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Knowledge and perception of vasectomy among male staffs of Novena University Ogume Delta State Nigeria

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Abstract
Background: *Vasectomy is a simple effective and safe surgical procedure for permanent male fertility control. However, high acceptance rates of vasectomy have been reported in developed countries, while low acceptance rates have been reported in developing countries like Nigeria.*
Objective: *This study was designed to investigate the knowledge and perception of vasectomy among male staffs of Novena University Ogume, Delta State Nigeria.*
Methods: *A cross-sectional study was conducted among 151 purposively selected male staffs of Novena University, Ogume. A semi-structured questionnaire was self-administered to obtain information on respondents' socio-demographic characteristics, level of knowledge of vasectomy, perception and attitude towards vasectomy. Descriptive statistics, Chi-square test were used to analyse the data with level of significance set at 0.05.*
Results: *The results show that the mean age of the respondents was 36.99±11.08 years. The overall level of knowledge show that 57% of the respondents had good knowledge of vasectomy, while 58.30% demonstrated poor perception towards vasectomy and 57% exhibited poor attitude towards vasectomy. Furthermore, there was no significant difference between the knowledge of the respondents and their perception and attitude towards vasectomy respectively (P<0.05).*
Conclusion: *In conclusion, though the respondents had knowledge of vasectomy, it did not translate into perception and attitude towards vasectomy. Therefore, health education programs that include incorporating the factors that influences acceptance of vasectomy should be addressed to improve the level of acceptance among males.*
Keywords: *Knowledge, Perception, Attitude, Vasectomy, Male staffs*

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I. Introduction

Vasectomy is a simple effective and safe surgical procedure for permanent male fertility control. The procedure which simply interrupts the delivery of sperm has no effect on either the production of male sex hormones (mainly testosterone) or their secretion into the bloodstream. [1] Thus, sexual desire (libido) and the ability to have an erection and orgasm with ejaculation are not affected. Vasectomy is one of the few fertility control methods that enable men to take personal responsibility for contraception. [2] Vasectomy remains an important option for contraception and over 500,000 vasectomy procedures are reported done each year in the United States of America. [3] According to the Population Reference Bureau (PRB) family planning worldwide report; [4] vasectomy made up only 7% of all modern contraceptive use worldwide. Furthermore, studies have shown high acceptance rates of vasectomy in developed countries like the USA and Australia; [5,6] while vasectomy prevalence is low in most developing countries especially in Asia and Africa, where it rarely exceeds 0.1%. [7] For instance a study conducted in India among rural men shows that 82.7% of the study population had heard about vasectomy. But, only about 22% were ready to accept vasectomy as a contraceptive method. In addition, of the total married men in the study, only one man had undergone vasectomy procedure. Of the men who were married and not undergone any permanent method of contraception, only few men were willing to accept vasectomy as a method in future. [8]

In Nigeria, family planning services including the permanent methods have been almost directed at women exclusively with little attention paid to men which has resulted in negative attitudes to permanent family planning methods among men. For instance, a Nigerian study found that only a small percentage of men reported even considering undergoing vasectomy. [9] Furthermore, according to the Nigerian Demographic Health Survey 2013, 26.90% of all men interviewed in Nigeria have knowledge of male sterilization as a type of family planning and 30.40% of currently married men have knowledge of male sterilisation as a type of family planning. This is also similar to a report in Ethiopia which reported low knowledge on permanent contraceptive

methods, particularly vasectomy. [10] In the same vein, the perception of men towards vasectomy in some African countries has been found to be low. [11] Similarly, while family planning services have mainly targeted women over the past decades, thus there is a growing recognition that reproductive health is the joint responsibility of men and women and as such both should be adequately involved and targeted in its services; given that men often have significant influences on the choice of a couple's contraceptive use. [12] Therefore this study was designed to investigate the knowledge and perception of vasectomy among male staffs of Novena University Ogume, Delta State Nigeria.

