge of respondents towards vasectomy as a family planning method was rated good in 58.3% and poor in 41.7% (Table 3). There were statistically significant association between knowledge towards vasectomy and various social demographic variables ($p < 0.05$). For example, 73.3% of male health providers were having good knowledge compared to their female counterparts (52%) ($p = 0.001$). Single health workers had more knowledge than married health providers ($p = 0.048$). Depending on their professional background physicians demonstrated higher knowledge than other professionals ($p = 0.015$). There was also significant association of being in obstetrics and gynecology department, having less years of experience with knowledge (p values 0.002 and 0.02, respectively) (Table 4).

Overall, 69.7 % of the respondents demonstrated a positive attitude towards vasectomy as a contraceptive method (Table 3). The study also revealed that there was no significant association

between profession background of respondents, marital status, departmental affiliation and attitude towards vasectomy. Significant association were found between attitudes towards vasectomy and being a female as 73.5% female respondents demonstrated a positive attitude (OR 1.8; $p=0.028$) (Table 5).

In our study 13.8% of respondents considered vasectomy to be a form of castration therefore should not be done. Additionally, 31.4% of the respondents felt that tubal ligation was a better procedure than vasectomy. Undergoing vasectomy was considered to be against religion in 33.4% of the respondents and against their culture in 30.4%. In general, more than half of the respondents considered getting vasectomy after they have had a desired number of children and would recommend vasectomy to their patient, friend and relatives (Table 6). Good knowledge of vasectomy was significantly associated with positive attitude towards vasectomy ($p=0.016$). Hence, 75% of health providers with good knowledge towards vasectomy as family planning had positive attitude (Table 7).

IV.DISCUSSION

Most of studies available on vasectomy focused on knowledge and attitude of men especially in the general population despite the pivotal role of both men and women in family planning. Only few studies were done on healthcare providers sub-Saharan Africa and none was previously done on knowledge and attitude towards vasectomy in Rwanda. The objective of this study s was to determine the knowledge and attitudes of healthcare providers towards vasectomy in Rwanda.

This study revealed that male providers had better knowledge towards vasectomy than their female counterparts which may be explained by the fact that most of doctors are male and most of nurses are female, therefore the high score could be a result of their training. This is consistent with the results of the study by K.Tijani et al. where men had more knowledge on vasectomy than women.⁸ Based on our results, single health providers demonstrated more knowledge than married respondents (OR 1.9; $p= 0.0048$) though we didn't find similar comparison in the literature it may be a reflection of their recent education and training in up to date information. This could also explain why health providers with five years and less of experience had significantly more knowledge than more work experienced providers. In our study there was no

association of religion and knowledge which is similar with one study by Baruwal C et al from western Nepal, which found that the only difference was the level of literacy in the population⁹.

Even though the overall level of knowledge among health providers in Rwanda was found to be at 58% of possessing good knowledge, doctors were found to have more knowledge than nurses and midwives (P values 0.015 and 0.64 respectively) as a result of their education which was consistent with the findings of P.Ebeigbe et al. on knowledge and attitude among Nigerian residents where majority of the doctors had good knowledge on vasectomy.¹⁰ However Godbole et al found inadequate knowledge among doctors in India on non-scalpel vasectomy.¹¹

According to department affiliation, healthcare providers from obstetrics and gynecology were found with more knowledge than other departments, and this is likely due to increased exposure to family planning. In this study nearly a half of health providers were not able to tell which type of vasectomy is safer and how long it takes for the semen to be free of sperm after vasectomy. In addition 10% of providers think there is loss of libido and risk of prostatic cancer after vasectomy ;furthermore these major deficits in knowledge were not different from findings by Godbole et al¹¹ where 75% of participants believed that normal functioning of the testis is altered after vasectomy, 25% that ejaculation may be impaired while 20% felt that vasectomy increases the risk of prostatic cancer .

