

**Knowledge And Acceptability Of Vasectomy Among Men in Passo, A Suburban  
Community in Gwagwalada, Abuja, Nigeria**

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**Abstract**

**N**igeria, with a population of 213.4 million people, is a sub-Saharan African country with low prevalence of Vasectomy even with the efficiency and low cost of the procedure. The objectives of this study were to assess the knowledge, acceptability and barriers to low prevalence of vasectomy among men of Passo, a suburban community, Gwagwalada, Abuja and also further bridge the gap on the understudied knowledge on vasectomy, causes of low prevalence of vasectomy and acceptability of vasectomy in people living in suburban communities in federal capital territory. This study was a cross-sectional descriptive survey on 150 men of reproductive age 18 years and above in Passo, sub-urban community, Gwagwalada, Abuja, using self-administered closed-ended questionnaire. With the safety and low cost of vasectomy, men still have fears about vasectomy and its efficiency and safety. Meanwhile, Education level, and Age has a significant role in knowledge of vasectomy, while Education level and Religion was a significant contributing factor to the knowledge of contraceptive/family planning. Ethnicity and Tradition did not have an impact on the use and acceptability of vasectomy though fear and inappropriate knowledge and religion remain the leading barriers to the use of vasectomy as a permanent method of family planning. With this, the burden is upon us to take the appropriate measures so as to reduce the burden of the side effects of contraceptive use among the female population by encouraging men to seek for vasectomy after achieving their family size.

**Keywords:** Vasectomy, Acceptability, Knowledge, Contraception, Family Planning

## INTRODUCTION

### Background of study

Vasectomy is a minor surgery that blocks the sperm from having contact with semen that is ejaculated from the phallus (penis). This is a type of permanent male contraceptive method used for family planning. Currently, there are two types; **Conventional and No-Scalpel vasectomy**.

It is a cheap, safe and almost non recordable side effects. However, its global prevalence remains very low. Globally, an estimated number of **33 million** of married women ages 15 to 49 (less than 3%) depend on their partner's vasectomy for contraception. In USA, one in eight married men reported having vasectomies. In the Africa, only less than **1%** of married women rely on their partners vasectomy. Even at that, according to engender Health, only a few of sub-Saharan African countries have vasectomy services: Zimbabwe, Uganda, Tanzania, South Africa, Rwanda, Namibia, Ethiopia, Ghana, Kenya and Republic of Congo. In Nigeria, the incidence is known and the procedure is unpopular. Studies before now shows that in Jos only 10 was over a period of 16 years. However, vasectomy is wrongly interpreted with castration and also with loss of libido, erection, vitality etc

## METHODOLOGY

### 1.1 Description of Study Area

Passo is one of the communities in Gwagwalada Area Council, Federal Capital Territory, Abuja. It is located approximately 6.6 kilometers south of University of Abuja Teaching Hospital. Its meridian course is roughly  $7^{\circ}00'00.00^{\circ}E$  of Gwagwalada. The population of the study area is heterogenous in nature which comprises the indigenous inhabitants; Gbagyi, Nupe, Igala, Igbo, Idoma, Yoruba, Hausa, Tiv etc.

The occupation of the indigenous community are majorly farmers who produce crops as a major source of livelihood, they also engage in animal rearing and petty trading. However, the community also serves as residential settlement for students of University of Abuja, civil servants and also traders. The religion practiced by the community is predominantly Christian, followed by Islam and Traditional religion. This population comprises majorly of youths.

The community falls in within the Savanna Zone. The dry season starts from October and lasts up to April. The wet season on the other hand begins in April and lasts up to September or October. The harmattan, a dry, cold and fairly dusty wind is experienced between November and February. Heat is more severe in March and April. However, the weather has been predominantly cold in the morning and hot in the afternoon, especially during the peak of harmattan period.

### 1.2 STUDY DESIGN

A descriptive cross-sectional study

### 1.3 STUDY POPULATION

The study population comprises of men aged 18 years and above in Passo village, Gwagwalada, Abuja.

### 1.4 INCLUSION CRITERIA

Men 18 years and older who consented and present during data collection

### 1.5 EXCLUSION CRITERIA

Male who has not attained 18 years of age and extreme aged men of greater than 70 years

### 1.6 SAMPLE SIZE DETERMINATION

The referred sample size was determine using the formula for descriptive cross-sectional study design.

$$N = \frac{Z^2 PQ}{d^2}$$

N = Minimum sample size desired

Z = Standard Normal Deviate with corresponding Z value at a level of 0.05 = 1.96

P = Proportion of factor under study i.e., proportion with the knowledge they have and will not accept it was seen from the previous study to be 89% (0.89). (3)