II. Material and Methods

2.1 Study design

The study utilised a descriptive cross-sectional design.

2.2 Study Area

The study was carried out in Novena University, Amai which is the first private University in Delta State. The University runs a multi-campus system. Its main campus is situated at Ogume while the take off site is at Amai. Academic activities take place in three colleges which includes; Natural and Applied Sciences, Management and Social Sciences and Health Sciences.

The University has an estimated total of 400 staffs.

2.3 Study Population

The study population consists of the male staffs both academic and non-academic in Novena University Ogume, Delta State.

2.4 Sample size

The sample size consists of all male staffs of Novena University Ogume, Delta State. Thus the total sample size was estimated to be over 151 males.

2.5 Sampling Procedure

Purposive sampling technique was used to collect the data after obtaining consent from the participants. In total only 151 males agreed to be part of the study.

2.6 Method and instrument for data collection

The instrument for data collection was a semi-structured questionnaire. The questionnaire was distributed to male participants on the day of data collection in all departments of the University and the filled questionnaire was retrieved immediately.

2.7 Data analysis

The retrieved questionnaire was analysed with Statistical Product and Service Solutions version 17.0. Descriptive statistics was used for frequency count, while test for hypothesis such as Chi-square test was used to test for associations between knowledge of the respondents of vasectomy and their perception and attitude towards vasectomy.

2.8 Ethical Consideration

Ethical clearance for the study was sought from the university's ethical management board and informed consent was obtained from all the study participants.

III. Results

As shown in table 1 below, more than half of the respondents 88(58.30%) were between the ages of 30-49 years old, while 40(26.50%) were between the ages of 10-29 years old. Furthermore, more of the respondents were lecturers 48(31.80%), while 29(19.20%) were clerk and 26(17.20%) were cleaners. In addition, more than half 88(58.30%) educational status was tertiary education while 81(53.60%) were married and majority 117(77.50%) had between 0-4 children.

Table 1: Socio-demographic characteristics of the respondents

Variable	Frequency (n=151)	Percentage
Age		
10-29	40	26.50
30-49	88	58.30
50-69	23	15.20
Position in the University		
Lecturer	48	31.80
Clerk	29	19.20
Cashier	20	13.20
Cleaner	26	17.20
Security Man	10	6.70
School plumber	2	1.30
Receptionist	2	1.30
Electrician	5	3.30
Computer Operator	3	2.0

Laboratory assistant	1	0.70
Doctor	1	0.70
Cook	2	1.30
School Chaplain	1	0.70
Accountant	1	0.70
Educational Level		
Tertiary	88	58.30
Secondary	40	26.50
Primary	14	9.30
No formal Education	9	6.0
Marital Status		
Single	62	41.10
Married	81	53.60
Divorce	7	4.60
Widower	1	0.70
Number of children		
0-4	117	77.50
5-9	30	19.90
10-14	4	2.60
Religion		
Christian	120	79.50
Islam	16	10.60
Traditional	15	9.90

Mean age of the respondents: 36.99±11.08

According to table 2 below, majority of the respondents were aware of vasectomy as a form of contraception 111(73.50%) out of which more than half 61(55.0%) sources of information about vasectomy were family planning clinics and 27(24.30%) television respectively. In addition, most demonstrated knowledge vasectomy as a permanent form of contraceptives, while 74(49.0%) affirmed vas deferens as one of the tubes involved in vasectomy and 82(54.30%) believes a man is still able to impregnate a woman after a vasectomy procedure.