In this study we have realized that female health workers had more positive attitude and acceptancy towards vasectomy than their male colleagues which is statistically significant despite men having better knowledge hence this is similar to a study among Nigerian resident gynecologists who reported that despite good knowledge about vasectomy among doctors, majority were having poor attitude towards use of vasectomy.¹⁰ However ,this is different from Onasonga et al. findings that positive attitude towards vasectomy was observed more among participants with adequate knowledge about vasectomy.¹² In some other studies for example Tijani et al on attitude and acceptance towards Nigerian men and women found that men were more favorably disposed than women towards vasectomy. While 26% of men were ready to accept vasectomy, only 13.5% of women would consent for their men to have the procedure.⁸ We may think also that as the study was done on a well-educated population and majority women ,they easily understand the role of men in family planning to bridge the gap and therefore explain our findings. There was no association between religious affiliation and attitude; which is

similar to findings by Saw ohn et al. on attitude towards vasectomy in clinical year medical students in Malaysia where religious beliefs of participants were not associated with their attitude towards vasectomy.¹³ Only 50% of our respondents preferred vasectomy in favor of tubal ligation and 78% agreed to recommend it to their patients or close relative which again is similar to the findings of P. Ebeigbe et al. where only 5.8% of residents counselled couples often for vasectomy and 89.4% for BTL while almost half of the participants had never counselled any couple for vasectomy¹⁰. Our results showed a better attitude towards vasectomy than findings from Malaysian clinical year medical students where 38.8% chose vasectomy better than tubal ligation and only 23.3% would recommend this method to their relatives¹³.

We found a positive association between having good knowledge and possessing positive attitude towards vasectomy which correlates with the findings by A. Okri et al in Nigeria where a strong association was found between knowledge of participants and their attitude. However, this is different from the findings by A. otovwe et al at novena university in Nigeria where good knowledge of respondents was not associated to having positive attitude towards vasectomy¹. Overall level of knowledge among health providers in Rwanda of 58.3% good knowledge and 69.7% positive attitude reveals a certain gap in both knowledge and attitude which may also explain the low level of knowledge in general population of sub-Saharan Africa between 10 to 50% and Rwanda in particular. Any strategy on improving the knowledge on vasectomy in our health care providers may increase their positive attitude and therefore positively impact awareness in the population and finally raise uptake of vasectomy.

Our study was not without limitations. First this is a cross-section study with all limitations of a cross section study. Second, the majority of participants are female and nurses at the same time this makes them prone to lower knowledge than their male counterparts who are majority doctors. Third, is that this study was done at one hospital area which may not give a total representation to the whole country.

V.CONCLUSION

The level of knowledge of healthcare providers on vasectomy as a family planning method was found to be highly variable among health care workers. Because attitude towards vasectomy was found to be associated with knowledge, the gap in knowledge towards vasectomy may have an impact on continued underuse of vasectomy as a family planning method in Rwanda. Poor knowledge within nurses and midwives at the main referral and teaching hospital can affect the training, knowledge and attitudes of future providers. Continued training program targeting clinical staff especially nurses and midwives on vasectomy is recommended to increase the acceptancy of vasectomy within health providers and thus increase the uptake in the general population.

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Table 1: Social demographic characteristics of participants

Table 1: Sociodemographic characteristics of study participants

Variables	n	%
Age		
20-35 years	128	44.1
36-49 years	140	48.3
≥50 years	22	7.6
Gender of respondent		
Male	86	29.7
Female	204	70.3
Marital status		
Single	48	16.6
Married	236	81.4
Divorced	4	1.4
Widow/Widower	2	0.7
Religion		
Catholic	137	47.4
Protestant	145	50.2
Muslim	8	2.4
Professional background		
Physician specialist	31	10.7
Physician Resident	52	18.0
Nurse	154	53.3
Midwife	53	18.0
Affiliated Department at work		
Obstetrics and gynecology	82	28.4
Surgery	74	25.6
Pediatrics	80	27.7
Internal medicine	54	18.3

Table2: Description of knowledge factors and their frequency.

