



**KNOWLEDGE AND ATTITUDE TOWARDS VASECTOMY
AMONG MEN IN A SELECTED DISTRICT OF THE
EASTERN PROVINCE, RWANDA**

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MASTER OF SCIENCE IN NURSING (PERIOPERATIVE)

June 2017



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by

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A dissertation submitted in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE IN NURSING (PERIOPERATIVE)

In the College of Medicine and Health Sciences

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June 2017

DECLARATION

I, **Christian NTAKIRUTIMANA**, hereby declare that this research project is my original work that has never been presented for a diploma, degree or any other purpose in any University or elsewhere.

By **Christian NTAKIRUTIMANA**, Signature, Date: 12/06/2017

Supervisor: **Mrs. UMUZIGA M. Providence**, Signature....., Date: 12/06/2017

DEDICATION

I dedicated this work to my Almighty God, for He gave life and strength to accomplish it.

I'd also like to dedicate my work to my lovely wife, my children, my parents, my brothers and sisters and all my friends for their great support and encouragement all the time.

I am very grateful to dedicate my work to the Government of Rwanda, the university of Rwanda and staff for the great support rendered to me during this long journey of studies, if they were not there I would not have finished.

ACKNOWLEDGEMENT

I would like to direct my gratitude to my main Supervisor, **Mrs. UMUZIGA M. Providence**, and my Co-supervisor, **Prof. Oluyinka Adejumo** for their infinite support, encouragement and guidance.

I am beholden to the University of Rwanda/College of Medicine and Health Sciences, School of Nursing and Midwifery for the sponsorship and daily support during my studies and clinical placement.

I can't forget to address my humble thanks to Dr. Maria Kidner for her help in my study by sharing with me accepted wisdom.

My sincerely thanks go to my wife who played an essential role in supporting and encouraging me throughout with many kind of sacrifices. I am very grateful to her.

My special thanks go also to my colleagues and everyone who cares about me.

ABSTRACT

Background: Vasectomy is a permanent method of contraception supporting men in family planning. Perry et. al. (2016) found the worldwide use of vasectomy was lower (2.4%) than tubal ligation (19.2%). Vasectomy is a safe surgical procedure using local anesthesia versus tubal ligation and general anesthesia.

Rwanda Ministry of Health (MOH) (2012) strategic plan highlighted the underutilization of vasectomy. Barriers to vasectomy include negative attitudes in males in Sub-Saharan Africa.

Purpose/Aim: Determine Knowledge and attitudes towards vasectomy among men in a selected District of the Eastern Province of Rwanda

Methods: A cross-sectional, quantitative descriptive design was used. A total number of 390 participants from a selected Administrative District were selected using a systematic sampling strategy. A validated questionnaire in African countries (olayinka et.al.2013) was used. Data were analyzed using SPSS, Version 20. Univariate, bivariate correlational and multivariate analyses were performed.

Results : Most participants were ranging from 31-39 years old (43,1%), catholic by religion(58.7%),farmers(54.6%) and respondents with primary education(42.3%).The study findings identified barriers such as lack of evidence based knowledge, religious factors, and low educational status as primary barriers influencing increased negative attitudes and rumors limiting the utilization of vasectomy. Participants (56.9%) viewed vasectomy as castration,while the odds of accepting vasectomy correlated with religion (Catholic Odds Ratio =0.451, 95% CI=0.02- 0.854, P. value< 0.040).Approving that men should be primarily responsible for decision making on family planning method to utilize increases with academic attainment and vice versa(secondary OR=2.937, 95%CI=1.647-6.286 ,P.value < 0.011), (university level OR=3.456, 95%CI=2.242-8.445,P.value=0.014.).

Conclusion: Vasectomy is misconceived and underutilized, thus is associated with negative attitudes and rumors limiting its usage among men. Therefore there is a need for a community-based educational program development. It is recommended to specifically include vasectomy in existing family planning educational programs. Furthermore, Vasectomy services need to be decentralized to primary health care facilities.

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LIST OF SYMBOLS, AND ABBREVIATIONS/ACRONYMS

1. MOH : Ministry of Health-Rwanda
2. DHS : Demographic Health Survey
3. NISR : National Institute of Statistics of Rwanda
4. NSV : Non Scalpel Vasectomy
5. FP :Family Planning
6. USAID : United states Agency for International Development
7. OR: Odds Ratio
8. CI: Confidence Interval
9. SPSS : Statistical Package for social sciences

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CHAPTER 1. : INTRODUCTION

This chapter describes the background of this study basing on other studies done other countries and few ones identified in Rwanda, it is also comprised of the problem statement, aim of the study, objectives, research questions, significance of the study, definition of key terms and the entire organization of the study.

1.1 BACKGROUND OF THE STUDY

Family planning has been reported to have several benefits to the population including social Economic development. Ethiopia has been reported to be among the most populated countries in sub-Saharan Africa whereby the total fertility rate was 5.6 and this was due to the low knowledge about long acting family planning methods especially vasectomy among men. (Alemayehu et al. 2012 P.1) Unfortunately, most male partners are not involved in family planning and many programs are much focused to the woman rather than men and it was revealed that men consider vasectomy like castration while others believe that it is a difficult procedure requiring long period of hospitalization which is not true enough to push policy makers to increase men level of knowledge towards vasectomy by initiating different educational programs (Owopetu et al. 2014 P. 4)

Therefore, vasectomy is currently the only permanent contraceptive method which strengthens the men's role in controlling birth. Vasectomy surgical procedure for men contributes to the worldwide population increase burden reduction (Szten, 2015).

The quickest population growth is the most basic obstacle to the economic and social developments of countries and unfortunately developing countries are highly involved with this problem more than others (United Nations, 2015).

In USA, there is an increased use of vasectomy as male contraceptive method whereby from 175000 to 350000 vasectomies are performed every year. In Canada, a total of 22% ,women rely on vasectomy use as their way to control birth (Jacobstein ,2015 P.7). However the vasectomy is wrongly understood by men whereby they consider it as a form of castration and encounter many negative effects in regard sexual activities, while some studies proved its being safe and the vasectomy underutilization in Africa has often been attributed to men's lack of interest in family planning (FP). Furthermore, evidence suggests that low vasectomy

procedure awareness and related services are the principal reasons for vasectomy underutilization(Perry et al.,2016 P.10.)

It was revealed that there is low knowledge for men towards the use vasectomy and this leads to rumors associated with vasectomy (Alemayehu et al.,2012 P.8). Using chi-square analysis, there was no association between knowledge and attitudes towards vasectomy and socio demographic variables (Gottlieb,2016)

The Government of Rwanda outlined a strong commitment to FP and in 2005 national FP strategy, thus FP services were integrated into other maternal and child health services to increase access to long term Family planning services including vasectomy at all government health care facilities (MOH, 2005).

The study conducted in Rwanda by Koalaga (2007) also found that men who did engage in the procedure tended to guard this in secrecy for fear of being ridiculous. The same authors highlighted that potential obstacles for the adoption of vasectomy as a FP method by men' include lack of knowledge; rumors and misinformation that vasectomy is like castration or that can lead to loss of virility, fatigue, cancer or even death.

Despite many initiatives, the Rwanda Demographic health survey (2014-2015) reported that fertility rate was still high through the interim demographic and health survey (DHS) which showed a note decline in the fertility rate (from 6.5 to 5.5 children per women in 2005 which become 4.2 with the survey done from 2014-2015. It is in this regard the government of Rwanda has also recognized the importance of men in the FP decision making and implements sessions of sensitization towards vasectomy practice which is the least known in Rwandan men (MOH, 2012). Therefore this research aimed at determining attitudes and knowledge of men towards vasectomy and propose possible solutions and recommendations to different levels

1.2 STATEMENT OF THE RESEARCH PROBLEM

Rwanda is being overpopulated day after day comparing to the soil and economic income whereby the population census held in 2012 revealed that the estimated total population was 10,515,973 while according to the related previous census it was 8,128,553 people in 2002 on the unchanged land size of 26,338 km² (NISR, 2012). The Rwandan Ministry of Health in its strategic planning 2012-2016 had a clear vision to control birth by strengthening the long acting family planning methods at 70% by 2016. The men's contribution in family planning is mainly focused on use of condoms and the same strategic planning highlighted the involvement of male partners through vasectomy which is the least practiced method (MOH Strategic Planning, 2012-2016 P.18.)

As reported by Yesta (2016), the male sterilization surgical procedure is reported to be cost effective and associated with fewer risks comparing to female tubal ligation which require a general surgery with increased risk. While the vasectomy is used at 2.4% worldwide, the tubal ligation is 19.2% and this highlights how much vasectomy procedure is the least practiced (United Nations, 2015). Although, men are core stones in family development in all domains mostly the reproductive services and failure to target men in family planning is a great challenge. They should be involved actively in Family planning equally like women and adopt long acting family planning methods (Pirinçi et al., 2008).

On the other hand there is a dramatic increase in prevalence of modern contraceptive usage rather than vasectomy, whereby it was 10% in 2005 which reached 27% in 2007 and 45% in 2010 by married women (DHS 2007; MOH,2012). In Rwanda, the Capacity project in 2009 trained some health care providers from selected hospitals of Northern and Western provinces towards the provision of long-term family planning procedures including vasectomy in particular. However, the project did not cover many health facilities, thus in some facilities still lack skilled personnel to provide vasectomy (MOH Strategic Planning, 2012-2016).

In Ethiopia, it was revealed that there is low knowledge for men towards the use vasectomy and this leads to rumors associated with vasectomy (Alemayehu et al. 2012). However, there is limited research on the knowledge and attitudes of men towards vasectomy in Rwanda. For this reason a study was carried out in Rwamagana District of the Eastern Province of Rwanda in order to determine the knowledge and attitudes of men towards vasectomy.

1.3 THE AIM OF THE STUDY

To determine the knowledge and attitudes towards vasectomy among men in Rwamagana District of Eastern province, Rwanda

1.4 RESEARCH OBJECTIVES

1. To assess the vasectomy related knowledge amongst men in Rwamagana District of Eastern province, Rwanda
2. To identify attitudes of men towards vasectomy in Rwamagana District of Eastern province, Rwanda.
3. Identify factors influencing men's attitudes and knowledge towards vasectomy.

1.5. RESEARCH QUESTIONS

1. What is the level of knowledge about vasectomy among men in Rwamagana District of Eastern province, Rwanda?
2. What are attitudes of men towards vasectomy in Rwamagana District of Eastern province, Rwanda?
3. What are factors influencing men's attitudes and knowledge towards vasectomy?

1.6 SIGNIFICANCE OF THE STUDY

The findings of this study might be used to develop sensitization and educational programs to improve knowledge and attitudes of men towards vasectomy in a selected District of the Eastern Province of Rwanda. The study also will contribute to the bank of knowledge in research to be used for reference at UR/CMHS, Rwamagana District and Rwanda as whole.

The Ministry of Health and Ministry of Education will use the results of the study to develop policies, related to educational programs design, health care providers training and key messages relating to vasectomy as a surgical permanent birth control method for men whereby health care providers should have enough knowledge and FP to be looked at as it concerns both male and female decision making.

1.7 DEFINITION OF CONCEPTS

Vasectomy: A vasectomy is a male permanent contraceptive method done through a surgical operation to resect the vas deferens, which carry a man's sperm and spermatozooids from his scrotum to his urethra (Perry et al.,2016)

Knowledge in this project is defined as the extent or the level at which the men is informed about vasectomy either accurately or inaccurately (Perry et al.,2016)

Attitudes in this research is defined like the degree at which the men perceives vasectomy and its outcomes either negatively or positively(Perry et al.,2016).

1.8 Structure /Organization of the Study

This study is composed of five chapters: Introduction, Literature review, methodology, results, discussions, conclusion and recommendations.

1.9. Summary/conclusion

In this Chapter, this chapter, the researcher found that with regard to the background they are different studies carried out towards vasectomy and a significant low level of knowledge and attitude among men men was mainly found in developing countries especially in sub-Saharan Africa while on the other hand men are aware of the existence of vasectomy, this pushed the researcher to carry out this study to determine knowledge and attitudes towards vasectomy among men with the objectives intending to determine the level of knowledge, identify the attitudes of men towards vasectomy and related influencing factors.

CHAPTER 2. LITERATURE REVIEW

2. 1. INTRODUCTION

This literature reviewed for this research project was obtained via the portals of electronic resources and many articles retrieved from PubMed, , Medline, HINARI, African journals and each article was appraised for the content and research design. The systematic review included different articles critically appraised and many others included in the systematic review for the foundation of this study. This section included a selected set of articles deemed of critical importance to the development of this research and were comprised of theoretical literature, empirical literature, research gaps, critical reviews and conceptual framework.

2.2. GENERAL KNOWLEDGE AND OVERVIEW OF VASECTOMY

A vasectomy is a sterilization technique for men. It requires minor surgery to cut the vasa differentia, the tubes that carry sperm. This operation keeps sperm from mixing into the semen when men ejaculate. Without sperm, fertilization of an egg cannot occur and pregnancy is prevented. It is a good method for the man who does not want children, or wants no more children. Men or couples need to think carefully before choosing vasectomy. Health care providers can help by providing complete and accurate information through asking questions that help men think about the decision. They can explain the procedure and encourage men and their partners to ask their own questions and to express any fears or concerns about vasectomy. Providers should make sure that men understand how a vasectomy works and should correct any misunderstandings. Providers must not pressure men to make a decision, and programs should not offer rewards (USAID, 2008).

In Rwanda, unmet need for family planning (FP) remains high even in the context of the government's strong support for FP as a key element in continuing development progress. While preliminary Demographic and Health Survey data showed a dramatic increase in modern contraceptive prevalence among married women from 10% in 2005 to 27% in 2007 and 45% in 2010, therefore the ministry of health strategic planning ranging from 2012 to

2016 targets included to reach 70% for modern contraceptive use including vasectomy which is the least used. (MOH,2012).

Much work is still needed to build the capacity of district-level health care providers in FP counselling and services and ensure district hospitals and health centers have necessary equipment and supplies. Funding from USAID's Repositioning Family Planning Global Leadership Priority area provided the Capacity Project with the opportunity to offer technical support to Rwanda's Ministry of Health to develop the capacity of the district hospital clinical workforce in order to expand client access to a full range of quality FP methods. These included long-acting and permanent methods and vasectomy in particular.

Long ago, most of FP programs focused on the role of women and neither man's role nor has men's attitude been considered in the field of contraception. In this regard the government of Rwanda has also recognized the importance of men in the FP decision making and implements sessions of sensitization towards vasectomy practice which is under known in Rwandan men.

2.3 FACTORS INFLUANCING MEN'S ATTITUDES TOWARDS VASECTOMY USE.

The use of vasectomy has been reported to be one among the very effective contraceptive methods which involve the male participation, unfortunately it is the least known and poorly practiced because of different rumors among others: lack of awareness for vasectomy being a contraceptive method; myths and rumours regarding vasectomy like castration, limited libido and other male sexual disturbances wrongly attributed to it (Admasu et al., 2013 P.3-4.)