Table 2: Knowledge of vasectomy among respondents

Variable	Frequency (n=151)	Percentage
Awareness of vasectomy as a type of contraception		
Yes	111	73.50
No	40	26.50
If yes, through source		
Radio	15	13.50
Television	27	24.30
Newspaper	8	7.20
Family planning clinics	61	55.0
What type of male contraception do you know		
Condom	105	69.50
Spermicidal	16	10.60
Vasectomy	28	18.50
All of the above	2	1.30
What type of family planning method is vasectomy		
Permanent	88	58.30
Temporary	63	41.70
What type of tubes are involved in vasectomy		
Vas deferens	74	49.0
Urethra	59	39.10
Epididymis	18	11.90
After a vasectomy procedure a man is able to impregnate a women		
Yes	82	54.30
No	68	45.0
Not sure	1	0.70
The tendency for prostate cancer increases in men who have had vasectomy		
Yes	87	57.60
No	60	39.70
Not sure	4	2.60

According to table 3, almost half of the respondents disagree that vasectomy is the best option of male contraception, while 54(26.90%) say they are not sure if vasectomy can prevent one from being infected with STI and 92(60.90%) agreed that lack of knowledge of vasectomy as a type of family planning method can lead to misconception of its benefits and 68(45.0%) perceived vasectomy as a form of castration.

Table 3: Perception of vasectomy among respondents

Variables	Agree		Disagree		Not sure	
	F	%	F	%	F	%
Vasectomy is the best option of male contraception	50	33.10	72	47.70	29	19.20
Vasectomy as a type of family planning mean it can prevent one from being infected with STI	41	20.40	47	23.40	54	26.90
Lack of knowledge of vasectomy as a type of family planning method can lead to misconception of its benefit	92	60.90	41	27.20	18	11.90
Will you advice someone to consider vasectomy	53	35.10	64	42.40	34	22.50
I perceived vasectomy as a form as a castration	68	45.0	67	44.40	16	10.60
Vasectomy is an effective form of family planning	104	68.90	22	14.60	25	16.60

According to table 4 below, almost half of the respondents 71(47.0%) disagreed that vasectomy is a form of male castration, while 71(47.0%) agreed that they will consider vasectomy as a choice of male contraception and 74(49.0%) agreed that if their awareness and knowledge about vasectomy is improved they will consider up taking it.

Table 4: Attitude towards vasectomy among respondents

Variables	Agree		Disagree		Not sure	
	F	%	F	%	F	%
I see vasectomy as castration of male therefore I will not consider undertaking it	65	43.0	71	47.0	15	9.90
I will consider vasectomy as a choice of male contraception	71	47.0	63	41.70	17	11.30
It is preferable that permanent sterilisation should only be for female	52	34.40	73	48.30	26	17.20
If my awareness and knowledge is improved I can consider uptake of vasectomy	74	49.0	55	36.40	22	14.60
I am afraid of vasectomy because it can lead to low libido	67	44.40	56	37.10	28	18.50
Vasectomy can make a man more promiscuous therefore I will not undertake it	58	38.40	64	42.40	29	19.20

As shown in figure 1 below, more than half 57% of the respondents demonstrated good knowledge of vasectomy, while 43% demonstrated poor knowledge of vasectomy. Similarly, 58.30% showed poor perception of vasectomy, while 41.70% showed good perception of vasectomy and 57% of the respondents had poor attitude towards vasectomy and 43% had good attitude towards vasectomy.

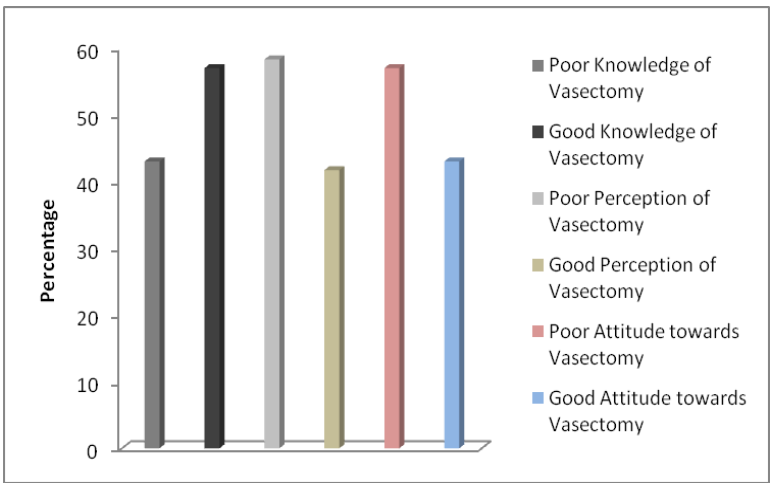

Figure 1: Level of knowledge, perception and attitude towards vasectomy among the respondents

There was no significant relationship between the knowledge of the respondents and their attitude towards vasectomy (P<0.05) and there was no significant relationship between the knowledge of the respondents and their perception towards vasectomy.