Variable	n	%
Vasectomy is a minor surgical procedure that involves occlusion of the vas deferens, which prevents transport of sperm into the ejaculate		
Yes	252	86.9
No	38	13.1
Is vasectomy a form of family planning method?		
Yes	281	96.9
No	9	3.1
What type of family planning is vasectomy		
Permanent	280	96.6
Temporary	10	3.4
After vasectomy procedure a man loses his sexual urge and desire for sexual activity		
Yes	32	11.0
No	258	89.0
A week after vasectomy procedure a man is able to impregnate his partner		
Yes	137	47.2
No	153	52.8
Non scapel vasectomy is more effective and associated with less trauma and pain as opposed to scapel vasectomy		
Yes	164	56.6
No	126	43.4
Following vasectomy procedure, it takes at least twelve weeks, or more, or 10-20 ejaculations for the ejaculate to be without sperm		
TRUE	145	50.0
FALSE	145	50.0
The tendency for prostatic cancer increases in men who have had vasectomy		
Yes	29	10.0
No	261	90.0

Table 3: Knowledge and attitude scores

Variables	n	%
Knowledge on vasectomy		
Poor	121	41.7
Good	169	58.3
Attitudes towards Vasectomy		
Positive	202	69.7
Negative	88	30.3

Table 4: Social demographic variables association with knowledge on vasectomy among study participants

Predictors	Knowledge on vasectomy		OR (95% CI)	P value
	Good	Poor		
Gender				
Male	63 (73.3%)	23 (26.7%)	2.5 (1.4-4.6)	0.001
Female	106 (52.0%)	98 (48.0%)		
Marital status				
Single	38 (70.4%)	16 (29.6%)	1.9 (1.0-3.6)	0.048
Couple	131 (55.5%)	105 (44.5%)		
Religion				
Catholic	88 (64.2%)	49 (35.8%)	Ref	
Protestant	76 (52.4%)	69 (47.6%)	0.6 (0.4-0.9)	0.045
Muslim	5 (62.5%)	3 (37.5%)	0.9 (0.2-4.0)	0.928
Profession				
Physician	65 (78.3%)	18 (21.7%)	2.5 (1.2-5.4)	0.015
Nurse	73 (47.4%)	81 (52.6%)	0.6 (0.3-1.2)	0.64
Midwife	31 (58.5%)	22 (41.5%)		
Department				
Obstetrics and gynecology	60 (72.350)	23 (27.7%)	3.1 (1.5-6.5)	0.002
Surgery	47 (63.5%)	27 (36.5%)	2.1 (1.0-4.3)	0.043
Pediatrics	38 (47.5%)	42 (52.5%)	1.1 (0.5-2.2)	0.802
Internal medicine	24 (45.3%)	29 (54.7%)		
Age group				
20-35 years	74 (57.8%)	54 (42.2%)	1.6 (0.6-4.0)	0.284
36-49 years	85 (60.7%)	55 (39.3%)	1.8 (0.7-4.5)	0.181
≥50 years	10 (45.5%)	12 (54.5%)		
Working experience				
≤ 5 years	79 (66.4%)	40 (33.6%)	1.7 (1.7-2.8)	0.02
> 5 years	90 (52.6%)	81 (47.4%)		
Parity in the couple				
Nulliparous	56 (66.7%)	28 (33.3%)	1.6 (0.9-2.7)	0.065
Multiparous	113 (54.9%)	93 (45.1%)		
Number of living children				
≤2 children	108 (60.7%)	70 (39.3%)	1.3 (0.8-2.1)	0.29
>2 children	61 (54.5%)	51 (45.5%)		