A Study conducted by Kidzuga in 2012, highlighted severe misconceptions on vasectomy and recommended the health care providers to be trained about carrying out vasectomy procedure thus play a big role in making effective counselling for men so as to enhance related education in health care settings. On the other hand, different articles review held in Washington revealed that some health care providers have low knowledge in regard to

vasectomy whereby they include many related risks like prostate cancer, loss of sexual identity and problems with ejaculation (Perry et al.,2016)

The procedure of vasectomy takes about 15 minutes and can be performed in an appropriately equipped office or ambulatory surgery centre. No-scalpel vasectomy is the preferred vasectomy technique in the United States (US) because of its lower complication rates, but it has yet to be adopted world-wide. Because reversal of vasectomy cannot be guaranteed, other methods of vasal occlusion are being investigated. (Engenderhealth,2008)

As demonstrated by Ward Cates et al. (2007) in report of family health international, Vasectomy has been used for decades for male sterilization and has a high rate of safety and effectiveness with very few side effects. The procedure is done on an outpatient basis with local anesthesia.

Worldwide, approximately 6% of married women using contraception rely on vasectomy. the rate of vasectomies compared to tubal ligations worldwide was extremely variable among countries whereby Worldwide, approximately five times as many married women rely on female sterilization comparing to those relying on male sterilization (Family planning worldwide, 2008).

The report further stipulated two types of surgical procedures which are commonly used for vasectomy. The older method involves making a small incision made on either side of the scrotum, through which the vas deferens are isolated and occluded with electrocautery or clips. Sutures are used to close the incisions. In no-scalpel vasectomy, both vas are isolated through a single small puncture made in the center of the vas, without the need for sutures. Although both procedures have a low rate of complications, the no-scalpel technique is associated with less pain and a lower risk of infection. Sexual activity may be resumed as soon as the patient feels comfortable, but because sperm remain in the vas beyond the point of occlusion, a reliable form of contraception should be used for the first 15–20 ejaculations after the procedure. Like female sterilization, vasectomy should be considered a permanent form of contraception. Reversal procedures exist but are technically complex and expensive and have a variable success rate. Vasectomy does not protect against transmission of STIs, including HIV/AIDS (Ward Cates, 2007)

The failure rate of vasectomy is very low—0.10 percent with perfect use and 0.15 percent with typical use. Failure may be due to incomplete occlusion or to omission of a backup contraceptive method until sperm are completely cleared from the vas. The Risks and Side Effects are minimized in case of vasectomy: Acute complications associated with surgery, such as reactions to local anesthesia, are rare. The rate of infection at the incision site is also low and is minimized by careful attention to incision care. Some short-term tenderness and bruising may occur at the surgery site. The Principal Advantages in case of this minor surgery are: Freedom from having to remember to use a contraceptive method regularly or at the time of intercourse, Low risk of side effects and Cost-effective (Ward Cates et al., 2007).

The report further disclosed that misperceptions include the rumors reporting that Vasectomy begins protecting against pregnancy immediately after the procedure, a vasectomy is very painful, It is easy to reverse a vasectomy, so that a man can be fertile again. But that is not corresponding to the reality. Before starting the vasectomy, the provider injects a local anesthetic. The prick of the anesthesia needle may be painful. Almost all men say they felt no pain or only mild pain during the vasectomy procedures. There may be a slight pulling sensation. Once the anesthesia wears off, men may feel some pain or discomfort. Ordinary pain medicines and cold packs will help and are usually all that is needed. For almost all men the pain and soreness last only a few days. Vasectomy should be considered permanent. Reversal surgery is difficult and expensive, and it can be hard to find. Reversing vasectomy was reported to be hard whereby success cannot be guaranteed. In addition it is advisable when people might change their mind about having more children or being uncertain for the future to use a different method of contraception.(USAID, 2008).

2. 4. CONCEPTUAL FRAMEWORK

The Health Promotion Model was adopted to assess men's knowledge and attitudes towards vasectomy. The following variables were included in this study.

HPM was developed by Nola Pender, 1982 and its primary goal was to avoid and prevent all factors that may hinder the optimal health (Pender 1982). Therefore, vasectomy may prevent men to reproduce more children in a family thus it contributes to the welfare of children because the family satisfies their needs.

It categorizes the factors that influence behaviors like modifying factors, cognitive-perceptual factors and variables influencing the likelihood of action (Galloway 2003). This model is best used to assess men's knowledge and attitudes towards vasectomy as the one of available family planning methods to them because it focuses more on achievement of higher levels of well-being and self actualization (Galloway 2003).

Behavioral factors and situational factors, interpersonal influences, and biological and demographic features take account of modifying factors. Behavioral factors are experiences learned, situational factors are related to environment, interpersonal influences are related to social support and expectations of others and demographic characteristics comprise of age, gender, income, and educational background (Galloway 2003). In this study all; the above mentioned variables were considered to assess men's knowledge and attitudes toward vasectomy. This study will look at the knowledge of men's towards vasectomy, how the environment influence their behaviors towards vasectomy, how the social support from peers of health care professionals influence the behaviors towards vasectomy and the role of demographic considerations towards vasectomy.

Cognitive-perceptual factors and cues normally look at the health concept, benefits and barriers to health promoting behaviors (Galloway 2003). This was considered to assess how men's feel the role of vasectomy, benefits from it and barriers associated to vasectomy.

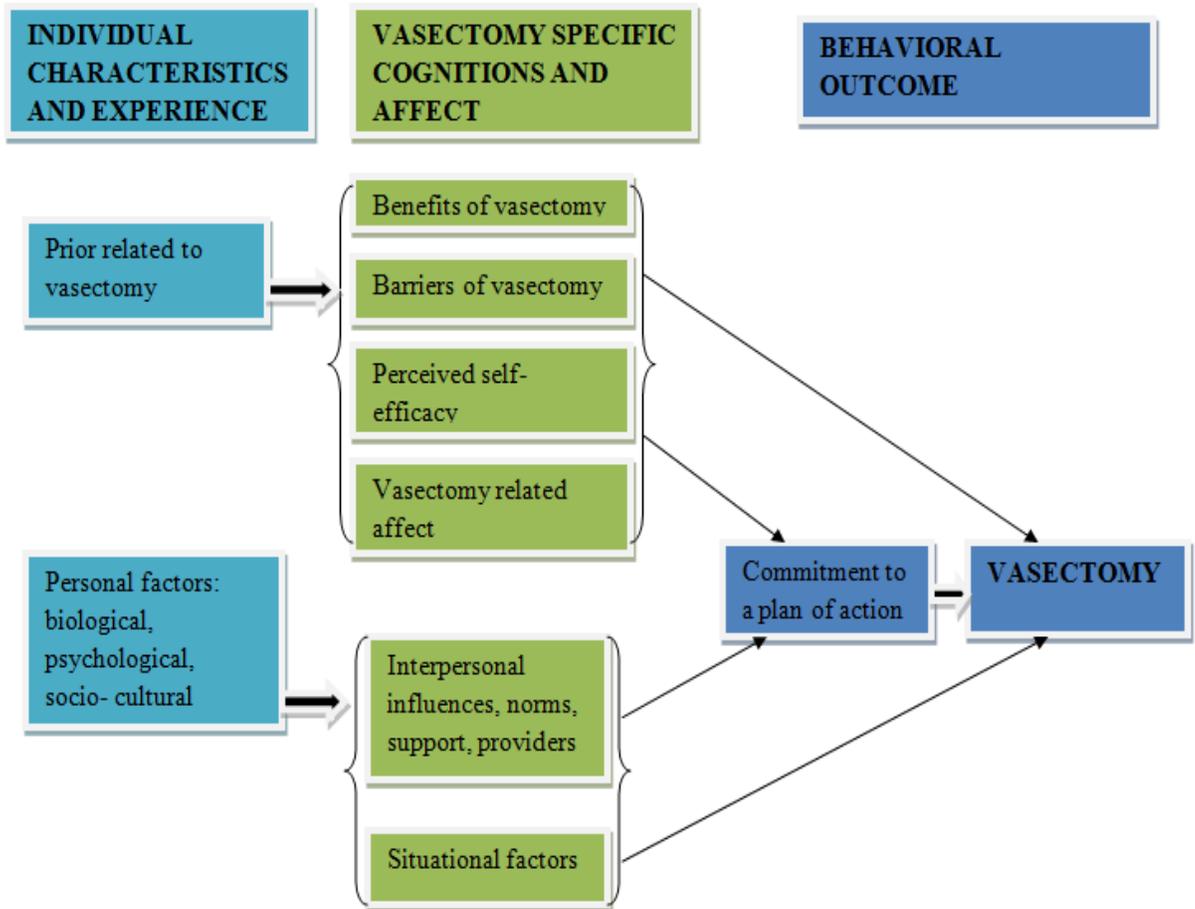


Figure 1: Adapted from Health promotion Model (Pender 1982)

Several studies have proven the HPM to be useful and to provide relevant information in terms of developing intervention, preventing risk factors, changing practice and health promotion activities. Its theoretical framework is essential in conducting researches that aim at detecting the main components of health related behaviors among different age groups and gender (Heydari & Khorashadizadeh '2014). Therefore, this is the reason to adopt this model while assessing the knowledge and attitudes of men towards vasectomy.

A descriptive study conducted at Dr. Bhimrao Ambedkar Memorial Hospital at Raipur with a purpose for assessing the knowledge and attitude on vasectomy among husbands of postnatal mothers used the Health Promotion Model.

Summary/Conclusion

Generally the literature reviewed in this study revealed the lack of knowledge and negative attitudes towards vasectomy, and still few literature was retrieved in Rwanda

CHAPTER THREE: RESEARCH METHODOLOGY

3.1. INTRODUCTION

Research methods are the steps, procedures, and strategies for analyzing data gathered in a study (Polit & Beck 2010). This chapter will be composed by study design, study setting, study population, sampling criteria, sampling method, sample size, data collection instruments, reliability and validity of data collection instruments, data analysis and ethical considerations.

3.2. RESEARCH DESIGN

The study was a cross sectional descriptive study which determined the knowledge and attitudes of men towards vasectomy. “Cross-sectional surveys aim at describing and quantifying the distribution of certain variables in a study population at one point of time. In addition, the cross section survey also aims to assess the behaviour or practices of people and the knowledge, attitudes, beliefs, opinions which may help to explain that behavior”(Corlien et al.;2003).This study was descriptive because it described the Knowledge and attitudes of the population through multistage and systematic sampling.

3.3. RESEARCH APPROACH

This is the plan by which the researcher may use to get new knowledge or even support the existing data purposely to have precise and significant data (Rebar et al. 2011). Thus, this study used quantitative approach which ” encompasses the study of research questions that describe phenomena, test relationships, assess differences, seek to explain cause and effect relationships between variables, and test for intervention effectiveness” (LoBiondo-Wood & Haber 2014). This study described the phenomena of knowledge and attitude towards vasectomy among men

3.4. RESEARCH SETTING

This research was conducted in Rwamagana District of the Eastern province within two month from 15th February to 15th April 2017. This District was chosen by the researcher because it is convenient.

3.5. POPULATION

Study population is the entire aggregation that the researcher is interested on (Polit & Cheryl 2012). Therefore, the study population was the men from the Eastern province. Target population is the set of individuals that shares the same characteristics that motivates the researcher to conduct a researcher on them (Creswell 2012). Thus, the target population was comprised of 149 214 men from Rwamagana District. Accessible population were comprised of the men available during data collection period.

3.6. INCLUSION AND EXCLUSION CRITERIA

Inclusion criteria: All men with 22 to 67 years of age who agreed to participate in the study after its explanation and clarifications were included.

Exclusion criteria: Those who were not available or refused to partipate in the study were not considered.

3.6.1. Sampling strategy

This study used multistage sampling which is the strategy that helps to sample units from larger to smaller ones (Polit & Cheryl 2012). This strategy proceeded from District, sectors, cells then households into Rwamagana District. Rwamagana District is composed of 14 sectors and 82 cells among which 7 sectors were systematically chosen while within cells each second cell on the list from the selected sectors was considered. Finally the systematic sampling was used to select households where each second household on the list was studied. “A systematic sampling is the selection of sample members such that every *kth* (e.g., every tenth) person or element in a sampling frame is chosen” (Polit & Cheryl 2012).

3.6.2. Sample size:

The sample size was automatically calculated according to Raosoft (2004). Therefore, among 149 214 total number of men for Rwamagana District the sample size is 384 men which is

large enough similar to the study of (Olayinka et al. 2013) that has been conducted in Nigeria . The researcher increased the sample to 390 men to minimize biases and generalize data. Below is the table explaining how the sample size was got according to (Raosoft 2004):

Table 3.1. Sample size calculation.

Margin error	5%
Confidence level	95%
Total population	149214
Response distribution	50%
Sample size	384

3.7. DATA COLLECTION

3.7.1. Data Collection instruments

This study used semi structured interview on the questionnaire adopted from the one used to evaluate men’s knowledge and attitudes towards vasectomy in Nigeria (Olayinka et al. 2013). Section A collected data on the socio-demographic characteristic of men, Section B gathered information about the general knowledge on vasectomy, whereas Section C retrieved information about the men’s attitude on vasectomy. Permission to use the instrument was granted to the researcher by the author of the survey instrument. The researcher used the research assistants during data collection.

3.7.2. Data collection procedure

The researcher has recruited 4 Research assistants whose background include nursing sciences with working experience in family planning unit and trained them the usage of the tool before data collection. They were also trained on the research process and the protection of the participant’s rights. The researcher ensured that the distributed questionnaires were all returned back.

Validity and reliability of the instrument

Validity is the extent to which the questionnaire measures the concept that was provided to measure (Polit & Beck 2010). Face validity refers to the degree to which the instrument looks when measuring the concept (LoBiondo-Wood & Haber, 2014 p.293). Therefore, the researcher used the classmates as peer reviewers to assess if the questions are well set, match with objectives, not boring and readable easily. Content validity means the extent to which the items in the instrument are appropriate regarding the concept it is measuring (Polit & Beck 2010). Thus, the previously related questionnaire from Nigeria was used after its slight modification because the items in it surely measure the knowledge and attitudes of men towards vasectomy in the African country like Rwanda (Nigeria). The construct validity is also assured as the title itself has got the same concepts as in research questions, objectives, conceptual framework and tool for data collection.

Reliability means the degree of dependability by which the tool measures the concepts (Allen 2012). . The questionnaire was designed on the way some questions are set on a four point Likert type scale with fix values ranging from strongly agree, agree, disagree and strongly disagree (Olayinka et al. 2013)

According to (Olayinka et al. 2013), they have developed the questionnaire themselves after a broad literature review on vasectomy and male sterilization. So far, only slight modifications on socio-demographic characteristics and translation in Kinyarwanda was done to contextualize it as both populations have the similar African geographical distribution. The Crohnbach alpha coefficient was 0.8 which indicated the internal consistency of the tool.

3.8. DATA ANALYSIS

Data was analysed using SPSS 20 version. Both descriptive and inferential statistics were used. Tables and percentages were used to analyze the knowledge and attitudes towards vasectomy. To assess the presence of association chi-square test and Fischer exact test were computed, and the statistical significance was defined when p-value was less than 0.05. Odds ratio with 95% confidence interval in multiple logistic regression was computed for variables which showed significant association with the dependent variable to identify their independent effects on knowledge and attitudes towards vasectomy.

3.9. ETHICAL CONSIDERATIONS

A letter of introduction to the study area was provided by CMHS and ethical approval was sought before conducting the study from the Rwamagana District. Personal consent forms were given after having explained well the type and purpose of the research. Participants were well explained about the purpose of the study and participation in the study was voluntarily as well as confidentiality was also maintained, and anonymity was assured. Therefore, the participants were explained concerning the informed consent and sign it to authorize the researcher to proceed with the data collection. The researcher got the National Institute of Health certificate for protecting human research participants.