Q = Complimentary probability of factor under study (1-P) = 1-0.89 = 0.11

d = Tolerable alpha error or level of precision = 5% = 0.05

Therefore;

$$\begin{aligned} N &= \frac{(1.96)^2(0.89 \times 0.11)}{0.05^2} \\ &= 150.44 \end{aligned}$$

Allowing for 95% response rate, the minimum size(ns) was given as; ns = n/0.95

$$ns = 150.44/0.95$$

$$ns = 158.$$

### **1.7 SAMPLING TECHNIQUE**

The study participants were selected using a multistage sampling technique. A multistage sampling technique is a technique where one draws a sample from a population using smaller and smaller groups at each stage and for the purpose of this study, this included; Simple random sampling technique for selecting districts in the region and in the second stage, men who met the inclusive criteria and consented during the study were selected and questionnaire was administered until the sample size was completed.

### **1.8 DATA COLLECTION TOOLS AND TECHNIQUES**

Instrument for Data Collection

Field data was collected using a questionnaire with closed and open-ended questions. The questions are in three sections;

Section A: contains questions on respondent's socio-demographic characteristics.

Section B: contains knowledge a of respondent on family planning/contraceptive and type of contraceptive in use

Section C: contains questions on the knowledge and acceptability of vasectomy.

### **1.9 METHOD OF DATE COLLECTION**

face to face interviewer administered questionnaire.

### **2.1 PLAN FOR DATA MANAGEMENT**

Grading of characteristics and frequency of factors contributing to low prevalence of vasectomy. and analyzed using the statistical package for social sciences (SPSS) Version 21.0 (IBM, Armonk, NY, United States of America).

### **2.2 PLAN FOR DATA ANALYSIS**

Data cleaning involved manually checking for completeness and errors, followed by data input on IBM®SPSS version 21. Exploratory data analysis will be done to further identify errors. The exploratory will involve running descriptive statistics of all variables and use of graphs like histogram and box plots to identify odd values, missing values and outliers.

### **2.3 DATA ANALYSIS**

Frequency of socio-demographics, graded knowledge scores will be reported.

### **2.4 ETHICAL CONSIDERATION**

Ethical approval was obtained from the University of Abuja Teaching Hospital Health Ethics Committee. Even at that, respondents informed consent was also obtained before questionnaire was administered. All information concerning participants was handled with highest confidentiality.

## RESULTS

### 2.5 Socio-Demographic Characteristics

A total of 150 men participated in the study. The age range was 18 years to 51 years and above. With mean age of  $32.64 \pm 4.2$ (SD) years and majority 78 (52%) were between 18 to 30 years old. 85 (56.7%) were single, 60 (40%) were married, 3 (2%) were divorced, 2(1.3) were widowed. The majority 67 (44.7%) were of other tribes apart from Hausa 27 (18%), Igbo 22 (14.7%), Yoruba 22 (14.7%), and Gbagyi 12 (8.0%). On the educational status, 79 (52.7%) were men who attained tertiary level of education, 58 (38.7%) had only secondary qualification, 10 (6.7%) attained only primary level of education and 3 (2%) never attended school. 73 (48.7%) were self-employed, 31 (20%) were students, 23 (15.3) were formally working and fully employed, 17 (11.3) were unemployed and 6 (4.0%) were formally employed and working part time. 105 (70%) were Christians, 41 (27.3) were Muslims and 4 (2.7) practice Traditional religion.

**Table 1: Socio-Demographic Characteristics of the respondents**

<b>Variables</b>	<b>Total (150)</b>
<b>Age (Years)</b>	
18 – 30	78 (52.0%)
31 – 50	57 (38.0%)
51 – above	15 (10.0%)
<b>Marital status</b>	
Single	85 (56.7%)
Married	60 (40.0%)
Divorced	3 (2.0%)
Widowed	2 (1.3%)
<b>Number of Wives</b>	
One	54 (36.0%)
Two	7 (4.7%)
Three and above	3 (2.0%)
<b>Number of Children</b>	
One to Three	39 (26.0%)
Four to Six	24 (16.0%)
Seven and above	3 (2.0%)
<b>Religion</b>	
Christian	105 (70.0%)
Islam	41 (27.3%)
Traditional	4 (2.7%)

<b>Level of Education</b>	
None	3 (2.0%)
Primary	10 (6.6%)
Secondary	58 (38.7%)
Tertiary	79 (52.7%)
<b>Employment Status</b>	
Student	31 (20.7%)
Self-employed	73 (48.7%)
Formally employed and working part time	6 (4.0%)
Formally employed and working full time	23 (15.3%)
Unemployed	17 (11.3%)
<b>Ethnicity</b>	
Igbo	22 (14.7%)
Hausa	27 (18.0%)
Yoruba	22 (14.7%)
Gbagyi	12 (8.0%)
Others	67 (44.7%)

## 2.6 METHODS OF CONTRACEPTIVE/FAMILY PLANNING

150 men of reproductive age 18 years above participated in the study, and 131 (87.0%) of men agreed that they have heard about contraceptives while 19 (12.7%) responded that they have not heard about family planning/contraceptives. However, among 131 men who responded that they have heard about contraceptive/family planning, 72 (48.0%) are using male condom, 19 (12.7%) are using withdrawal method, 21 (14.0%) responded that their female partner is using contraceptive, 16 (10.7%) of men responded that they are sexually not active. However, some men who have knowledge on contraceptive/family planning and also men who does not have knowledge on contraceptive/family planning are using no method were 10 (6.7%).

