AWARENESS, ACCEPTANCE AND BARRIERS OF VASECTOMY AS A FAMILY PLANNING METHOD AMONG MALE RESIDENT DOCTORS AT THE JOS UNIVERSITY TEACHING HOSPITAL

Abstract

This study will help identify the barriers of vasectomy as a family planning option among male medical resident doctors in Jos University Teaching Hospital.Vasectomy, or male surgical sterilization, involves the division or occlusion of the lumen of the vas deferens leading to disruption of the passage of sperm from the testes.it is one of the few fertility control methods that enable men to take personal responsibility for contraception.Respondents were selected using a stratified proportionate random sampling technique. Of the three tertiary health facilities in Jos North, JUTH was picked by simple random sampling by balloting. A list of all the resident doctors was obtained for each department and the names were sorted by sex and arranged by seniority. This study also showed that negative attitude towards vasectomy was influenced by need for more children as most of the participants had concerns about regrets experienced by couples after the procedure. it is recommended that strategies should be developed to tackle major indentified barriers especially to personal use of vasectomy. Training programmes which are focused on evidence-based facts on male sterilisation would help promote proper counseling in birth control consultations.

Keywords: family planning, sterilization,contraception, Vasectomy

INTRODUCTION;

The 2006 census revealed that the population of Nigeria was a little above 140 million persons with a national population growth rate of 3.2% per annum.[1] Current estimates have it that the population of Nigeria is well over 170 million and rising with a high fertility rate of 5.5 births per woman and a relatively high mortality ratio of 576 per 100,000 live births. [1]The Safe Motherhood Initiative, a global campaign to reduce maternal mortality, launched in 1987, identified family planning as one of four strategies to reduce maternal mortality in developing countries, where 99% of all maternal deaths occur.[1] Family planning or contraceptive services have helped reduce maternal mortality and population growth in developed countries. The contraceptive prevalence rate in Nigeria is low compared to those of Ghana, South Africa, and the United Kingdom.[1]

The low rates of contraceptive use in Nigeria and other developing countries is largely influenced by cultural perceptions and misconceptions about family planning methods, poverty, low levels of female education, as well as the unmet need for family planning from unavailability, and lack of access to family planning services. [1]Men also play a very important role in deciding the number of children couples have and how to use FP methods most effectively.[2.] One of the most important ways to encourage men to use FP is to provide couples with more male-oriented contraceptive choices, such as vasectomy.[2] Although vasectomy is a simple process with a high success rate (>99%) and minimal complications (such as swelling and pain), it is still underutilized around the world, especially in developing countries.[2] Vasectomy, or male surgical sterilization, involves the division or occlusion of the lumen of the vas deferens leading to disruption of the passage of sperm from the testes.[3] it is one of the few fertility control methods that enable men to take personal responsibility for contraception.[3] It is a simple procedure usually done under local anaesthesia on outpatient

basis and is associated with less risk of morbidity than BTL. It is less expensive than BTL and its method failure rate of 0.01 per 100 women years is lower than 0.13 per 100 women years for female sterilization.[3] While high acceptance rates have been reported in developed countries like the USA and Australia.[3] Vasectomy is still not widely accepted in many African countries including Nigeria[3]because manybelieve that it causes impotence, ejaculatory failure, weight gain, and its equation with castration.[3] Spread of accurate information in a population has been shown to improve the perception and acceptability of vasectomy.[3]

A cross sectional study done on the knowledge and acceptance of vasectomy among 102 medical students in Meta in 2018 showed that 53.35% of the students had a high knowledge of vasectomy, 41.07% had a medium knowledge of vasectomy and 5.35% had a low knowledge of vasectomy.[4] Of the medical students who participated in the study, 75% accepted undergoing vasectomy at some points in their lives.[4]

A study carried out on Attitudes, Counselling Patterns and Acceptance of Vasectomy among Obstetrics andGynaecology resident doctors attending an update course showed that 99.6% had good knowledge of vasectomy.[3]The unwillingness to accept vasectomy were attributed to socio-cultural (21.3%), religious (13.1%) and psychological (41.0%), 24.6% had no specific reasons.[3,4]More than four-fifths were convinced that the average Nigerian doctor will not accept vasectomy when indicated.[3]

A study was carried out on the awareness and perception of vasectomy among antenatal women in a tertiary facility in south east Nigeria.[5]Of the 200 respondents, 146(73%) were unaware of the existence of vasectomy while 54(27%) were aware. Of those who were aware, 41(75.9%) accepted its use as a family planning method for men. The commonest reason,

17(41.5%), for acceptance was the fear of infidelity among their husbands. The intention to use was, however, low as 24(44.4%) of those who accepted vasectomy disapproved of its use by their husbands and the main reason for disapproval was “weakens husband’s sexual performance” (33.3%). [5]

Owing to the low rates and barriers to vasectomy as a method of family planning.[2,3] This study aims to identify the knowledge the knowledge gap of vasectomy as a family planning method among medical doctors. The acceptance rate of vasectomy in this study population is unknown. Hence, this study aims to know the acceptance among doctors and for these doctors to recommend vasectomy as a family planning method to patients they come in contact with. Lastly, this study will help identify the barriers of vasectomy as a family planning option among male medical resident doctors in Jos University Teaching Hospital.