3.10. DATA MANAGEMENT

The collected data hard questionnaires will be safely kept in a locked cupboard; soft data will be kept on computer with password and disseminated only to the concerned people with anonymity.

3.11. Data Dissemination

Data will be disseminated to the University of Rwanda, Rwamagana District and Ministry of Health. They will be also used as part of publication of the study in the recognized Journal.

3.12. Limitations and challenges

The problems and limitations of this study are related to translating the tool in Kinyarwanda and the study generalizability within one District of the Eastern province whereby further studies were recommended to generalize to the Province level and the Country's Level as whole.

CHAPTER 4: PRESENTATION OF RESULTS

4.0. INTRODUCTION

This chapter presents the results findings of this study with figures, tables and cross tabulation and reflects all the findings from the questions of the entire tool, and clearly identify the more significant findings retrieved from respondents

4.1 DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

4.1.1 Distribution of participants according to age

Findings of this study in the figure below show that a large number is between 31-39 years (43.1%), followed by those who are between 40-48 years (23.8%), those who were between 22-30 years (21.1%), and the minority was between 58-67 years (2.1%) of participants.

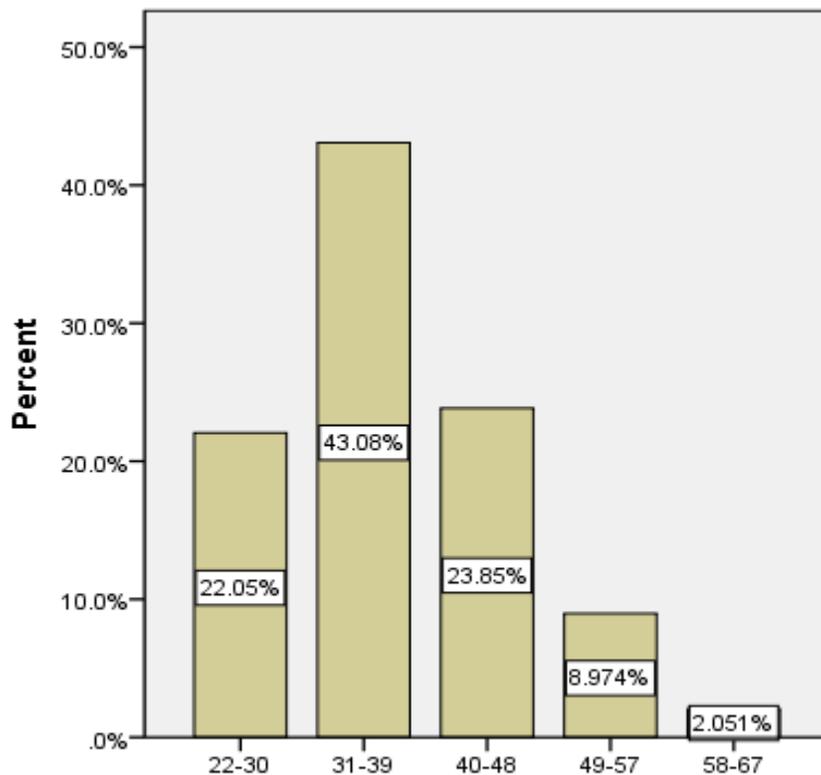


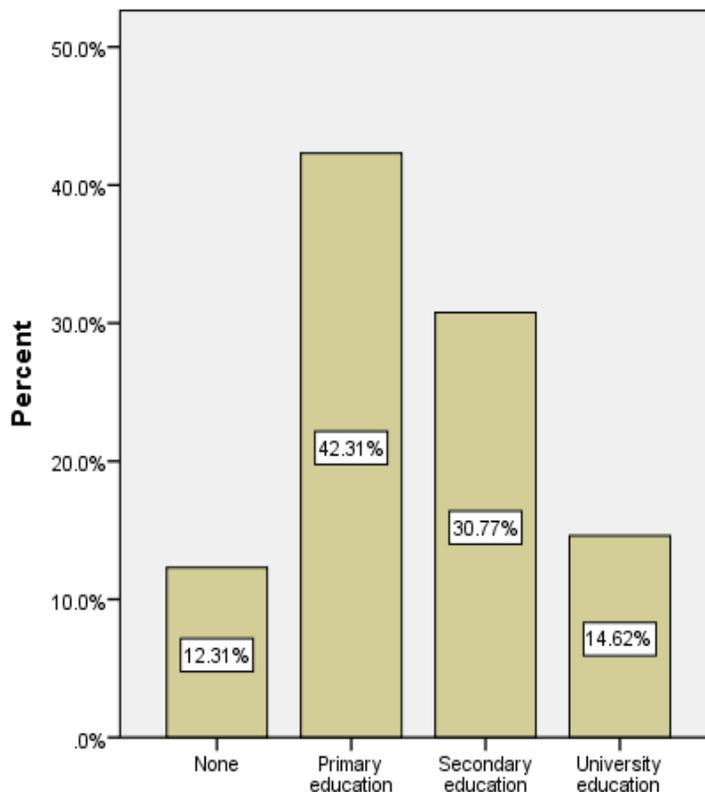
Figure 4.2: Age of participants

4.1.2 Religion of participants (n=390)

The religion of respondents was reported, and the majority (58.7%) is Catholic, followed by Protestant (24.9%), Islam (6.7%), Pentecost (5.6%), Adventist (3.1%), Jehovah (0.8%).

Table 4.2 Religion of participants

Religion of participants	Frequency	Percent
Catholic	229	58.7
Islam	26	6.7
Protestant	97	24.9
Adventist	12	3.1
Jehovah	3	.8
Pentecost	22	5.6
No religion	1	.3
Total	390	100.0



4.1.3 Academic attainment (n=390)

The majority 165(42.3%) completed primary education, secondary education 120 (30.8%), university 57 (14.6%), no education 48 (12.3%)

Figure 4.3 :Academic attainment

4.1.4 Occupation of participants (n=390)

Respondents have reported their occupation, and of them the majority are farmers & cultivators 213 (54.6%), civil servant 81(20.8%), cultivator 48(12.3%), business activities 41(10.5 %,) Students 7(1.8%),

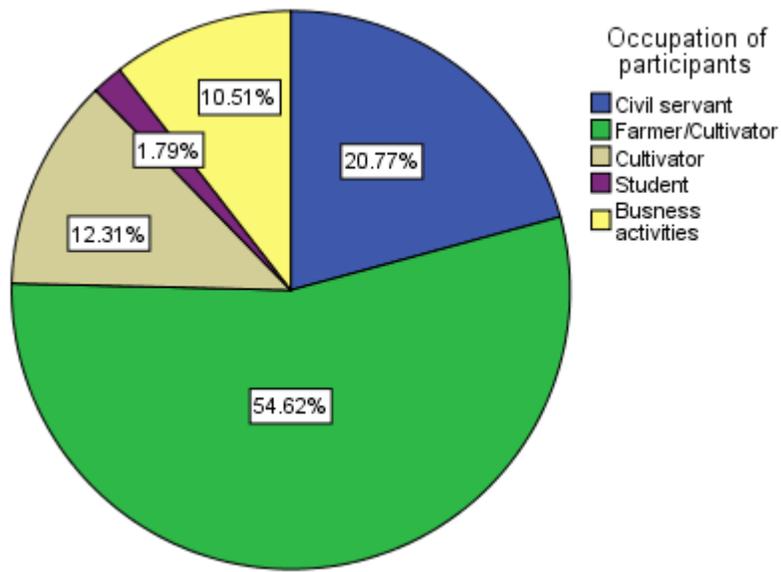


Figure 4.4: Occupation of participants

4.1.5 Marital status (n=390)

The majority is married (77.7%), Single (21.8%), Divorced (0.3%), Widower (0.3%)

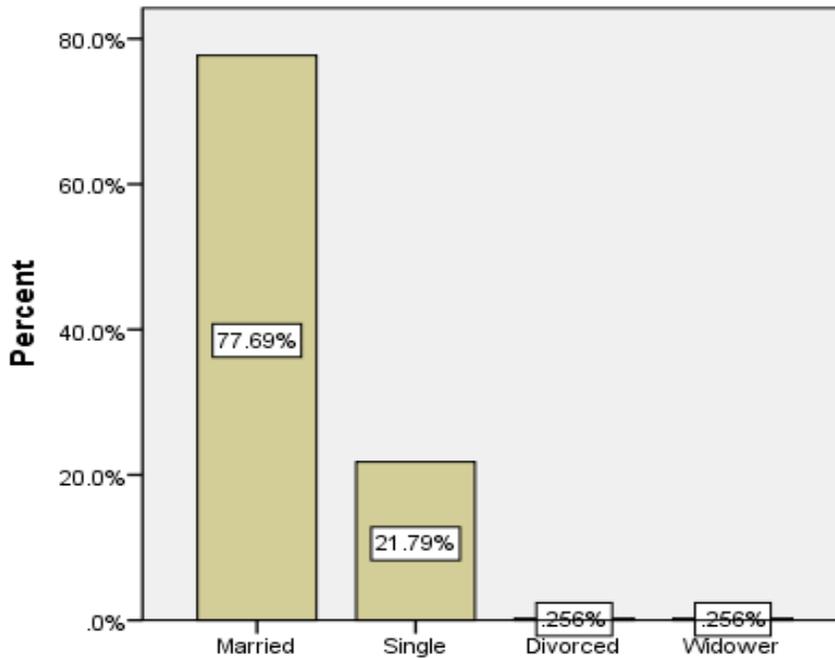


Figure 4.5: Marital status

4.1.6 If married, for how long (in years) (n=303)

When asked how long married men live with their partners, the majority (37.0%) reported the period less than 5 years, followed by the ones between 6-10 (16.7%), those who reported being married between 11-15 years were 15.2%, followed by those who reported 16-20 years with (7.3%), men who reported from 21-25 years (6.3%), those who are between 26-30 (4.0%), who reported between 31-35 (1.7%), and finally who were between 36- 40 years (2.0%).

Table 4.3: If married, for how long (in years)

If married , for how long (in years)	Frequency	Percent
< 5	112	37.0
6-10	81	26.7
11-15	46	15.2
16-20	22	7.3
21-25	19	6.3
26-30	12	4.0
31-35	5	1.7
36-40	6	2.0
Total	303	100.0

4.1.7 Nature of family (n=312)

A large proportion reported monogamy as nature of family (95.5%), polygamy was reported by (3.6%).

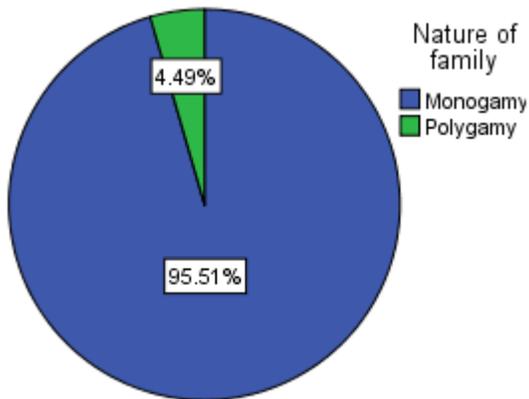


Figure 4.6: Nature of family

4.1.8 Number of sexual partner

Respondent were asked the number of sexual partner and the majority (78.5%) reported one sexual partner, no sexual partner (15.9%), multiple (5.6%)

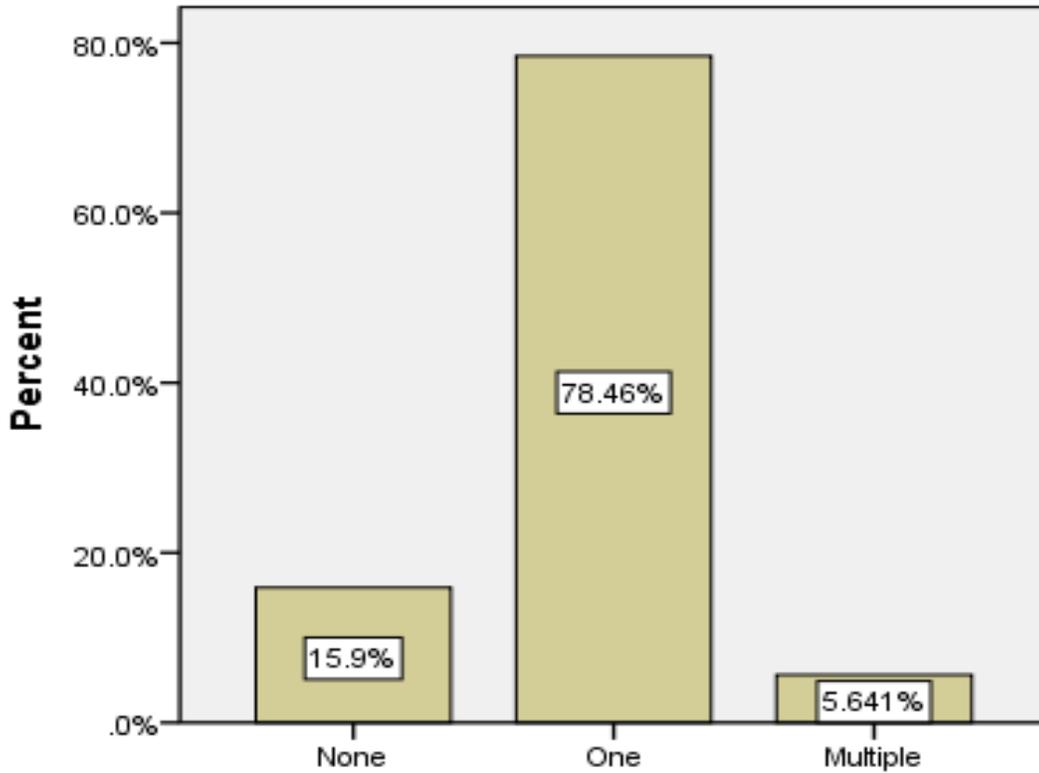


Figure 4.6 :Sexual partner

4.1.8 Number of children

When asked the number of children, the majority (51.5%) reported to have from 1 to 3 children, followed by those who have 4 to 6 with(24.9%), those who have 7 and above were (5.096 %) of respondents.