Table 5: Relationship between respondents' knowledge and perception, attitude

Level of knowledge	**Level of Attitude**		**X^2**	**df**	**P-value**
	Poor	**Good**			
Poor	32(21.2%)	33(21.9%)	2.776	1	0.096
Good	54(35.8%)	32(21.2%)			
	Level of Perception				
Level of Knowledge	**Poor**	**Good**			
Poor	42(27.80%)	23(15.20%)	1.885	1	0.170
Good	46(30.50%)	40(26.50%)			

IV. Discussion

The mean age of the respondents was 36.99±11.08 years and more of the respondents were married. This is similar to a previous study in Nigeria. [13] In addition, majority of the respondents have one or more children. This finding is also similar to a study conducted in Ethiopia. [14]

The results show that majority of the respondents were aware of vasectomy as a type of contraception and the overall knowledge of vasectomy among the respondents was fair. This finding of the study is in line with previous study; [13] but however contradicts previous studies in Nigeria and Ethiopia who found lower knowledge of vasectomy among their respondents. [9,14] This difference in knowledge can be ascribed to the study being carried out in a university environment. Exploring the knowledge of respondents further, more than half still believes a man can impregnate a woman after a vasectomy procedure and the finding is contrary to previous study [13] and is in line with the report of WHO which states that there is a small chance that a man's partner will become pregnant after he has had a vasectomy. [2]

In addition, there was a significant relationship between the position of the respondents in the university, educational background and their knowledge of vasectomy. This shows that the knowledge experienced in the study might have been contributed more from those in the academic section of the university as you expect them to be more knowledgeable about vasectomy. However, this finding is contrary to a study in a university in Nigeria where significant difference was not observed between respondents' educational level and their knowledge of vasectomy. [13]

Furthermore, most of the respondents showed poor perception of vasectomy such as disagreeing that vasectomy is the best option of male contraception, perceiving vasectomy as a form of castration and not agreeing to advice someone to consider vasectomy. The overall perception shows that the respondents exhibited poor perception of vasectomy than good perception. This finding is similar to the study in Ethiopia where respondents demonstrated poor perception towards vasectomy. [14] In addition, the study showed having good knowledge of vasectomy does not really translate into good perception towards vasectomy as the respondents despite their good knowledge of vasectomy still exhibited poor perception towards vasectomy. This was also corroborated by the hypothesis which did not show any significance between the knowledge of the respondents and their perception towards vasectomy.

In the same vein, the respondents displayed poor attitude towards vasectomy. This is contrary to the findings in a Nigerian university where the respondents demonstrated positive attitude towards vasectomy. [13,15] In addition, there was no significant relationship between the knowledge of respondents and their attitude towards vasectomy. This finding is also contrary to previous study; [13] but also similar to a previous study. [16]

V. Conclusion

The findings in the study showed fair knowledge of vasectomy among respondents, poor perception and attitude towards vasectomy. Furthermore, the study showed that the knowledge of the respondents did not significantly influence their perception and attitude towards vasectomy. This shows that the perception and attitude of Nigerians including educated individuals towards vasectomy is still very poor and a lot still needs to be done by all stakeholders to improve the acceptance of vasectomy as a form of family planning among men. The study therefore, recommended that more campaigns should be carried out to enlighten the public especially men of the advantages of vasectomy as a form of family planning and also men should be incorporated into issues of family planning more so as to change the current perspective that family planning is only for women.

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