Table 5: Social demographic variables association with attitude on vasectomy

Predictors	Attitude towards vasectomy		OR (95% CI)	P value
	Positive	Negative		
Gender				
Male	52 (60.5%)	34 (39.5%)		
Female	150 (73.5%)	54 (26.5%)	1.8 (1.0-3.1)	0.028
Marital status				
Single	35 (64.8%)	19 (35.2%)		
Couple	167 (70.8%)	69 (29.2%)	1.3 (0.7-2.4)	0.392
Religion				
Catholic	97 (70.8%)	40 (29.2%)		
Protestant	100 (69.0%)	45 (31.0%)	0.6 (0.2-1.6)	0.619
Muslim	5 (62.5%)	3 (37.5%)	0.7 (0.17-3.2)	0.702
Profession				
Physician	61 (73.5%)	22 (26.5%)	1.4 (0.8-2.5)	0.251
Nurse	102 (66.2%)	52 (33.8%)	0.9 (0.4-2.1)	0.991
Midwife	39 (73.6%)	14 (26.4%)		
Age group				
20-35 years	84 (65.6%)	44 (34.4%)		
36-49 years	103 (73.6%)	37 (26.4%)	1.2 (0.4-2.9)	0.815
≥50 years	15 (68.2%)	7 (31.8%)	0.8 (0.3-2.0)	0.598
Parity in the couple				
Nulliparous	54 (64.3%)	30 (35.7%)		
Multiparous	148 (71.8%)	58 (28.2%)	1.4 (0.8-2.4)	0.205
Number of living children				
≤2 children	128 (71.9%)	50 (28.1%)	1.3 (0.8-2.2)	0.293
>2 children	74 (66.1%)	38 (33.9%)		
Department				
Obstetrics and gynecology	62 (74.7%)	21 (25.3%)	1.16 (0.5-2.5)	0.699
Surgery	51 (68.9%)	23 (31.1%)	0.8 (0.4-1.9)	0.736
Pediatrics	51 (63.8%)	29 (36.3%)	0.7 (0.3-1.5)	0.341
Internal medicine	38 (71.7%)	15 (28.3%)		

Table 6: Description of respondent's attitude towards vasectomy

Characteristic	Likert scale	n	%
vasectomy is castration and should not be done	Strongly agree	14	4.8
	Agree	26	9.0
	Don't know	35	12.1
	Disagree	60	20.7
	Strongly disagree	155	53.4
It is better for a woman to have tubal ligation than a man to have vasectomy	Strongly agree	42	14.5
	Agree	49	16.9
	Don't know	51	17.6
	Disagree	79	27.2
	Strongly disagree	69	23.8
It is against religious belief for a man to have vasectomy	Strongly agree	47	16.2
	Agree	50	17.2
	Don't know	28	9.7
	Disagree	89	30.7
	Strongly disagree	76	26.2
I would consider getting a vasectomy after I have had desired number of children with my wife/husband	Strongly agree	98	33.8
	Agree	73	25.2
	Don't know	28	9.7
	Disagree	47	16.2
	Strongly disagree	44	15.2
It is against culture for a man to have vasectomy	Strongly agree	42	14.5
	Agree	46	15.9
	Don't know	35	12.1
	Disagree	91	31.4
	Strongly disagree	76	26.2
I would recommend my patient, friend and close relatives to use vasectomy	Strongly agree	85	29.3
	Agree	119	41.0
	Don't know	24	8.3
	Disagree	35	12.1
	Strongly disagree	27	9.3

Table7: Association between knowledge on vasectomy and the attitude towards vasectomy

Knowledge	Attitude towards vasectomy		P value
	Positive	Negative	
Good	127 (75.1%)	42 (24.9%)	0.016
Poor	75 (62.0%)	46 (38.0%)	

VIII.APPENDICES

APPENDIX 1: INFORMED CONSENT

My name is Dr RWAMBIBI Herman. -As part of obtaining a Master's Degree in gynecology and obstetrics I am conducting a research on knowledge and attitude of healthcare providers towards vasectomy as a family panning method, by interviewing Physicians, nurses and midwives at CHUK.