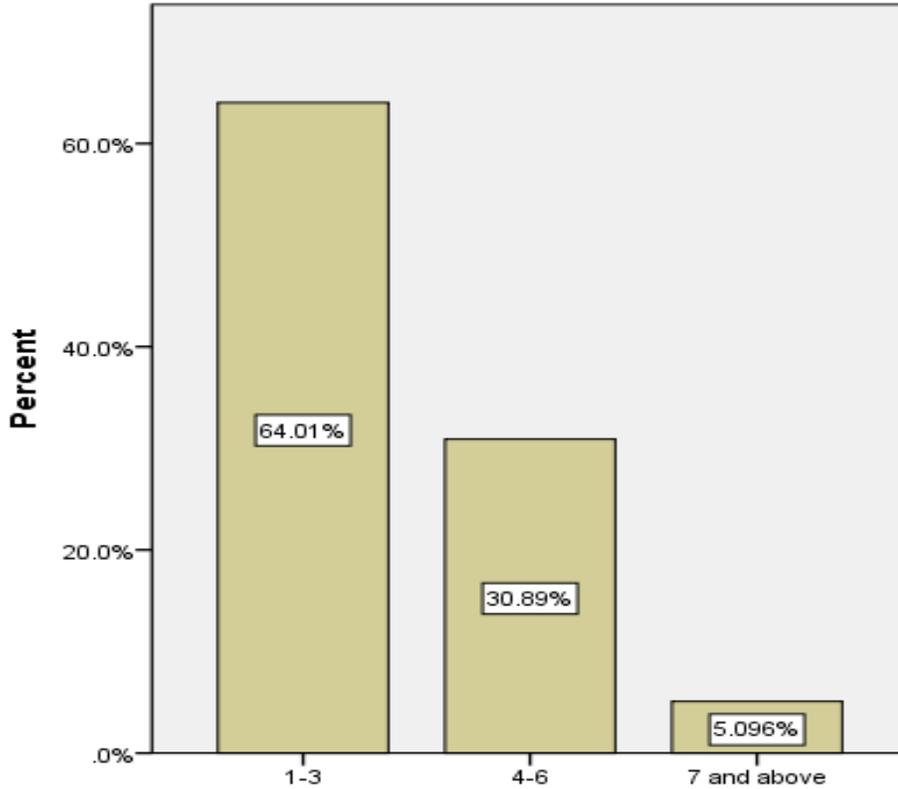


Figure 4.7 : Number of children

4.1.9 Average income per day

Findings of this study, show that more than half (68.2%) reported that the average income per day is less than one thousand Rwandan francs while only 1% reported 15000 Rwf and above.

Table 4.4: Average income per day

Average income per day	Frequency	Valid Percent
Less than one thousand	266	68.2
1000-4999	97	24.9
5000-9999	22	5.6
10000-14999	4	.3
15000 and above	1	1.0
Total	390	100.0

4.2 GENERAL KNOWLEDGE ON VASECTOMY.

Table 4.5 describes general knowledge on vasectomy. Respondents were asked male family method they know, and 31.8% could state condom, withdrawal, vasectomy, those who state condom were only (19.7%), those who state condom; withdrawal and vasectomy were 17.2%, vasectomy only was stated by 15.6%, those who could not state any male family method were 7.4%. When asked if they have heard vasectomy before, the majority of them (98.7%) reported heard vasectomy while (1.3%) did not. When asked where they first learned vasectomy, health center was found to be an important source of information (91.2%), followed by mass media (79.5%), Hospital (70.6%), Friends/Partner (60.0%), Literature (52.7%), Private clinics (9.9%). When asked if vasectomy is a form of family planning method, of them 71.25% said yes, who said no were (19.2%), those who don't know were (9.6%). Among those who said that vasectomy is a form of family planning method, of them (73.0%) reported that vasectomy is a permanent male family method, temporary male family method (24.1%), who don't know (2.9%) Respondents were asked if after a vasectomy would a man lose his sexual urge or desire for sexual activity, of them (30.6%) said yes, who said no were (65.2%) who don't know were (4.2%). Respondents were asked if after a vasectomy would a man be able to impregnate his partner, of them (15.8%) said yes, who said no were (82.1%) who don't know were (1.6%). When asked if Sperm is ejaculated during sexual intercourse even after a vasectomy, of them (36.4%) said yes, who said no were (58.4%) who don't know were (5.2%). Respondents were asked if the tendency for prostate cancer increases with men who have had vasectomy, among them (27.3%) said yes, who said no were (60.3%) who don't know were (12.5%). When asked if vasectomy prevents sexually transmitted infections among them (15.8%) said yes, who said no were (82.6%) who don't know were (1.6%).

Table.4.5. General Knowledge on vasectomy.

Variables	Frequency	Percent
What male family method do you know ? (n=390)		
Abstinence	7	1.8
Condom	77	19.7
Condom, Withdrawal, Vasectomy	67	17.2
Condom, Vasectomy	124	31.8
Condom, Withdrawal	12	3.1
Vasectomy	61	15.6
Vasectomy, Withdrawal	6	1.5
Withdrawal	7	1.8
None	29	7.4
Have you heard vasectomy before (n=390)		
Yes	385	98.7
No	5	1.3
Where did you first learn of vasectomy? (n=385)		
Mass media		
Yes	306	79.5
No	79	20.5
Literature		
Yes	203	52.7
No	182	47.3

Friends/Partner		
Yes	231	60.0
No		
	154	40.0
Hospital		
Yes	272	70.6
No	113	29.4
Health center		
Yes	351	91.2
No	34	8.8
Private clinics		
Yes	38	9.9
No	347	90.1
Is vasectomy a form of family planning method? (n=385)		
Yes	274	71.2
No	74	19.2
Don't know	37	9.6
If yes what form of family planning methods? (n=274)		
Permanent	200	73.0
Temporary	66	24.1
Don't know	8	2.9
After a vasectomy would a man lose his sexual urge or desire for sexual activity? (n=385)		
Yes	118	30.6
No	251	65.2
Don't know	16	4.2

After a vasectomy would a man be able to impregnate his partner? (n=385)		
Yes	61	15.8
No	318	82.6
Don't know	6	1.6
Sperm is ejaculated during sexual intercourse even after a vasectomy? (n=385)		
Yes	140	36.4
No	225	58.4
Don't know	20	5.2
The tendency for prostate cancer increases with men who have had vasectomy (n=385)		
Yes	105	27.3
No	232	60.3
Don't know	48	12.5
Vasectomy prevents sexually transmitted infections (n=385)		
Yes	61	15.8
No	318	82.6
Don't	6	1.6

4.3 ATTITUDE TOWARDS VASECTOMY

Table 4.6 describes attitude towards vasectomy. For the statement that vasectomy to any man is like castration and should not be done, the ones who strongly agree were (27.5%), agree (29.4%), disagree (25.7%), strongly disagree (17.4%). Permanent sterilization should be only for females (13.0%) strongly agree, of them (27.8%) agree, among participants (36.6%) disagree, while (22.6%) strongly disagreed. Vasectomy make men more promiscuous (13.2%) strongly agreed, of them (22.2%) agree, among participants (39.7%) disagree, while (24.7%) strongly disagree. Approving the use of vasectomy as method of family planning (37.7%)

strongly agreed, of them (39.5%) agreed, among participants (17.1%) disagreed, while (5.7%) strongly disagreed. The question indicating weather Men should be primarily responsible for decision making on family planning method to utilize, (33.3%) strongly agreed, of them (46.4%) agreed, among participants (10.8%) disagreed, while (9.5%) strongly disagreed. When asked if vasectomy is an effective form of family planning (17.7%) strongly agree, of them (29.1%) agreed, among participants (28.1%) disagreed, while (25.2%) strongly disagreed. I will carry out vasectomy (12.5%) strongly agree, of them (24.4%) agree, among participants (30.6%) disagree, while (32.5%) strongly disagree.

Men should take part in family planning (37.9%) strongly agree, of them (40.8%) agree, among them (15.9%) disagree, while (5.4%) strongly disagree. It is against my cultural belief for a man to practice vasectomy (29.4%) strongly agree, of them (23.9%) agree, among them (23.6%) disagree, while (23.1%) strongly disagree. It is against my religious belief for a man to practice vasectomy (23.6%) strongly agree, of them (30.1%) agree, among them (23.6%) disagree, while (22.6%) strongly disagree. Form their opinions; factors that influence men attitude towards vasectomy in their community were assessed. Attitude of family planning provider was reported by (31.9%), availability of facilities/equipment (37.7%), ignorance (54.8%), language barrier (41.0%),Schedule of family planning clinics (32.5%), effectiveness of family planning methods (35.8%),accessibility of family planning where vasectomy is done (39.0%), , cultural acceptance (51.7%), cultural acceptance of family planning methods (45.5%), Low income because vasectomy is expensive (36.6%)

Table 4.6 Attitude towards vasectomy

Variables	frequency	percent
Vasectomy to any man is like castration should not be done (n=385)		
Strongly agree	106	27.5
Agree	113	.4
Disagree	99	25.7
Strongly disagree	67	17.4

Permanent sterilization should be only for females (n=385)		
Strongly agree	50	13.0
Agree	107	27.8
Disagree	141	36.6
Strongly disagree	87	22.6
Vasectomy make men more promiscuous (n=385)		
Strongly agree	51	13.2
Agree	86	22.3
Disagree	153	39.7
Strongly disagree	95	24.7
I approve the use of vasectomy as method of family planning (n=385)		
Strongly agree	145	37.7
Agree	152	39.5
Disagree	66	17.1
Strongly disagree	22	5.7
Men should be primarily responsible for decision making on family planning method to utilize (n=390)		
Strongly agree	130	33.3
Agree	181	46.4
Disagree	42	10.8
Strongly disagree	37	9.5
Vasectomy is an effective form of family planning ((n=385))		
Strongly agree	68	17.7
Agree	112	29.1
Disagree	108	28.1
Strongly disagree	97	25.2
I will carry out vasectomy (n=385)		
Strongly agree	48	12.5
Agree	94	24.4
Disagree	118	30.6

Strongly disagree	125	32.5
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Men should take part in family planning (n=390)

Strongly agree	148	37.9
Agree	159	40.8
Disagree	62	15.9
Strongly disagree	21	5.4

It is against my cultural belief for a man to practice vasectomy (n=385)

Strongly agree	113	29.4
Agree	92	23.9
Disagree	91	23.6
Strongly disagree	89	23.1

It is against my religious belief for a man to practice vasectomy (n=385)

Strongly agree	91	23.6
Agree	116	30.1
Disagree	91	23.6
Strongly disagree	87	22.6

In your opinion what factors influence men's attitude towards vasectomy in your community?

Variables	frequency	percent
Attitude of family planning provider (n=385)		
Yes	123	31.9
Non	262	68.1

Availability of facilities/Equipment (n=385)		
Yes	145	37.7
<u>No</u>	<u>240</u>	<u>62.3</u>
Ignorance(n=385)		
Yes	211	54.8
<u>No</u>	<u>144</u>	<u>45.2</u>
Language barrier(n=385)		
Yes	158	41.0
<u>No</u>	<u>227</u>	<u>59.0</u>
Schedule of family planning clinics (n=385)		
Yes	125	32.5
<u>No</u>	<u>260</u>	<u>67.5</u>
Effectiveness of family planning methods(n=385)		
Yes	138	35.8
<u>No</u>	<u>247</u>	<u>64.2</u>
Accessibility of family planning where vasectomy is done (n=385)		
Yes	150	39.0
<u>No</u>	<u>234</u>	<u>61.0</u>
Cultural acceptance(n=385)		
Yes	199	51.7
<u>No</u>	<u>186</u>	<u>48.3</u>
Cultural acceptance of family planning methods (n=385)		
Yes	175	45.5
<u>No</u>	<u>210</u>	<u>54.5</u>
Low income because vasectomy is expensive (n=385)		
Yes	141	36.6
No	244	63.4

4.4. BIVARIATE ANALYSIS OF SOCIODEMOGRAPHIC CHARACTERISTICS AND GENERAL KNOWLEDGE ON VASECTOMY.

4.4.1. Bivariate analysis of Age and general knowledge on Vasectomy

The results of bivariate analysis of different age groups and general knowledge on vasectomy significantly showed the association between age and knowledge towards vasectomy whereby the p. value of respondents who did not know any male method was $P < 0.001$ and the ones who know at least any ($P < 0.001$), after vasectomy would a man lose sexual activity ($P < 0.05$), sperm is ejaculated after vasectomy ($P < 0.05$), vasectomy prevent STI ($P < 0.05$).

Table 4.7. Bivariate analysis of Age and general knowledge on Vasectomy

Age	don't know any male method**	know at least any**	is vasectomy a form of FP		after vasectomy would a man lose* sexual activity			
			Yes	No	don't know	Yes	No	Don't know
22-30	9	99	58	17	10	55	30	0
31-39	4	164	121	37	9	56	105	6
40-48	16	77	64	16	11	26	56	9
49-57	7	28	23	4	7	10	24	0
58-67	0	8	8	0	0	1	6	1

Age	after vasectomy would* a man impregnate			sperm is ejaculated* after vasectomy			tendency of prostate cancer increases with vasectomy			vasectomy prevent STI**		
	Yes	No	Don't know	Yes	No	Don't know	Yes	No	don't know	Yes	No	Don't know
22-30	17	68	0	36	47	2	22	49	14	24	61	0
31-39	25	139	3	52	107	8	58	94	15	24	143	0
40-48	18	71	2	37	45	9	18	61	12	10	76	5
49-57	1	33	0	15	19	0	5	23	6	3	31	0
58-67	0	7	1	0	7	1	2	5	1	0	7	1

* P-value <0.05

** P-value <0.0001

4.4.2. Bivariate analysis of religion and knowledge of men towards vasectomy

Religion of respondents was significantly associated with the knowledge of men towards vasectomy whereby the P value on whether after vasectomy would a man lose sexual activity is (P<0.05), after vasectomy would a man impregnate (P<0.05) sperm is ejaculated after vasectomy (P<0.005) tendency of breast cancer increases with vasectomy (P<0.005) and lastly the P value for the question on whether vasectomy prevent STI is (P<0.05).

Table 4.8 Bivariate analysis of religion and knowledge of men towards vasectomy

Religion	don't know any male method*	know at least any*	is vasectomy a form of FP			after vasectomy would a man lose* sexual activity		
			Yes	No	Don't know	Yes	No	don't
know								
Catholic	18	221	161	43	23	74	140	13
Islam	0	26	15	9	0	1	23	0
Protestant	13	84	72	16	9	29	65	3
Adventist	0	12	12	0	0	1	11	0
Pentecost	5	17	10	6	5	1	11	0
Jehovah	0	3	3	0	0	3	0	0
No religion	0	1	1	0	1	0	1	0

Religion	after vasectomy would* a man impregnate			sperm is ejaculated ** after vasectomy			tendency of prostate cancer** increases with vasectomy			vasectomy prevent STI*		
	Yes	No	don't know	Yes	No	don't know	Yes	No	Don't know	Yes	No	Don't know
Catholic	30	194	3	93	119	15	66	132	29	40	181	6
Islam	7	17	0	15	9	0	3	21	0	6	18	0
Protestant	24	70	3	18	74	5	30	59	8	6	91	0
Adventist	0	12	0	8	4	0	0	9	3	0	12	0
Pentecost	0	21	0	5	16	0	2	11	8	9	12	0
Jehovah	0	3	0	0	3	0	3	0	0	0	3	0
No religion	0	1	0	1	0	0	1	0	0	0	1	0

4.4.3. Bivariate analysis of academic attainment and general knowledge towards vasectomy

The findings of this study revealed that academic level was significantly associated with the knowledge of respondents highlighting that the level of knowledge increases as the men has a high level of education and vice-versa whereby the P value for the following questions were the following: don't know any male method (P<0.001) , know at least any (P <0.001), vasectomy is a form of FP (P<0.001), after vasectomy would a man impregnate (P<0.001), sperm is ejaculated after vasectomy (P<0.001), vasectomy prevent STI (P<0.001).