**Table 2: Methods of Contraceptive/Family Planning**

<b>Variables</b>	<b>Total</b>
Those that have heard about family planning	131 (87.3%)
Those that have not heard about family planning	19 (12.7%)
<b>Type of contraceptive used by respondents</b>	
Male Condom	72 (48.0%)
Withdrawal Method	19 (12.7%)
Partners uses contraceptive	21 (14.0%)
Abstinence	16 (10.7%)
Others	10 (6.7%)

**2.7 KNOWLEDGE OF VASECTOMY**

150 men participated in the study and 50 (33.3%) responded that they have heard about vasectomy, 100 (66.7%) responded that they have not heard about vasectomy. Among those who have heard about vasectomy, 24 (16.0%) responded that it is a permanent contraception, 11 (7.3%) responded that they don't know what it is. 15 (10.0%) believed it is castration, while 1 (0.7%) responded as others.

**Table 3: Knowledge of Vasectomy**

<b>Variables</b>	<b>Total</b>
Those that have heard	50 (33.3%)
Those that have not heard	100 (66.7%)
Permanent contraceptive	24 (16.0%)
No idea	11 (7.3%)
Castration	15 (10.0%)
Others	1 (0.7%)

**2.8 ACCEPTABILITY OF VASECTOMY**

8 (5.3%) of men responded that they will prefer vasectomy as an option for family planning, while 142(94.7%) responded that they will not accept vasectomy as an option for family planning.

**Table 4: Acceptability of Vasectomy**

<b>Variable</b>	<b>Total</b>
Prefer vasectomy	8 (5.3%)
Will not accept vasectomy	142 (94.7%)

**4.4 BARRIERS OF VASECTOMY**

Among those who accepted vasectomy, 7 (4.7%) responded that it is preferable while 1 (0.7%) was because it is safe and cheap, 1 (0.7%) responded because of other reasons. Among those who responded they will not use vasectomy, 72 (48.0%) is because it is not safe, 36 (24.0%) is due to religion belief, 9 (6.0%) is because family planning is for women, 8 (5.3%) is because of traditional belief while 16 (10.7%) responded as other factors such as personnel reasons, uncertain reasons etc.

**Table 5: Barriers of Vasectomy**

Variables	Total
Vasectomy is not safe	72 (48.0%)
Religion	36 (24.0%)
Family planning is for women	9 (6.0%)
Tradition	8 (5.3%)
Other reasons	16 (10.7%)

**Association between knowledge of Vasectomy and Socio-Demographic variable**

Variables	Knowledge		Chi Square	P value
	Yes	No		
No. of Children			3.745	0.154
1 – 3	5	34		
4 – 6	0	24		
7 – and above	0	3		
Employment Status			0.472	0.976
Student	2	29		
Informally Employed/Self employed	4	69		
formally employed and working part time	0	6		
formally employed and working full time	1	22		
Unemployed	1	16		
Number of wives			1.004	0.605
1	5	49		
2	0	7		
3 and above	0	3		
Age			<b>13.978</b>	<b>0.007</b>
18 – 30	16	62		
31 – 50	25	30		
51 and above	6	8		
Marital Status			5.749	0.125
Single	22	63		
Married/Cohabiting	25	35		
Divorced/Separated	2	1		
Widowed	1	1		
Level of Education			<b>19.848</b>	<b>0.001</b>
None	0	3		
Primary	1	9		
Secondary	10	48		
Tertiary	39	40		



The analysis from the table showed that there is a significance association between level of education and also age on the knowledge of vasectomy

**Association between Accepting Vasectomy Procedure and Socio -Demographic Variable**

Variables	Knowledge		Chi Square	P value
	Yes	No		
<b>Employment status</b>			5.995	0.424
Student	2	28		
Informally Employed/Self employed	4	69		
formally employed and working part time	0	6		
formally employed and working full time	1	22		
Unemployed	0	14		
<b>Marital Status</b>			0.559	0.906
Single	4	81		
Married/Cohabiting	4	56		
Divorced/Separated	0	3		
Widowed	0	2		
<b>Level of education</b>			4.176	0.243
None	0	3		
Primary	0	10		
Secondary	1	57		
Tertiary	7	72		
<b>Religion</b>			1.275	0.866
Christian	7	98		
Islam	1	40		
<b>Age</b>			2.522	0.283
18 – 30	3	75		
31- 50	5	52		
51 and above	0	15		