You will be selected voluntarily participate in the study by giving me permission to interview you and to complete an anonymous questionnaire on the topic of vasectomy.

Your name will remain confidential throughout the study. You can withdraw from the study at any stage. The information which you provide will remain anonymous at all stage of the study. You will not receive any form of remuneration for participating in the study. By providing with your honest views on the matter, we will be able to use the collective data to understand the level of knowledge with regards to vasectomy as a method of choice for family planning. The information based on the study will assist health authorities to establish policies that promotes the knowledge of health providers and good attitude towards vasectomy, and as a result increased rate of vasectomy users countrywide.

If you have read the above information and you agree to participate in the study, please sign the following section. I understand the purpose and value of the study. I further understand my rights and my responsibility to provide honest response to the questions in the questionnaire. I take note of the facts that I will not receive any remuneration and that as an individual will remain anonymous and the information, I provide is confidential. I agree that I participate in this study voluntarily

Signature_____

Date_____

Contact address of the researcher

Name: Dr RWAMBIBI Herman Contact address- Mobile 078840780

AMASEZERANO YO KUGIRA URUHARE MU BUSHAKASHATSI

Nitwa RWAMBIBI Herman nkaba ndi umunyeshuri muri koreji y'ubuvuzi, ndetse n'ubumenyi bw'ubuzima ya kaminuza y'u Rwanda.

Nkaba ndi gukora ubushakashatsi ku kureba ubumenyi n'imyumvire y'abaganga (docter.umubyaza,n'umuforomo)bakora muri CHUK bafite ku bijyanye no kuboneza urubyaro kw'abagabo hakoreshejwe gufunga imiyoborantanga yabo(vasectomy). Kimwe mubisabwa kugira ngo mbone impamyabumenyi ni ugukora ubushakashatsi.

Kugira uruhare muri ubu bushakashatsi bishingiye kubushake bwawe, Ufite uburenganzira ubwo aribwo bwose bwo kutagira uruhare muri ubu bushakashatsi kandi ntibigire icyo biguhungabanyaho. Ufite uburenganzira bwo kutagira ikibazo na kimwe usubiza cyangwa ikibazo waba wumva kirebana n'ubusugire bwawe. Kimwe nuko ufite uburenganzira bwo kuba wava cyangwa wahagarika ubushakashatsi igihe icyo aricyo cyose nubwo bwaba bwatangiye.

Amakuru yose tuzakura muri ubu bushakashatsi azaguma ari ibanga kandi nta zina rizagara ku rupapuro ruriho ibibazo n'ibisubizo. Amakuru yose azabikwa ahantu hizewe kandi ntawundi muntu usibye abari muri ubu bushakashatsi wemerewe kuyabona.

Ubu bushakashatsi bufite intego kubijyanye n'amashuri nta nkunga y'amafaranga cyangwa indi ntego ifite inyungu bityo rero nta mafaranga cyangwa impano duteganya gutanga ku kwemera kugira uruhare muri ubu bushakashatsi. Ibizava muri ubu bushakashatsi bizafasha abashinzwe ibyubuzima kumenya ubumenyi abaganga bafite ndetsenno gushyiraho ingamba zo kwongerera abakozi b, ubuzima ubumenyi ndetse n'imyumvire ikwiye mubijyanye no kuboneza urubyaro kw'abagabo, bizatuma ubu buryo burushaho gukoreshwa.

Niba wumvise kandi wasobanuriwe neza ibigize ubu bushakashatsi kandi wemera kugira uruhare muri ubu bushakashatsi, uzuza aha hakurikira.

Njyewe maze kwisomera, gusobanurirwa no kumva amakuru yose nahawe yavuzwe haruguru, nemeye kugira uruhare muri ubu bushakashatsi kugiti cyanjye ntagahato.

Umukono,

Italiki

APPENDIX 2: QUESTIONNAIRE

Study on Knowledge and Attitude of health providers towards vasectomy as family planning method option in Rwanda.