Table 4.9. Bivariate analysis of academic attainment and general knowledge towards vasectomy

Academic	don't know any male method**	know at least any**	is vasectomy a form of FP**			after vasectomy would a man lose sexual activity		
			Yes	No	don't know	Yes	No	don't know
None	6	42	30	11	5	17	28	1
Primary education	28	137	99	39	25	49	102	12
Secondary education	2	118	103	12	5	39	78	3
University	0	57	42	12	2	13	43	0

academic	after vasectomy would**			sperm is ejaculated**			tendency of prostate cancer			vasectomy prevent STI*		
	a man impregnate			after vasectomy			increases with vasectomy					
	Yes	No	Don't know	Yes	No	don't know	Yes	No	don't know	Yes	No	don't know
None	9	36	1	29	16	1	13	29	4	9	36	1
Primary education	32	129	2	54	100	9	43	97	23	18	140	5
Secondary education	2	115	3	41	71	8	28	73	19	19	101	0
University	18	38	0	16	38	2	21	33	2	12	41	0

* P-value <0.05

** P-value <0.0001

4.4.4. Bivariate analysis of occupation and knowledge of men towards vasectomy

The results of this study revealed that occupation was significantly associated with the knowledge of respondents highlighting that the level of knowledge increases as the men has a hi whereby the P value for the following questions were the following: don't know any male method (P<0.001), know at least any (P <0.001), vasectomy is a form of FP (P<0.001), after vasectomy would a man impregnate (P<0.001), sperm is ejaculated after vasectomy (P<0.001), vasectomy prevent STI (P<0.001).

Table.4.10. Bivariate analysis of occupation and knowledge of men towards vasectomy

occupation	don't know any male method*	know at least any*	is vasectomy a form of FP**			after vasectomy would a man lose sexual activity		
			Yes	No	don't know	Yes	No	don't know
Civil servant	1	80	67	10	3	32	46	2
Farmer	31	182	124	56	29	35	135	9
Cultivator	0	48	42	5	1	11	33	4
Business activities	4	37	35	2	4	10	30	1
Students	0	7	6	1	0	0	7	0

occupation	after vasectomy would a man impregnate			sperm is ejaculated** after vasectomy			tendency of prostate cancer increases with vasectomy			vasectomy prevent STI*		
	Yes	No	don't know	Yes	No	don't know	Yes	No	don't know	Yes	No	don't know
Civil servant	10	68	2	19	59	2	21	48	11	17	63	0
Farmer	34	172	3	91	111	7	61	121	27	31	176	2
Cultivator	7	41	0	19	222	7	13	32	3	3	41	4
Business activities	6	34	1	6	31	4	9	25	7	10	31	0
Students	4	3	0	5	2	0	1	6	0	0	7	0

* P-value <0.05

** P-value <0.0001

4.4.5 Bivariate analysis of average income and knowledge of men towards vasectomy.

The results of the bivariate analysis significantly demonstrated the association of the average income and the knowledge of men towards vasectomy whereby the majority of respondents were retrieved to be less informed whether after vasectomy a man ejaculates and whether vasectomy is a form of family planning with P-value <0.05.

Table.4.11. Bivariate analysis of average income and knowledge of men towards vasectomy.

Average income Per day	don't know any male method	know at least any method	is vasectomy a form of FP*			after vasectomy would a man lose sexual activity		
			Yes	No	don't know	Yes	No	don't
know								
<1,000	30	236	175	58	30	79	172	12
1000-4,999	6	61	80	10	5	32	59	4
5,000-9,999	0	22	16	5	1	6	16	0
10000-14,999	0	1	0	1	0	0	1	0
15,000 and above	0	4	3	0	1	1	3	0

* P-value <0.05

Average income Per day	after vasectomy would a man impregnate			sperm is ejaculated after vasectomy			tendency of prostate cancer increases with vasectomy			vasectomy prevent STI		
	Yes	No	don't know	Yes	No	don't know	Yes	No	don't know	Yes	No	don't know
<1,000	44	213	6	100	148	15	72	161	30	43	214	6
1000-4,999	13	82	0	29	61	5	27	53	15	12	83	0
5,000-9,999	3	19	0	9	13	0	4	15	3	4	18	0
10000-14,999	0	1	0	0	1	0	0	1	0	0	1	0

15,000 and above	0	4	0	0	2	2	2	2	0	1	3	0
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4.4.6 Bivariate analysis of marital status and knowledge of men towards vasectomy.

Marital status was associated with the knowledge of men towards vasectomy as follows: the question asking whether after vasectomy would a man lose sexual activity was associated with marital status with (P<0.05) and then after vasectomy would a man impregnate (P<0.05), sperm is ejaculated after vasectomy (P <0.05), vasectomy prevent STI (P <0.05). If married how long in years was associated with don't know any male method (P<0.001) and know at least any (P <0.001), is vasectomy a form of FP (P <0.05), after vasectomy would a man lose sexual activity (P<0.05), tendency of prostate cancer increases with vasectomy (P<0.05) and finally vasectomy prevent STI (P<0.05).

Table.4.12. Bivariate analysis of marital status and knowledge of men towards vasectomy.

Marital status	don't know any male method	know at least any	is vasectomy a form of FP			after vasectomy would a man lose* sexual activity		
			Yes	No	don't know	Yes	No	don't know
Married	25	278	212	58	28	87	196	15
Single	11	74	61	15	9	31	55	0
Divorced	0	1	0	1	0	0	1	0
Widower	0	1	1	9	0	0	0	1

Marital status	after vasectomy would* a man impregnate			sperm is ejaculated* after vasectomy			tendency of prostate cancer increases with vasectomy			vasectomy prevent STI*		
	Yes	No	don't know	Yes	No	don't know	Yes	No	don't know	Yes	No	don't know
	Married	41	252	5	111	168	19	82	178	36	42	251
Single	19	66	0	28	57	0	23	53	9	18	67	0
Divorced	1	0	1	1	0	0	0	1	0	1	0	0
Widower	0	0	1	0	0	1	0	0	1	0	0	1

* P-value <0.05

Married	don't know any male method**	know at least any **	is vasectomy a form of FP *			after vasectomy would a man lose* sexual activity		
			Yes	No	don't know	Yes	No	don't
How long (in years)								
know								
< 5	4	108	79	24	9	20	84	8
6-10	2	79	62	14	3	33	43	3
11-15	5	41	30	9	6	15	26	4
16-20	6	16	11	8	3	7	15	0
21-25	8	11	9	2	6	5	12	0
26-30	0	12	11	0	1	3	9	0
31-35	0	5	4	1	0	0	5	0
36-40	0	6	6	0	0	4	2	0

Married How long (in years)	after vasectomy would a man impregnate			sperm is ejaculated after vasectomy			tendency of prostate cancer* increases with vasectomy			vasectomy prevent STI*		
	Yes	No	don't know	Yes	No	don't know	Yes	No	don't know	Yes	No	don't know
	< 5	11	100	1	36	67	9	32	59	21	18	94
6-10	13	63	3	38	35	6	16	56	7	12	67	0
11-15	11	34	0	15	26	4	16	26	3	7	34	4
16-20	3	18	1	9	13	0	8	13	1	0	21	1
26-30	0	12	0	6	11	0	5	9	3	0	12	0
31-35	0	5	0	0	5	0	0	5	0	0	5	0
36-40	0	6	0	0	6	0	2	1	3	3	3	0

4.4.7. Bivariate analysis of number of children and knowledge of men towards vasectomy.

Number of children was associated with “vasectomy prevent STI” ($P < 0.05$). Nature of family was associated with tendency of prostate cancer increases with vasectomy ($P < 0.05$).

Table 4.13. Bivariate analysis of number of children and knowledge of men towards vasectomy.

Number of children know	don't know any male method	know at least any	is vasectomy a form of FP			after vasectomy would a man lose sexual activity		
			Yes	No	don't know	Yes	No	don't
1-3	15	186	141	40	18	65	123	11
4-6	11	86	60	24	10	21	68	5
7 and above	3	13	13	1	2	9	7	0

Number Of children	after vasectomy would a man impregnate			sperm is ejaculated after vasectomy			tendency of prostate cancer increases with vasectomy			vasectomy prevent STI*		
	Yes	No	don't know	Yes	No	don't know	Yes	No	don't know	Yes	No	don't know
1-3	29	165	5	69	115	15	48	122	49	29	169	1
4-6	14	79	1	40	49	5	32	58	4	9	80	5
7 and above	2	14	0	3	13	0	9	1	6	5	11	0

4.4.8. Bivariate analysis of the nature of family and knowledge of men towards vasectomy.

Nature of family was significantly associated with the knowledge of men towards vasectomy while asking whether the tendency of prostate cancer increases with vasectomy ($P < 0.05$).

Table.4.14. Bivariate analysis of the nature of family and knowledge of men towards vasectomy.

Nature Of family	don't know any male method	know at least any	is vasectomy a form of FP			after vasectomy would a man lose sexual activity		
			Yes	No	don't know	Yes	No	don't know
Monogamy	29	269	205	57	31	89	189	15
Polygamy	0	14	11	3	0	2	12	0

Nature Of family	after vasectomy would a man impregnate			sperm is ejaculated after vasectomy			tendency of prostate cancer* increases with vasectomy			vasectomy prevent STI		
	Yes	No	don't know	Yes	No	don't know	Yes	No	don't know	Yes	No	don't know
Monogamy	43	245	5	106	168	19	88	164	41	38	250	5

Polygamy	0	14	0	5	9	0	0	14	0	4	10	0
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* P-value <0.05

4.4.9. Bivariate analysis of the nature of family and knowledge of men towards vasectomy.

The significant association was also found with regard to the number of sexual partners whereby the questions asking on the knowledge of vasectomy were answered and analyzed with the following P values respectively: “is vasectomy a form of FP (P<0.05), after vasectomy would a man lose sexual activity (P<0.001), after vasectomy would a man impregnate (P<0.05) and vasectomy prevent STI (P<0.05)”.

Table 4.15 Bivariate analysis of the nature of family and knowledge of men towards vasectomy.

Sexual Partner	don't know any male method	know at least any	is vasectomy a form of FP*			after vasectomy would a man lose** sexual activity		
			Yes	No	don't know	Yes	No	don't
None	6	56	50	6	6	19	42	1
One	30	276	204	66	31	96	193	12
Multiple	0	22	20	2	01	3	16	3

* P-value <0.05

** P-value <0.0001

Sexual Partner	after vasectomy would** a man impregnate			sperm is ejaculated after vasectomy			tendency of prostate cancer increases with vasectomy			vasectomy prevent STI*		
	Yes	No	don't know	Yes	No	don't know	Yes	No	don't know	Yes	No	don't know
None	16	45	1	18	43	1	17	38	7	19	41	1
One	45	254	2	114	171	16	84	179	38	42	254	5
Multiple	0	19	3	8	11	3	4	15	3	0	22	0

4.5. BIVARIATE ANALYSIS OF SOCIODEMOGRAPHIC CHARACTERISTICS AND ATTITUDES TOWARDS VASECTOMY.

4.5.1 Bivariate analysis of age and attitudes toward vasectomy.

The results of cross tabulation of age and attitude towards vasectomy showed the association between age and the following related questions among respondents” I approve the use of vasectomy as method of FP (P<0.001), men should be primarily responsible for decision making on family methods to utilize (P<0.001), vasectomy is an effective form of FP (P<0.001) and men should take part in FP (P<0.001).” These results revealed a significant association with regard to age and negative attitudes towards vasectomy as demonstrated.

Table 4.15. Bivariate analysis of age and attitudes toward vasectomy.

Age	Vasectomy to any is castration		permanent sterilization should only for female		vasectomy make men promiscuous	
	Good attitude	Bad attitude	Good attitude	Bad attitude	Good attitude	Bad attitude
22-30	62	23	27	58	37	48
31-39	76	91	78	89	50	117
40-48	57	34	35	56	31	60
49-57	21	13	13	21	1717	
58-67	3	5	4	4	2	6

** P-value <0.0001

Age	I approve the use of vasectomy as method** men should be primarily responsible for decision** vasectomy is an effective form of FP**					
	Of family planning		making on family method to utilize			
	Good attitude	Bad attitude	Good attitude	Bad attitude	Good attitude	Bad attitude
22-30	51	34	51	34	20	65
31-39	140	27	140	27	95	72
40-48	81	10	81	10	38	53
49-57		18	16	18	21	13
58-67	7	1	7	1	7	1

** P-value <0.0001

Age	I will carry out vasectomy** men should be take part in FP** It is against my cultural belief to a man, It is against my religious belief							
	To practice vasectomy							
	Good attitude	Bad attitude	Good attitude	Bad attitude	Good attitude	Bad attitude	Good attitude	Bad attitude
22-30	21	64	57	29	50	35	48	37
31-39	77	90	151	17	83	84	81	86
40-48	31	60	76	17	51	40	56	35
49-57	9	25	15	20	19	15	20	14
58-67	4	4	8	0	2	6	2	6

** P-value <0.0001

4.5.2. Bivariate analysis of religion and attitudes toward vasectomy.

Religion was significantly associated with questions asked to assess the attitudes as demonstrated herewith in the table despite the knowledge of men on vasectomy as a family planning method and that men can take part in FP, other negative attitudes were significantly demonstrated as follows” permanent sterilization should only for female (P<0.001), vasectomy make men promiscuous (P<0.001), Vasectomy is an effective form of FP (P<0.05) I approve the use of vasectomy as method of FP (P<0.05), men should be primarily responsible for decision making on family methods to utilize (P<0.05), I will carry out vasectomy (P<0.05), men should take part in FP (P<0.001), It is again my cultural belief to a man to practice vasectomy (P<0.05), it is again my religious belief to a man to practice vasectomy(P<0.05)”.

Table 4.16. Bivariate analysis of religion and attitudes toward vasectomy.

Religion	Vasectomy to any is castration		permanent sterilization should only for female**		vasectomy make men promiscuous**	
	Good attitude	Bad attitude	Good attitude	Bad attitude	Good attitude	Bad attitude
Catholic	125	102	68	159	68	159
Islam	9	15	13	11	9	15
Protestant	60	37	53	44	38	59
Adventist	3	9	8	4	5	7
Pentecost	19	2	12	9	17	4
Jehovah	3	0	3	0	0	3
No religion	0	1	0	1	0	1

** P-value <0.0001

Religion	I approve the use of vasectomy as method*		men should be primarily responsible for decision* vasectomy is an effective form of FP*			
	Of family planning		making on family method to utilize			
	Good attitude	Bad attitude	Good attitude	Bad attitude	Good attitude	Bad attitude
Catholic	55	172	172	55	117	109
Islam	23	1	23	1	13	11
Protestant	17	80	67	30	31	66
Adventist	12	0	12	0	7	5
Pentecost	19	2	19	2	11	10
Jehovah	3	0	3	0	0	3
No religion	1	0	1	0	1	0

* P-value <0.05

Religion	I will carry out vasectomy*		men should be take part in FP**					
	Good attitude	Bad attitude	Good attitude	Bad attitude	Good attitude	Bad attitude	Good attitude	Bad attitude
Catholic	92	135	188	41	112	115	101	126
Islam	15	9	25	1	10	14	9	15
Protestant	25	72	73	24	57	40	39	58
Adventist	3	9	8	4	11	1	11	1
Pentecost	7	14	12	10	12	9	12	9
Jehovah	3	0	0	3	3	0	0	3
No religion	0	1	1	0	0	1	0	1

* P-value <0.05, ** P-value <0.0001

4.5.3 .Bivariate analysis of academic level and the attitudes towards vasectomy.