From the table above, there is no significant association between social demographic variables and willingness of the men in Passo to accept vasectomy as a form of permanent family planning

**Association between knowledge of Contraceptive/Family planning and Socio-Demographic Variable**

Variables	Knowledge		Chi Square	P value
	Yes	No		
<b>Age</b>			<b>4.924</b>	<b>0.085</b>
18 - 30	64	14		
31 - 50	52	5		
>51	15	0		
<b>Religion</b>			<b>7.266</b>	<b>0.026</b>
Christian	96	9		
Islam	31	10		
Traditional Religion	4	0		
<b>Marital Status</b>			<b>1.641</b>	<b>0.650</b>
Single	72	13		
Married/Cohabiting	54	6		
Divorced/Separated	3	0		
Widowed	2	0		
<b>Level of Education</b>			<b>13.918</b>	<b>0.003</b>
None	1	2		
Primary	7	3		
Secondary	49	9		
Tertiary	74	5		

From the table above, there is a significance role of religion and level of education on knowledge of contraception/family planning.

## DISCUSSION

### 3.1 Knowledge of Vasectomy

Following analysis of the knowledge questions, 50 (33.3%) of participants showed that they have heard about vasectomy, while 100 (67.7%) have never heard of vasectomy. Among those who have heard of vasectomy, 24 (16.0%) knows that vasectomy is a permanent contraception while the remaining 27 (18.0%) have a wrong knowledge of vasectomy (castration, no idea and others). Meanwhile on chi square test, **Age and Level of Education** showed a significant role on knowledge about vasectomy. This compares favorably with a study done in Enugu, Nigeria by Nwobodo et al in 2017 which shows that majority of men who participated in the study had a poor knowledge of vasectomy.<sup>16</sup> Similarly, another study was done in Eswatini Kingdom in 2019 which shows participants having poor knowledge of vasectomy.<sup>17</sup> However, **Religion and Level of Education** on Chi square test showed a positive significant on knowledge about family planning/contraceptive

### 3.2 Barriers to low prevalence of Vasectomy

Although knowledge level of vasectomy was very low, 8 (5.3%), the major barrier according to this study, shows that fear 72 (48.0%) and religion 36 (24.0%)

are the major factors contributing to low prevalence of vasectomy. Other factors include; some men with the understanding that family planning is meant for women 9 (6.7%), 8 (5.3%) due to tradition and personal factors 16 (10.7%). This supports the study that was done in Eswatini in 2019, which shows that societal norms, cultural beliefs and misconception about vasectomy were the leading cause of low prevalence of vasectomy.<sup>17</sup> In a similar study that was done in Nigeria that involved Resident Doctors attending a national update course in Obstetrics and Gynecology in 2011 showed that socio-cultural (21.3%), religious (13.1%) and psychological (41.0%), 24.6% had no specific reasons were the leading cause of barriers to acceptance of vasectomy among married men.<sup>18</sup> In another study conducted in Tanzania showed that misunderstandings about vasectomy, including a fear of decreased sexual performance were major barriers to acceptance of vasectomy.<sup>19</sup>

### 3.3 ACCEPTABILITY OF VASECTOMY

At the end of the analysis, 8 (5.3%) of participant accepted vasectomy as a means of family planning while 142 (94.7%) of participants did not accept vasectomy. This showed a very low acceptability within the inhabitants of Passo community, in Gwagwalada, Abuja. A similar study was done in University of Nigeria Teaching Hospital, Enugu, Nigeria by H. Ezegwui et al in 2009

which shows 10 (6.8%) may accept vasectomy with the knowledge they have while 130 (89.0%) will not.<sup>20</sup> In University college, Ibadan, M. Okunlola et al in 2009 conducted a study which revealed that 145 (58.0%) of the respondents were unwilling to accept sterilization as a contraceptive procedure while 48 (19.2%) were willing to accept it and the remaining respondents 57 (22.8%) were uncertain.<sup>21</sup>

## CONCLUSION

With the safety and low cost of vasectomy, men still have fear about vasectomy and its efficiency and safeness. Meanwhile, Education level, and Age has a significant role in knowledge of vasectomy while Education level and Religion has a significant role in knowledge of contraceptive/family. Ethnicity and Tradition did not have an impact on the use and acceptability of vasectomy though fear and inappropriate knowledge remain the leading barriers to the use of vasectomy as a permanent method of family planning within this population. With this, the burden is upon us to take the appropriate measures so as to reduce the burden of the side effects of contraceptive use among the female population by encouraging married men to sought for vasectomy after achieving their family size.

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