Questionnaire Code No _____

I. Socio Demographic factors

1. Age
2. Gender M F
3. marital status a) Single b. married c. Divorced d. Widower
if married, years in marriage
4. Religion: a) catholic b) protestant c) Orthodox d) Muslim
5. Profession background
 - a. Physician specialist
 - b. Physician resident
 - c. General practitioner
 - b. nurse,
 - c. midwife
6. Department: a. obgyn b. surgery c. pediatrics d. internal medicine
7. Number of years since graduation from medical/nursing school
8. Years of practice since specialty training completed
9. Number of pregnancies in a couple NA
10. Number of leaving children in a family NA
11. Do you want to have any more child/children a. YES b, NO
If yes, how many children? A) one B) two C) three D) four E) five F) if more than five_

II. Knowledge factors

1. Have you ever heard of vasectomy before? Tick right answer

Yes No

2. What is vasectomy? (circle right answer)

- a. It is a family planning method involving surgical procedure which prevents a man from achieving erection.
- b. It is a family planning method involving surgical procedure to increase a man's desire for sexual activity.
- c. It's a minor surgical procedure involving occlusion of the vas deferens, which prevents transport of sperm into the ejaculate?
- d. I don't know

Other (Specify)

3. Is vasectomy a form of family planning method? a. yes b. no

if yes, what type of family planning is vasectomy

- a. Temporary
- b. Permanent

4. After vasectomy procedure a man loses his sexual urge and desire for sexual activity.

- a) Yes
- b) No

5. A week after vasectomy procedure a man is able to impregnate his partner?

- a. yes
- b. No

7. The following people can have vasectomy as a family planning method option?

- a) Men who have no children
- b) Men who have many children
- c) Men who did not want to have any more children
- d) Men of any age
- e) other, specify _____

8. Non scalpel vasectomy is more effective and associated with less trauma and pain as opposed to scalpel vasectomy

- A. yes
- B. No

9. Following vasectomy procedure, it takes at least twelve weeks, or more, or 10-20 ejaculations for the ejaculate to be without sperm. A. True B. False

10. The tendency for prostatic cancer increases in men who have had vasectomy?

- A. yes B. No

III. Attitude factors

1. It is better for a woman to have tubal ligation than for a man to have vasectomy.

- a) Strongly agree b) Agree c) Don't know d) Disagree e) strongly disagree

2. Vasectomy is castration and should not be done.

- a) Strongly agree b) Agree c) Don't know d) Disagree e) strongly disagree

3. Vasectomy makes men more promiscuous (engage in multiple sexual relationship).

- a) Strongly agree b) Agree c) Don't know d) Disagree e) strongly disagree

4. I would consider getting a vasectomy after I have had a desired number of children with my wife/husband.

- a) Strongly agree b) Agree c) Don't know d) Disagree e) strongly disagree

5. Vasectomy is an effective form of family planning.

- a) Strongly agree b) Agree c) Don't know d) Disagree e) strongly disagree

6. I believe men can play a significant role in family planning

- a) Strongly agree b) Agree c) Don't know d) Disagree e) strongly disagree

7. It is against my culture belief for a man to have vasectomy.

- a) Strongly agree b) Agree c) Don't know d) Disagree e) strongly disagree

8. It is against my religious belief for a man to have vasectomy.

- a) Strongly agree b) Agree c) Don't know d) Disagree e) strongly disagree

9. Do you think that using vasectomy decreases a man's self-esteem.

- a) Strongly agree b) Agree c) Don't know d) Disagree e) strongly disagree

10. I would recommend my patient, friend and close relatives to use vasectomy.

- a) Strongly agree b) Agree c) Don't know d) Disagree e) strongly disagree.