The results revealed that good, attitudes increases in men with high academic level and vice-versa. men believe that vasectomy to any is castration with P value of (P<0.001), vasectomy make men promiscuous (P<0.001), I approve the use of vasectomy as method of FP (P<0.001), men should be primarily responsible for decision making on family methods to utilize (P<0.05), I will carry out vasectomy (P<0.001), men should take part in FP (P<0.001).

Table 4.17 . Bivariate analysis of academic level and the attitudes towards vasectomy.

academic	Vasectomy to any is castration ** permanent sterilization should only for female		vasectomy make men promiscuous**			
	Good attitude	Bad attitude	Good attitude	Bad attitude		
None	16	30	22	24	23	23
Primary education	98	65	64	99	41	122
Secondary education	76	44	48	72	67	53
University	15	41	23	33	6	50

Academic	I approve the use of vasectomy as method** men should be primarily responsible for decision*vasectomy is an effective form of FP					
	Of family planning		making on family method to utilize			
	Good attitude	Bad attitude	Good attitude	Bad attitude	Good attitude	Bad attitude
None	28	18	29	117	26	19
Primary education	83	80	138	25	67	96
Secondary education	98	22	91	29	62	58
University	48	8	46	10	25	31

* P-value <0.05

** P-value <0.0001

Academic	I will carry out vasectomy**men should be take part in FP**I is again my cultural belief to a man it is again my religious belief							
	To practice vasectomy				to a man to practice vasectomy			
	Good attitude	Bad attitude	Good attitude	Bad attitude	Good attitude	Bad attitude	Good attitude	Bad attitude
None	17	29	32	16	19	27	14	32
Primary education	61	102	131	34	85	78	97	66
Secondary education	48	72	98	22	71	49	66	54
University	16	40	46	11	30	25	30	25

* P-value <0.05

** P-value <0.0001

Occupation	Vasectomy to any is castration *		permanent sterilization should only for female *		vasectomy make men promiscuous *	
	Good attitude	Bad attitude	Good attitude	Bad attitude	Good attitude	Bad attitude
Civil servant	35	45	38	42	35	45
Farmer	62	147	83	127	62	147
Cultivator	25	23	18	30	25	23
Student	1	6	1	6	1	6
Business activities	14	27	17	24	14	27

* P-value <0.05

Occupation	I approve the use of vasectomy as method		men should be primarily responsible for decision		vasectomy is an effective form of	
	Of family planning		making on family method to utilize		FP**	
	Good attitude	Bad attitude	Good attitude	Bad attitude	Good attitude	Bad attitude
Civil servant	64	16	63	17	32	48
Farmer	160	49	166	43	101	107
Cultivator	40	8	41	7	24	24
Student	6	1	5	2	6	1
Business activities	27	14	49	12	17	24

* P-value <0.05

** P-value <0.0001

4.5.4. Bivariate analysis of occupation and the attitudes towards vasectomy.

Occupation was associated with vasectomy to any is castration ($P<0.05$), permanent sterilization should be only for female ($P<0.05$), vasectomy make men promiscuous ($P<0.05$), I approve the use of vasectomy as method of FP ($P<0.001$), men should be primarily responsible for decision making on family methods to utilize ($P<0.05$), vasectomy is an effective form of FP ($P<0.001$), I will carry out vasectomy ($P<0.001$), men should take part in FP ($P<0.001$) I will carry out vasectomy ($P<0.05$).

Table 4.18. Bivariate analysis of occupation and the attitudes towards vasectomy.

Occupation	I will carry out vasectomy*		men should be take part in FP		I is again my cultural belief to a man		it is again my religious belief	
	Good attitude	Bad attitude	Good attitude	Bad attitude	Good attitude	Bad attitude	Good attitude	Bad attitude
Bad attitude								
Civil servant	23	57	62	19	48	32	43	37
Farmer	83	126	164	49	98	111	115	94
Cultivator	25	23	42	6	31	17	22	26
Student	1	6	5	2	4	3	4	3
Business activities	10	31	34	7	24	17	23	18

* P-value <0.05

4.5.5. Bivariate analysis of average monthly income and the attitudes towards vasectomy.

The cross-tabulation results demonstrated that Average monthly income was associated with I approve the use of vasectomy as method of FP ($P < 0.001$), men should be primarily responsible for decision making on family methods to utilize ($P < 0.001$), vasectomy is an effective form of FP ($P < 0.05$), I will carry out vasectomy ($P < 0.05$), men should take part in FP ($P < 0.001$).

Table 4.19 Bivariate analysis of average monthly income and the attitudes towards vasectomy.

Average income Per month	Vasectomy to any is castration		permanent sterilization should only for female		vasectomy make men promiscuous	
	Good attitude	Bad attitude	Good attitude	Bad attitude	Good attitude	Bad attitude
Less than 1,000	155	108	113	150	93	170
1000-4,999	52	43	35	60	37	58
5000-9,999	10	12	7	15	6	16
10000-14,999	0	1	1	0	0	1
15 and above	2	2	1	3	1	3

Average income Per month	I approve the use of vasectomy as method**men should be primarily responsible for decision**vasectomy is an effective form of FP**					
	Of family planning		making on family method to utilize		of FP**	
	Good attitude	Bad attitude	Good attitude	Bad attitude	Good attitude	Bad attitude
Less than 1,000	203	60	211	52	127	135
1000-4,999	71	24	71	24	40	55
5000-9,999	18	4	18	4	9	13
10000-14,999	1	0	1	0	1	0
15 and above	4	0	3	1	3	1

* P-value <0.05, ** P-value <0.0001

Average income Per month	I will carry out vasectomy*men should be take part in FP**I is again my cultural belief to a man, it is again my religious belief to a man to practice vasectomy.							
	Good attitude		Bad attitude		To practice vasectomy.		belief to a man to practice vasectomy	
	Good attitude	Bad attitude	Good attitude	Bad attitude	Good attitude	Bad attitude	Good attitude	Bad attitude
Less than 1,000	105	158	211	55	139	124	146	117
1000-4,999	24	71	75	22	52	43	48	47
5000-9,999	8	14	18	4	11	11	10	12
10000-14,999	1	0	1	0			1	0
15 and above	4	0	2	2	2	2	2	2

* P-value <0.05, ** P-value <0.0001

4.5.6 Bivariate analysis of marital status and attitudes towards vasectomy.

Marital status and duration of marriage was significantly associated when participants were asked whether vasectomy to any is castration ($P < 0.001$), approving the use of vasectomy as method of FP ($P < 0.001$), men should be primarily responsible for decision making on family methods to utilize ($P < 0.001$), permanent sterilization should be only for female ($P < 0.001$).

Table: 4.20 Bivariate analysis of marital status and attitudes towards vasectomy.

Marital status	Vasectomy to any is castration **		permanent sterilization should only for female		vasectomy make men promiscuous	
	Good attitude	Bad attitude	Good attitude	Bad attitude	Good attitude	Bad attitude
Married	173	125	127	171	111	187
Single	44	41	28	57	25	60
Divorced	1	0	1	0	1	0
Widower	1	0	1	0	0	1

Marital status	I approve the use of vasectomy as method**		men should be primarily responsible for decision**		vasectomy is an effective	
	Of family planning		making on family method to utilize		form of FP	
	Good attitude	Bad attitude	Good attitude	Bad attitude	Good attitude	Bad attitude
Married	233	65	240	58	137	160
Single	63	22	63	22	43	42
Divorced	1	0	1	0	0	1
Widower	0	1	0	1	0	1

* P-value < 0.05 , ** P-value < 0.0001

If married How long (in years)	Vasectomy to any is castration permanent sterilization should only for female**				vasectomy make men promiscuous	
	Good attitude	Bad attitude	Good attitude	Bad attitude	Good attitude	Bad attitude
< 5	60	52	41	71	46	66
6-10	55	24	47	32	28	51
11-15	22	23	16	29	15	30
16-20	13	9	8	14	4	18
21-25	12	5	11	16	11	6
26-30	7	5	1	11	3	9
31-35	1	4	0	5	1	4
36-40	3	3	3	3	3	3

** P-value <0.0001

If married How long (in years)	I approve the use of vasectomy as method*		men should be primarily responsible for decision*		vasectomy is an effective form of FP*	
	Of family planning		making on family method to utilize			
	Good attitude	Bad attitude	Good attitude	Bad attitude	Good attitude	Bad attitude
< 5	88	24	90	22	49	63
6-10	68	11	68	11	25	54
11-15	37	8	41	4	29	16
16-20	16	6	16	6	8	14
21-25	9	8	10	7	5	12
26-30	5	7	5	7	11	0
31-35	4	1	4	1	4	1
36-40	6	0	6	0	6	0

* P-value <0.05

** P-value <0.0001

If married How long (in years)	I will carry out vasectomy* men should be take part in FP** I is again my cultural belief to a man*		To practice vasectomy				it is again my religious belief to a man to practice vasectomy		
	Good attitude	Bad attitude	Good attitude	Bad attitude	Good attitude	Bad attitude	Good attitude	Bad attitude	
< 5	48	64	96	16	62	50	54	58	
6-10	29	50	66	15	34	45	42	37	
11-15	20	25	37	9	24	21	20	25	
16-20	5	17	22	0	14	8	18	4	
21-25	1	16	9	10	6	11	8	9	
26-30	9	3	4	8	4	8	5	7	
31-35	0	5	5	0	1	4	1	4	
36-40	3	3	3	3	4		2	4	2

* P-value <0.05

** P-value <0.0001

4.5.7. Bivariate analysis of number of children and attitudes towards vasectomy.

Number of children was significantly associated when respondents were asked whether permanent sterilization should only be done for female (P<0.05), I approve the use of vasectomy as method of FP (P<0.05), men should be primarily responsible for decision making on family methods to utilize (P<0.05), vasectomy is an effective form of FP (P<0.001), men should take part in FP (P<0.001).

Table 4.21. Bivariate analysis of number of children and attitudes towards vasectomy.

Number of Children	Vasectomy to any is castration		permanent sterilization should only for female*		vasectomy make men promiscuous	
	Good attitude	Bad attitude	Good attitude	Bad attitude	Good attitude	Bad attitude
1-3	111	88	91	108	71	128
4-6	59	35	32	62	29	65
7 and above	10	6	10	6	10	6

Number of children	I approve the use of vasectomy as method*		men should be primarily responsible for decision*		vasectomy is an effective form of FP**	
	Of family planning		making on family method to utilize		Good attitude	Bad attitude
	Good attitude	Bad attitude	Good attitude	Bad attitude		
1-3	160	39	165	34	89	110
4-6	76	18	78	16	41	52
7 and above	8	8	8	8	11	5

* P-value <0.05, ** P-value <0.0001

Number of children	I will carry out vasectomy		men should be take part in FP**		I is again my cultural belief to a man to practice vasectomy.		It is against my religious belief to a man to practice vasectomy	
	Good attitude	Bad attitude	Good attitude	Bad attitude	Good attitude	Bad attitude	Good attitude	Bad attitude
1-3	76	123	169	32	106	93	110	89
4-6	35	59	79	18	41	53	40	54
7 and above	4	12	5	11	11	5	8	8

** P-value <0.0001

4.5.8. Bivariate analysis of the nature of family and attitudes of men towards vasectomy.

Nature of family was associated with permanent sterilization should only for female ($P < 0.05$), vasectomy is an effective form of FP ($P < 0.001$), I will carry out vasectomy ($P < 0.001$) men should be take part in FP ($P < 0.001$).

4.22. Bivariate analysis of the nature of family and attitudes of men towards vasectomy.

Nature of family	Vasectomy to any is castration		permanent sterilization should only for female*		vasectomy make men promiscuous	
	Good attitude	Bad attitude	Good attitude	Bad attitude	Good attitude	Bad attitude
Monogamy	171	122	128	165	110	183
Polygamy	11	3	4	10	4	10

Family	Of family planning		making on family method to utilize		men should be primarily responsible for decision vasectomy is an effective form of FP**	
	Good attitude	Bad attitude	Good attitude	Bad attitude	Good attitude	Bad attitude
Monogamy	230	63	237	56	131	161
Polygamy	12	2	12	2	6	8

* P-value < 0.05

Nature of family	I will carry out vasectomy**		men should be take part in FP**		I is again my cultural belief to a man		it is again my religious belief	
	Good attitude	Bad attitude	Good attitude	Bad attitude	Good attitude	Bad attitude	Good attitude	Bad attitude
Monogamy	111	182	239	59	146	147	149	144
Polygamy	4	10	12	2	10	4	10	4

4.5.9 Bivariate analysis of sexual partners and attitudes of men towards vasectomy.

Number of Sexual partners was significantly associated with “I approve the use of vasectomy as method of FP (P<0.05)”, men should be primarily responsible for decision making on family methods to utilize (P<0.05), vasectomy is an effective form of FP (P<0.001), I will carry out vasectomy (P<0.001), men should take part in FP (P<0.05), it is again my cultural belief to a man to practice vasectomy (P<0.05)”

Table 4.23 Bivariate analysis of sexual partners and attitudes of men towards vasectomy.

sexual partner	Vasectomy to any is castration permanent sterilization should only for female vasectomy make men promiscuous					
	Good attitude	Bad attitude	Good attitude	Bad attitude	Good attitude	Bad attitude
None	35	27	23	39	23	39
One	110	131	125	176	106	195

Multiple	14	8	9	13	8	14
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sexual partner	I approve the use of vasectomy as method* Of family planning		men should be primarily responsible for decision* making on family method to utilize		vasectomy is an effective form of FP**	
	Good attitude	Bad attitude	Good attitude	Bad attitude	Good attitude	Bad attitude
None	43	19	43	19	31	31
One	242	59	247	54	141	159
Multiple	12	10	14	8	8	14

* P-value <0.05

** P-value <0.0001

sexual partner vasectomy	I will carry out vasectomy**		men should be take part in FP*I is again my cultural belief to a man*		To practice vasectomy. religious belief		it is against my to a man to practice	
	Good attitude	Bad attitude	Good attitude	Bad attitude	Good attitude	Bad attitude	Good attitude	Bad attitude
None	22	40	44	18	40	22	40	22
One	111	190	241	65	147	154	157	144
Multiple	9	13	22	0	18	4	10	12

4.6. FACTORS INFLUENCING MEN'S LEVEL OF KNOWLEDGE TOWARDS VASECTOMY.

The odd ratio of vasectomy as a form of family planning method decreases with religion (Catholic OR= 0.450 ;95%CI= 0.090-0.920;P.value=<0.001, protestant OR=0.393, 95%CI=0.083-0.844,P.value<0.001) and academic attainment (None OR=0.150; 95%CI=0.070- 0.820 ; P.value=<0.001 , primary education OR=0.233; 95%CI=0.083-0.944 , P.value<0.001), the odd ratio of whether after a vasectomy would a man lose his sexual urge or desire for sexual activity increases with religion (Catholic OR= 3.710 ;95%CI= 1.810-4.209,P.value=0.021,Protestant OR= 5.393,95%CI= 4.415-84.493 P.value=<0.021) and low level of education None (OR=3.958 95%CI=4.760-24.858 P.value=0.033, primary education OR=2.061 95%CI= 3.167-56.861,P.value=0.004 and decreases with advanced level of education (secondary education OR=0.334, 95%CI= 0.165-0.962,P.value< 0.001, university level OR=0.234, 95%CI=0.265-0.862 ,P.value=< 0.001). On the other hand the odds indicating whether after a vasectomy would a man be able to impregnate his partner increases with number of sexual partner (1-3 OR= 2.916, 95%CI=1.091-5.154 , P.value=0.018), the odds of approving that sperm is ejaculated during sexual intercourse even after a vasectomy decreases with religion (Islam OR= 0.190,95%CI=0.045- 0.799 , P. value=0.036) and academic attainment (University OR=0.190 , 95%CI=0.075-0.565, P.value=0.002) the odds of reporting that vasectomy prevent sexually transmitted infection decreases with academic attainment (secondary level OR=0.456 ., 95%CI= 0.056-0.986,P.value=< 0.001 , university level OR=0.371, 95%CI=0.078-0.787, P.value=0.021)

Is vasectomy a form of family planning?