APPENDIX 3: IRB APPROVAL



UNIVERSITY of
RWANDA

COLLEGE OF MEDICINE AND HEALTH SCIENCES
DIRECTORATE OF RESEARCH & INNOVATION

CMHS INSTITUTIONAL REVIEW BOARD (IRB)

Kigali, 23rd /August/2019

Dr RWAMBIBI Herman
School of Medicine and Pharmacy, CMHS, UR

Approval Notice: No 420/CMHS IRB/2019

Your Project Title "*Knowledge and Attitudes Of Healthcare Workers Towards Vasectomy As A Family Planning Method*" has been evaluated by CMHS Institutional Review Board.

Name of Members	Institute	Involved in the decision		
		Yes	No (Reason)	
			Absent	Withdrawn from the proceeding
Prof Kato J. Njunwa	UR-CMHS	X		
Prof Jean Bosco Gahuru	UR-CMHS	X		
Dr Brenda Asimwe-Kateera	UR-CMHS	X		
Prof Ntaganira Joseph	UR-CMHS	X		
Dr Tumusiime K. David	UR-CMHS	X		
Dr Kayonga N. Egide	UR-CMHS	X		
Mr Kanyoni Maurice	UR-CMHS		X	
Prof Munyanshongore Cyprien	UR-CMHS	X		
Mrs Ruzindana Landrine	Kicukiro district		X	
Dr Gishoma Darius	UR-CMHS	X		
Dr Donatilla Mukamana	UR-CMHS	X		
Prof Kyamanywa Patrick	UR-CMHS		X	
Prof Condo Umutesi Jeannine	UR-CMHS		X	
Dr Nyirazinyoye Laetitia	UR-CMHS	X		
Dr Nkeramihigo Emmanuel	UR-CMHS		X	
Sr Maliboli Marie Josee	CHUK	X		
Dr Mudenge Charles	Centre Psycho-Social	X		

After reviewing your protocol during the IRB meeting of where quorum was met and revisions made on the advice of the CMHS IRB submitted on 16th August 2019, **Approval has been granted to your study.**

Please note that approval of the protocol and consent form is valid for **12 months.**

You are responsible for fulfilling the following requirements:

1. Changes, amendments, and addenda to the protocol or consent form must be submitted to the committee for review and approval, prior to activation of the changes.
2. Only approved consent forms are to be used in the enrolment of participants.
3. All consent forms signed by subjects should be retained on file. The IRB may conduct audits of all study records, and consent documentation may be part of such audits.
4. A continuing review application must be submitted to the IRB in a timely fashion and before expiry of this approval
5. Failure to submit a continuing review application will result in termination of the study
6. Notify the IRB committee once the study is finished

Sincerely,



Date of Approval: The 23rd August 2019

Expiration date: The 23rd August 2020

Professor GAHUTU Jean Bosco
Chairperson Institutional Review Board,
College of Medicine and Health Sciences, UR

Cc:

- Principal College of Medicine and Health Sciences, UR
- University Director of Research and Postgraduate Studies, UR

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www.ur.ac.rw



CENTRE HOSPITALIER UNIVERSITAIRE
UNIVERSITY TEACHING HOSPITAL

Ethics Committee / Comité d'éthique

August 20th, 2019

Ref.: EC/CHUK/ 154/2019

Review Approval Notice

Dear Dr.Herman Rwambibi

Your research project: *"Knowledge and attitude towards vasectomy as family planning method among health care providers at CHUK"*

During the meeting of the Ethics Committee of University Teaching Hospital of Kigali (CHUK) that was held on 20th August 2019 to evaluate your protocol of the above mentioned research project, we are pleased to inform you that the Ethics Committee/CHUK has approved your renewal.

You are required to present the results of your study to CHUK Ethics Committee before publication.

PS: Please note that the present approval is valid for 12 months.

Yours sincerely,

Dr. RUSINGIZA KAMANZI Emmanuel

The Chairperson, Ethics Committee,

University Teaching Hospital of Kigali



<<University teaching hospital of Kigali Ethics committee operates according to standard operating procedures (Sops) which are updated on an annual basis and in compliance with GCP and Ethics guidelines and regulations.>>