Table 4.24. Factors influencing men’s level of knowledge towards vasectomy

Variables	OR	OR(95%CI)	P-value
Religion			
Catholic	0.450	0.090- 0.920	<0.001
Protestant	0.393	0.083-0.844	<0.001
Academic attainment			
None	0.150	0.070- 0.820	<0.001
Primary education	0.233	0.083-0.944	<0.001

After a vasectomy would a man lose his sexual urge or desire for sexual activity?

Variables	OR	OR(95%CI)	P-value
Religion			
Catholic	3.710	1.810- 4.209	0.021
Protestant	5.393	4.415-8.493	<0.021
Academic attainment			
None	3.958	4.760-6.858	0.033
Primary education	2.061	3.167-5.861	0.004
Secondary education	0.334	0.165-0.862	< 0.001

University	0.234	0.265-0.962	< 0.011
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After a vasectomy would a man be able to impregnate his partner?

Variables	OR	OR(95%CI)	P-value
Sexual partner			
1-3	2.916	1.091-5.154	0.018

Sperm is ejaculated during sexual intercourse even after a vasectomy

Variables	OR	OR(95%CI)	P-value
Religion			
Islam	0.205	0.045- 0.799	0.036
Academic			
university	0.190	0.075-0.565	0.002

Vasectomy prevent sexually transmitted infection

Variables	OR	OR(95%CI)	P-value
Academic attainment			
Secondary education	0.456	0.056-0.986	< 0.001
University	0.371	0.078-0.787	0.021

4.7. FACTORS INFLUENCING MEN'S ATTITUDE TOWARDS VASECTOMY

The odd of reporting that vasectomy to any man is like castration and should not be done increases with low level of education (None OR=3.928, 95%CI=1.730-6.848,P.value=0.043), primary education OR=2.021, 95%CI=1.287-5.831,P.value=0.041), the odd approving the use of vasectomy as a method of family planning decreases with religion (Catholic OR=0.110, 95%CI=0.034-0.809,P.value=0.032) and protestant OR=0.222, 95%CI=0.015-0.986,P.value<0.021)) and increases with education (secondary OR=0.393, 95%CI=0.083-0.844,P.value<0.001) education OR=0.393, 95%CI=0.083-0.844,P.value<0.001), university OR=0.393, 95%CI=0.083-0.844,P.value<0.001) the odd of approving that men should be primarily responsible for decision making on family planning method to utilize increases with academic attainment(secondary OR=2.937, 95%CI=1.647-6.286 ,P.value < 0.011), (university level OR=3.456, 95%CI=2.242-8.445,P.value=0.014.The odd Men should be primarily responsible for decision making on family planning method to utilize increases with academic attainment (secondary education= OR=4.657, 95%CI=2.678-9.768, P.value=0.078 university OR=4.657, 95%CI=2.678-9.768, P.value=0.078)

The odds of accepting that vasectomy is an effective form of family planning increases with academic attainment (secondary education OR=4.137, 95%CI=2.647-8.586, P.value < 0.001), university OR=6.456, 95%CI=3.546-11.345, P.value=0.044).While the odds of accepting to carry out vasectomy decreases with religion (Catholic OR=0.451, 95%CI=0.02- 0.854, P.value=0.040) and increases with high education (university OR=5.138, 95%CI=2.460-7.558, P.value=0.045)

It was revealed that the odds of accepting that men should take part in family planning reduces with religion (Catholic OR=0.110, 95%CI=0.034- 0. 823, P.value=0.012), protestant OR=0.234, 95%CI=0.023-0.743, P.value=0.041) the odd of It is against my cultural belief for a man to practice vasectomy increases with number of sexual partner OR=5.676, 95%CI=2.414-9.456, P.value=0.016). The odd of It is again my religious belief for a man to practice vasectomy increases with religion (Catholic OR=2.714, 95%CI=1.610- 4.209, P.value=0.002, (Protestant OR=3.343, 95%CI=2.435-6.443, P.value 0.001)

Table 4.25. **Factors influencing men’s level of knowledge towards vasectomy**

Vasectomy to any man is castration and should not be done

Variables	OR	OR(95%CI)	P-value
None	3.928	1.730-6.848	0.043
Primary education	2.021	1.287-5.831	0.041

I approve the use of vasectomy as a method of family planning

Variables	OR	OR(95%CI)	P-value
Religion			
Catholic	0.110	0.034- 0.809	0.032
Protestant	0.222	0.015-0.986	0.021
Academic attainment			
Secondary education	2.937	1..657-7.869	< 0.001
university	4.657	2.678-9.768	0.078

Men should be primarily responsible for decision making on family planning method to utilize

Variables	OR	OR(95%CI)	P-value
Academic attainment			
Secondary education	2.137	1.647-6.286	< 0.011
University	3.456	2.242-8.445	0.014

Vasectomy is an effective form of family planning

Variables	OR	OR(95%CI)	P-value
Academic			
Secondary education	4.137	2.647-8.586	< 0.001
University	6.456	3.546-11.345	0.044

I will carry out vasectomy

Variables	OR	OR(95%CI)	P-value
Religion			
Catholic	0.451	0.02- 0.854	0.040
Academic attainment			

University	5.138	2.460-7.558	0.045
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Men should take part in family planning

Variables	OR	OR(95%CI)	P-value
Religion			
Catholic	0.110	0.034- 0. 823	0.012
Protestant	0.234	0.023-0.743	0.041

It is against my cultural belief for a man to practice vasectomy

Variables	OR	OR(95%CI)	P-value
Number of sexual partner			
Multiple	5.676	2.414-9.456	0.016

It is against my religious belief for a man to practice vasectomy

Variables	OR	OR(95%CI)	P-value
Religion			
Catholic	2.714	1.610- 4.209	0.002
Protestant	3.343	2.435-6.443	<0.001

CHAPTER.5. DISCUSSION OF RESULTS

Introduction

The study was conducted to determine the knowledge and attitude of men towards vasectomy in a selected District of the Eastern Province of Rwanda and this chapter described the discussion of social demographic data, general knowledge towards vasectomy, attitudes towards vasectomy and factors influencing the level of knowledge and attitudes towards vasectomy.

5.1. Socio demographic data

The study revealed that the majority of respondents' age was ranging from 31 to 39 years which was about to be similar with another study done by Owopetu et al (2014) where by the respondents was ranging from 31 to 40 years. Concerning with academic attainment, the majority (..) of respondents had primary education, in contrast with the same study by Owopetu et al, (2014) where the majority had at least Bachelor's degree because their study was oriented in the academic institution rather than in the community like this study. In addition, the study revealed that the majority of respondents were from the catholic religion at 42,31% which is different to the findings read from other studies done in other countries whose religion does not include massively the catholic and many of respondents were both farmers and cultivators at 54.6%, the farmers majority of responders was also reported in the study done in Nigeria by Olayinka et al(2013).This study also has revealed that average income per day for the majority of respondents earn less than one thousand Rwandan francs(68,2%). It was discovered that many of the respondents had between one to three children (64,1%) and the majority of men reported having one sex partner 78,46% while the ones with multiple partners are 5.6%.A significant association was revealed from academic attainment, religion and occupation whereby the findings retrieved that the level of knowledge increases as the respondents has a high level of education and vice versa, generally the religion was associated negatively with acceptance of vasectomy as a family planning and low level of knowledge was obtained mainly in catholic religion which is may be due to the fact that the majority of respondents were catholic. Negative attitudes was also noted in the farmers respondents who reported misconceptions, rumors and disinformation towards vasectomy and believe negatively that the family planning is a

only a responsibility of women, which indicate how much vasectomy is misunderstood in the community.

5.2. Knowledge of men towards vasectomy.

The findings of this study have shown that only 31,8% could know all male family planning methods including vasectomy, withdrawal and condom, while 15.6% could state vasectomy as the only method for men in birth control. It was noticed that almost all men have heard of vasectomy from somewhere and demonstrate prior knowledge of it whereby 98.7% reported to have understood vasectomy and 73% ensures that vasectomy is a permanent male family planning method. In line with the study done by Owopetu et al.(2014) whereby the majority of respondents have heard of vasectomy but contrarily to this study they demonstrated positive knowledge and attitude towards vasectomy than in this study.

With regard to the findings, most of participants reported to have mainly heard about vasectomy in health centers and Mass media (91,2% and 70,6% respectively), while only 9.9 % listened vasectomy in private clinics. In contrast with these findings, Nishtar et al. (2013) revealed that the knowledge about vasectomy among their study participants, was gotten from mainly relatives and friends. Which implies that a multidisciplinary team involving local leaders, religion institutions and community health workers could increase support of health care facilities and get involved altogether in sensitizing vasectomy a, more training on the vasectomy importance and male involvement in Family planning is needed to private health facilities who very few respondents reported to have understood vasectomy from them and local leaders to support the acceptance of vasectomy and remove all related fallacies because the respondents did not report to have understood vasectomy among local leaders.

Findings of the study, show that 58.4% of men responded by no when asked whether the sperm is ejaculated even after vasectomy, only the minority (36.4%) are aware on what may happen with ejaculation after vasectomy and this proves that men are afraid that they may not ejaculate after vasectomy which is in line with the findings of the study done by onasoga et al.(2013) whereby the majority 62.7% reported the same with regard to ejaculation after vasectomy.

Thus, this shows how much there is still a need to educate men about vasectomy information in general as it has been revealed that misconception and disinformation about vasectomy is the major challenge towards the adoption of vasectomy whereby men choose condom than vasectomy despite the huge number of children they have (Nishtar et al. 2013). On the other hand 30.6% of respondents misconceived that a man can lose sexual urge and desire after vasectomy and this shows that around one third of men fear vasectomy by wrongly thinking that it may worsen their sexual ability and this was revealed oppositely in the study done by Perri et al.(2016-).

The majority of respondents (60.3 %) approved that vasectomy may not cause prostate cancer while 27.3% misconceive that after vasectomy prostate cancer or any other genitalia related cancer may rise. The similar findings were retrieved from another dissertation done by Awie (2014) where by the misconception including cancer was also noted. The respondents of this study did not report prostate cancer by the majority.

When men were asked whether vasectomy may prevent sexually transmitted diseases the majority 82.6% demonstrated a clear knowledge that it is not true, another research proven that condoms are the only effective male to prevent sexually transmitted diseases (Szten,2015).

Although, men have different negative attitudes and misconceptions about vasectomy whereby more than half (56.9%) of respondents strongly agreed while others agreed that vasectomy is like castration for human beings. In line with the study by Kidzuga(2013) which demonstrates how men fear vasectomy and wrongly attributes many negative side effects. In contrast, a study by Kisa et al. (2017) had proven the safety of vasectomy as a family planning method .While combining those who strongly agree and the ones who agree that permanent family planning is only for women; 40.8% of men said that the permanent family planning methods should be done for women only, and this demonstrates how much the male involvement in family planning is still low and a great need for male involvement in FP is required. In this study 13,2% strongly agreed that men with vasectomy could be promiscuous while 22.2% agreed the same, and this also reveals that some men believe that they may develop some prostitution behaviour after vasectomy

5.3 Attitudes of men towards vasectomy

With this study the only (39.5%) agree the approval of vasectomy as a family planning methods while others responded otherwise as presented in the table 4.6, and such view demonstrated that another way of sensitization rather than existing ones should be done to teach vasectomy as a family planning methods. The results from the cross tabulation revealed data showing that the majority of men aged from 31 to 39 viewed vasectomy as castration p value $< 0,0001$, The same results has been obtained in the study done by ebeigbe et al.(2011).

This range of age reported that only females should use permanent family planning but on the other hand they are aware with good attitude that men should take part in family planning decision making while the majority of men with catholic religion have similarly demonstrated a very negative attitude towards vasectomy where they also include promiscuity as may be it increased by performing vasectomy, a significant association p value $< 0,0001$ indicating bad attitude towards vasectomy in general was noted in non-educated men, Farmers, people with less than one thousand Rwandan francs per day and regrettably the students which shows how much the need to incorporate vasectomy services lectures to the schools and in all public lectures from community may increase the knowledge towards vasectomy. All these are similar to the study done by onasoga et al.(2013) which also revealed negative attitudes of men towards vasectomy in Edo State from Nigeria. The findings of this study are contrally to the study done by Owopetu et al.(2014) which showed that men had adequate knowledge and attitude about vasectomy.

Furthermore the study findings revealed that ignorance ,cultural belief, and religious belief are highlighted to be influencing negatively the men to have vasectomy whereby 54.8%,51,7% and 30.1% focused on the above respectively whereby the odd of accepting to carry out vasectomy decreases with religion (Catholic OR=0.451, 95%CI=0.02- 0.854, P . value=0.040) and increase with high education level as found in some studies (Perry et al., 2016 and onasoga et al.2013). The odd of reporting that vasectomy to any man is castration and should not be done increases with low level of education (None OR=3.928, 95%CI=1.730-6.848, P .value=0.043), primary education OR=2.021, 95%CI=1.287-5.831, P .value=0.041)

The facilities and accessibility to reach where vasectomy is done also were negatively highlighted to influence on vasectomy acceptance at 37.7% and 39% respectively while on the other hand a study done by KIDZUGA (2013) revealed that providers lack capacities and training on vasectomy which may also limit the sensitization of the procedure

The findings of the study also report 12.5% of respondents strongly agreed that they can accept to carry out vasectomy and others said otherwise. Finally the findings of this study reported that the majority of men have negative attitude which is attributed to low knowledge, rumours and misconception with regard to vasectomy procedure. Another important finding of this study is that the cultural acceptance and ignorance were reported to be influencing negatively the knowledge and attitude about vasectomy. Another study found that the knowledge of vasectomy is increases as the men has a high level of education and positive associations were found between levels of education and attitudes towards vasectomy whereby it was revealed that the odd of reporting that vasectomy to any man is castration and should not be done increases with low level of education (None OR=3.928, 95%CI=1.730-6.848,P.value=0.043) which is in line with the study done by (Owopetu et al., 2014).

CHAPTER 6 CONCLUSION AND RECOMMENDATIONS

6.1 CONCLUSION

Similarly to many of the previous studies and articles reviewed in the literature of this study from other countries, this study has found that men in Rwamagana District has inadequate knowledge and negative attitudes towards vasectomy because the knowledge level was significantly revealed to be negatively associated with attitudes and socio-demographic characteristics of the majority of respondents whose many rumours ,misconceptions viewing vasectomy as a form of castration reducing general sexual ability and mostly preferring that the decision for family planning should be a female responsibility. The study disclosed that mainly ignorance, religion, culture and academic attainment are among the factors influencing the highlighted negative attitudes towards vasectomy and the research recommended the multidisciplinary collaboration and support to get rid of the highlighted factors influencing negatively the adoption of vasectomy and male involvement in long acting family planning methods.

6.2 RECOMMENDATIONS

To the Ministry of health

- 1) To organize many training programs to enhance the ability of all concerned health care providers towards the provision of vasectomy surgical procedures especially in remote health centers where accessibility to vasectomy services is not easy.
- 2) To Design a vibrant specific sensitization program for vasectomy and strengthen male involvement in long acting family planning methods related decision making.

To the Ministry of education

- 1) To incorporate long family planning methods especially vasectomy procedure information for male in the curriculum for other non-medical students from all levels.

To the University of Rwanda

- 1) To organize the outreach activities to sensitize and perform vasectomy procedures at community level.
- 2) To plan for further research towards knowledge and attitudes of men and women about vasectomy and generalize data to the country level to be able to improve male related sensitization strategies basing on evidence
- 3) Organize vasectomy related special trainings to equip medical and nursing students with related knowledge before graduation.

To Rwamagana District

- 1) To increase the sensitization programs on long acting family planning methods and enhance especially male involvement through vasectomy services and design effective health education, counseling and communication special strategies hindering men to positively understand vasectomy and get involved in family planning decision making.
- 2) To involve Mass Media, private sector, stakeholders and community health workers in sensitizing and carrying out vasectomy services throughout the District health facilities.
- 3) Decentralize the vasectomy services and facilities to remote health centers by training in service providers towards the provision of vasectomy procedure.
- 4) Organize special campaigns for vasectomy in collaboration with multidisciplinary teams.
- 5) There is a need to include some groups while sensitizing vasectomy among others non- educated people, farmers, people with many children and different religious institutions.

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APPENDICES/ANNEXES.

QUESTIONNAIRE ON THE KNOWLEDGE AND ATTITUDE OF MEN TOWARDS VASECTOMY SURGICAL PROCEDURE.

Tick in the box or fill in the gaps where appropriate, the best option that describes your response to the information required.

SECTION A. SOCIO-DEMOGRAPHIC CHARACTERISTICS.

1. Age.....
2. Religion: (a) catholic [] (b) Islam [] (c) protestant [] (d) others specify.....
3. Academic attainment (a) None [] (b) primary education [] (C) secondary education [] (d) University education []
4. Occupation : (a) Civil servant [] (b) Farmer [],(c) cultivator [] (d)student (e) None []
5. Average income per day:
6. Marital status:(a) Married [] (b) Single [],Divorced [] (d) widower[]
7. If married , for how long?.....
8. Nature of family (a) Monogamy [] (b) Polygamy []
9. Sexual partner (a) None [] (b) Single [] (c) Multiple []
10. Number of children.....

SECTION B: GENERAL KNOWLEDGE ON VASECTOMY.

11. What male family planning method do you know.....
12. Have you heard of vasectomy before? Yes [] No []
If no, please turn to question 21-31
13. Where did you first learn of vasectomy? Mass media [] Literature [] Friends/partner []
Hospital [] Health center [] private clinic [],Elsewhere specify.....
14. Is vasectomy a form of family planning method? Yes [] No []
15. If yes ,what form of family planning: Permanent [] Temporary []

16. After a vasectomy would a man lose his sexual urge or desire for sexual activity? Yes[]
No []
17. After a vasectomy would a man be able to impregnate his partner? Yes [] No []
18. Sperm is ejaculated during sexual intercourse even after a vasectomy? Yes [] No []
19. The tendency for prostate cancer increases with men who have had vasectomy Yes[]
No[]
20. Vasectomy prevents sexually transmitted infections ? Yes[] No[]

SECTION C: ATTITUDE TOWARDS VASECTOMY.

S/N	Questions	Strongly agree	Agree	Disagree	Strongly disagree
21.	Vasectomy to any man is castration and should not be done				
22.	Permanent sterilization should be only for females				
23.	Vasectomy make men more promiscuous				
24.	I approve the use of vasectomy as a method of family planning				
25.	Men should be primarily responsible for decision making on family planning method to utilize				
26.	Vasectomy is an effective form of family planning				
27.	I will carry out vasectomy				
28.	Men should take part in family planning				
29.	It is against my cultural belief for a man to practice vasectomy.				
30.	It is against my religious belief for a				

	man to practice vasectomy.				
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31. In your opinion what factors influence men's attitude towards vasectomy in your community?

- a. Attitude of family planning provider? Yes[] No[]
- b. Availability of facilities/equipment? Yes[] No[]
- c. Ignorance? Yes[] No[]
- d. Language barrier? Yes [] No[]
- e. Schedule of family planning clinics ?Yes[] No[]
- f. Effectiveness of family planning method? Yes[] No[]
- g. Accessibility of family planning services where vasectomy is done? Yes[] No[]
- h. Cultural acceptance? Yes[] No[]
- i. Cultural acceptance of family planning method?
- j. Low income because vasectomy is expensive ? Yes[] No[]

THANK YOU.

**IFISHI Y'UBUSHAKASHATSI K'UBUMENYI N'IMYITWARIRE BY'ABAGABO
KURI GAHUNDA YA "VASECTOMY".**

Shyira ikimenyetso cy'ubushakashatsi cyaweho ku makuru asabwa.

ICYICIRO CYA 1. UMWIRONDORO.

1. Imyaka:
2. Idini : (a) Gatolika []; (b) Islam []; (c) Isilamu []; (d)Protesitanti [], andi madini sobanura.....
3. Urwego rw'amashuri wize: a) Ntayo [], amashuri abanza [], b) amashuri yisumbuye [], c) kaminuza []
4. Umurimo ukora: a) Umukozi wa leta [], b) Umuhinzi [], c) Umucuruzi [], d) umworozi [], e) umunyeshuli [], e) ibindi sobanura:.....
5. Impuzandengo y'amafaranga winjiza kumunsi:.....
6. Irangamimerere: a) arubatse [], b) Ingaragu [], c) yatanye nuwo bashakanye [], d) umupfakazi []
7. Niba wubatse hashize igihe kinganiki?.....
8. Imiterere y'umuryango: a) ubana n' umugore umwe [], b) ubana n' abagore benshi []
9. Umubare wabantu mukorana imibonano mpuzabitsina: a) Ntabo [], b) one [], c) benshi []
10. Umubare w'abana:.....
.....

**ICYICIRO CYA 2: UBUMENYI RUSANGE BW'ABAGABO KURI GAHUNDA
YA "VASECTOMY".**

11. Ni ubuhe buryo bwo kuboneza urubyaro ku bagabo uzi?.....
12. Wigeze wumva uburyo bwo kuboneza urubyaro burundu ku bagabo "Vasectomy"? a) yes[],No[]
13. Nihe wigiye bwa mbere ibijyanye no gufunga burundu abagabo nka bumwe muburyo bwo kuboneza urubyaro? a)kumbuga nkoranyambaga [],b)mu binyamakuru n'ibitabo[],c)mu nshuti[],d) ku bitaro[] e)ku kigo nderabuzima[],f) ku ivuriro ryigenga[],g) ahandi sobanura:.....
14. Ese "vasectomy" kubagabo ni bumwe muburyo bwo kuboneza urubyaro? A)yes[],No[]
15. Niba aribyo, nubuhe buryo bwo kuboneza urubyaro? A)uburyo bwa burundu? [],b)uburyo bw'agateganyo[]
16. Ese Nyuma yo gufunga imiyoborantanga (vasectomy), umugabo atakaza ubushobozi muby'imibonano mpuzabitsina, cg ubushake bukagabanuka? A) yes[],b)No[]
17. Ese Nyuma yo gufunga imiyoborantanga umugabo yabasha gutera inda uwo bakoranye imibonano mpuzabitsina? A)yes [],No[]
18. Mugihe cy'imibonano mpuzabitsina umugabo akomeza gusohora ndetse na nyuma yo gufunga burundu imiyoborantanga? A)Yes[] b) No[]
19. Kanseri ya" prostate" ishobora kwiyongera kubagabo bakoresheje "vasectomy"?a)yes[],b)No[]
20. Gufunga burundu imiyoborantanga birinda indwara zandurira mumibonano mpuzabitsina? A)yes[],b)No[]

**ICYICIRO CYA 3. IMYITWARIRE Y'ABAGABO KURI GAHUNDA YO KUBONEZA
URUBYARO MUBURO BWA BURUNDU "VASECTOMY".**

No	IBIBAZO	NDABYEMEYE CYANE	NDABYEME YE	SIMBYEMER A	NDABIHAKANY E CYANE
21	Gufunga burundu umugabo uwariwewe ni nko gukona				
22	Kuboneza urubyaro muburyo bwa burundu byagombye kuba ibyabagore				
23	Kuboneza urubyaro muburyo bwa burundu ku bagabo"vasectomy" bibatera kwiyandarika mubagore benshi				
24	Ndemeza ko "vasectomy" ari uburyo bwo				

	kuboneza urubyaro				
25	Umugabo yagombye gufata iyambere mu guhitamo uburyo buboneye bwo kuboneza urubyaro				
26	“Vasectomy” ku bagabo ni uburyo buboneye bwo kuboneza urubyaro				
27	Nzifungisha burundu mboneze urubyaro				
28	Abagabo bagombye kugira uruhare mukuboneza urubyaro				
29	Binyuranyije nimyemerere y’umuco wanjye gukoresha “vasectomy”				

30	Binyuranyije nimyemerere y'idini ryanjye gukora “vasectomy”mu kuboneza urubyaro				
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**31.UKURIKIJE IBITEKEREZO BYAWE NI IKI GITUMA ABAGABO
BATITABIRA KUBONEZA URUBYARO BAKORESHEJE “VASECTOMY”?**

- a. Imyitwarire y’abashinzwe kuboneza urubyaro? a)Yes[],b)No[]
- b. Kuba hari ubushobozi nibikoresho? a)Yes[],b)No[]
- c. Ubutamenya a)Yes[],b)No[]
- d. Imbogamizi mubijyanye n’indimi a)Yes[],b)No[]
- e. Ingengabihe za gahunda zo kuboneza urubyaro a)Yes[],b)No[]
- f. Ugukoraneza kwa gahunda yo kuboneza urubyaro”vasectomy”? a)Yes[],b)No[]
- g. Kuba kugera aho servisi za “vasectomy” zikorera byoroshye a)Yes[],b)No[]
- h. Imyemerere y’umuco? a)Yes[],b)No[]
- i. Ubushobozi buke kuko gukoresha vasectomy bihenze a)Yes[],b)No[].

MURAKOZE

CONSENT FORM FOR PARTICIPATION IN A RESEARCH STUDY

**Title of Study: Knowledge and attitude towards vasectomy among men in a selected
District of the Eastern province, Rwanda**

Description of the research and your participation

You are invited to participate in a research study conducted by **Mr. NTAKIRUTIMANA Christian**. The purpose of this research is to determine the knowledge and attitude of men towards vasectomy in a Selected District of the Eastern Province, Rwanda. Your participation will involve only giving information by answering questions highlighted on the questionnaire with the researcher's guidance.

Risks and discomforts: There are no risks associated with this research.

Potential benefits

There are no known individual participant benefits to you that would result from your participation in this research. This research may help us to determine the knowledge and attitudes of men towards vasectomy and come up with possible solutions to deal with the obtained findings.

Protection of confidentiality

We will do everything we can to protect your privacy and your identity will not be revealed in any publication resulting from this study.

Voluntary participation

Your participation in this research study is voluntary. You may choose not to participate and you may withdraw your consent to participate at any time. You will not be penalized in any way should you decide not to participate or to withdraw from this study.

Contact information

If you have any questions or concerns about this study or if any problems arise, please contact **Mr. NTAKIRUTIMANA Christian** on Tel No: +250788515358 or Email:ntakiru7christian@yahoo.fr

Consent

I have read this consent form and have been given the opportunity to ask questions. I give my consent to participate in this study.

Participant's signature _____ Date: _____

A copy of this consent form should be given to you.

CMHS INSTITUTIONAL REVIEW BOARD (IRB)

Kigali, 16/01/2017
Ref: CMHS/IRB/109/2017

NTAKIRUTIMANA Christian
School of Nursing and Midwifery, CMHS, UR

Dear NTAKIRUTIMANA Christian

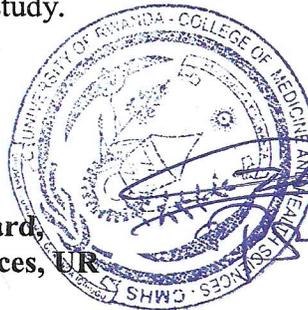
RE: ETHICAL CLEARANCE

Reference is made to your application for ethical clearance for the study entitled "*Knowledge and attitude towards vasectomy among men in a selected District of the Eastern Province, Rwanda*".

Having reviewed your protocol and found it satisfying the ethical requirements, your study is hereby granted ethical clearance. The ethical clearance is valid for one year starting from the date it is issued and shall be renewed on request. You will be required to submit the progress report and any major changes made in the proposal during the implementation stage. In addition, at the end, the IRB shall need to be given the final report of your study.

We wish you success in this important study.

For Professor Kato J. NJUNWA
Chairperson Institutional Review Board,
College of Medicine and Health Sciences, UR



J.B. Gashuku
IRB Vice-Chair

Cc:

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

SCHOOL OF NURSING AND MIDWIFERY

Kigali, on 30 / 01 / 2017

Ref. No: 64 / UR-CMHS/SonM/17

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

Re: Request to collect data

Referring to the above subject, I am requesting for permission for Christian NTAKIRUTIMANA, a final year student in the Masters of Science in Nursing at the University of Rwanda/College of Medicine and Health Science to collect data for his research dissertation entitled "Knowledge and Attitudes of men towards vasectomy among men in a selected District of the Eastern Province, Rwanda".

This exercise that is going to take a period of 2 months starting from 13th February 2017 to 12th April 2017 will be conducted in Rwamagana District of the Eastern Province, Rwanda.

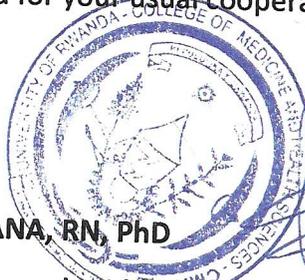
We are looking forward for your usual cooperation.

Sincerely,

 **Dr. Donatilla MUKAMANA, RN, PhD**

Dean, School of Nursing and Midwifery

College of Medicine and Health Sciences



REPUBLIC OF RWANDA

Rwamagana 7.13/2017
N°..923/05.01/15



**EASTERN PROVINCE
RWAMAGANA DISTRICT
B.P: 24 RWAMAGANA**

Dear NTAKIRUTIMANA Christian, RN

RE: Permission to conduct the research in Rwamagana District

Dear,

Reference is made to your letter 'Requesting for Permission to conduct the research in Rwamagana District on Knowledge and attitudes of men towards vasectomy in a selected District of Eastern Province, Rwanda,' to fulfill your study in master of sciences in perioperative care track. Your request is accepted, you will be required to conduct your research working hand in hand with our population after contacting the local leaders.

We wish you success in this important study.

A handwritten signature in blue ink, appearing to read 'Mbonyumuvunyi Radjab'.

**MBONYUMUVUNYI Radjab
Mayor of Rwamagana District**