METHODOLOGY:

STUDY AREA

JUTH is a tertiary health institution in Jos, the capital of Plateau state located in North-central Nigeria. It was established in 1981 and has a capacity of about 600 beds. It has 25 departments including clinical departments like the department of Obstetrics and Gynaecology and non-clinical departments. It serves as a training centre for students, interns, house officers and resident doctors. JUTH has a total of 492 resident doctors receiving specialist training in the facility.

STUDY POPULATION

The study population comprised male doctors undergoing residency training who consent to the study.

INCLUSION CRITERIA

Male resident doctors who have been in training for at least 6 months.

EXCLUSION CRITERIA

All other health professional not in residency training and those not willing to participate.

ESTIMATION OF SAMPLE SIZE

The sample size was calculated using the formula:[4,5]

$n = Z^2 pq_d{}^2$

N= Minimum sample size

Z=1.96 at 95% confidence level

P= Best estimate of prevalence of the condition in the target population expressed as fraction of 100. The prevalence rate of would be used = 0.75[3]

Q= Complementary proportion (1- p) = 0.25

D= level of significance, 0.05 at 95% confidence level

$N = 1.96^2 \times 0.75 \times 0.25 / 0.05^2$

$= 288$

≈ 290

This gives a minimum sample size of 290. Assuming a non-response rate of 10%, the minimum sample size = 319

The number of respondents from each department was determined using

Number of male doctors in Department/Total number of male doctors in JUTH X Minimum sample size

For example. Department of Obstetrics and Gynaecology = 30 male doctors

37/367 X 319 = 32.1 ≈ 32

SAMPLING TECHNIQUE

Respondents were selected using a stratified proportionate random sampling technique. Of the three tertiary health facilities in Jos North, JUTH was picked by simple random sampling by balloting. A list of all the resident doctors was obtained for each department and the names were sorted by sex and arranged by seniority.

Each sampling frame (number of male resident doctors in the department derived by PPS) was divided by the sample size required to get an nth number. The first respondent was selected by balloting and every nth name will be picked subsequently. When consent is not obtained, the next number is selected as a respondent.

DATA COLLECTION

The list of all the resident doctors was got from the Association of Resident Doctors (ARD) secretariat and serialised. After which the sample size was adjusted based on the number of doctors in each department. The eligible doctors were selected using simple random sampling

and the questionnaires were administered to them. Data collection was by self-administered structured questionnaires adapted from a study done on the intention to use vasectomy and its associated factors among married men in Ethopia.[6]

The Knowledge of Vasectomy was scored over a point of 10. People who scored less than 5 were assigned poor knowedge and scores above 5 were assigned good knowledge.

DATA ANALYSIS

Data entry and cleaning in Microsoft Excel and data analysis in SPSS version 26.

STUDY DESIGN

The design adopted for this study is a cross sectional study.

RESULT

The study revealed that majority of the participants 247(77.4%) were aged between 30-39 years. Mean age of participants was 33.4±4.1 years. A proportion of 181(56.7%) of the participants were married. Also, 226(70.8%) of the study participants were Registrars, while 93(29.2%) Senior registrars (table 1).

Table 1:Demographic characteristics of participants (n = 319)

Demographic characteristics	Frequency (f)	Percent (%)
Age (years)		

20-29	47	14.7
30-39	247	77.4
40-49	25	7.8
Mean±SD	33.4±4.1	
Religion		
Christianity	271	85.0
Islam	48	15.0
Marital status		
Single	138	43.3
Married	181	56.7
Cadre		
Registrar	226	70.8
Senior Registrar	93	29.2

AWARENESS OF VASECTOMY AS A FAMILY PLANNING METHOD

Majority of the participants 309(96.9%) agreed that vasectomy is a contraceptive method that involves transacting the vas deferens. Similarly, 279(87.5%) also agreed that vasectomy is an irreversible method of family planning. All the participants agreed that vasectomy requires a minor surgical procedure. Similarly, majority of the participants 266(83.4%) did not believe that with vasectomy the normal functioning of testis is altered. Also, majority of the participants 234(73.4%) did not believe that ejaculation is impaired with vasectomy as seen in table 2 below.

Overall assessment on knowledge of vasectomy revealed that majority of the participants (89.3%) had good knowledge of vasectomy as a family planning method as seen in Figure 1 below.

Table 2: Awareness of Vasectomy as a family planning method (n = 319)

Knowledge	f	%
Vasectomy is a contraceptive method that involves transacting the Vas deferens		
True	309	96.9
False	10	3.1
Vasectomy is an irreversible method of family planning		
True	279	87.5
False	40	12.5
Vasectomy requires a minor surgical procedure		
True	319	100.0
False	0	0.0
Seminal fluid is present shortly after Vasectomy		
True	287	90.0
False	4	1.3
Don't know	28	8.8
With Vasectomy, the normal functioning of the testis is altered		
True	10	3.1

False	266	83.4
Don't know	43	13.5
Vasectomy is a known risk factor for testicular cancer		
True	10	3.1
False	228	71.5
Don't know	81	25.4
Ejaculation is impaired with vasectomy		
True	48	15.0
False	234	73.4
Don't know	37	11.6
Sexual satisfaction is altered with vasectomy		
True	5	1.6
False	266	83.4
Don't know	48	15.0

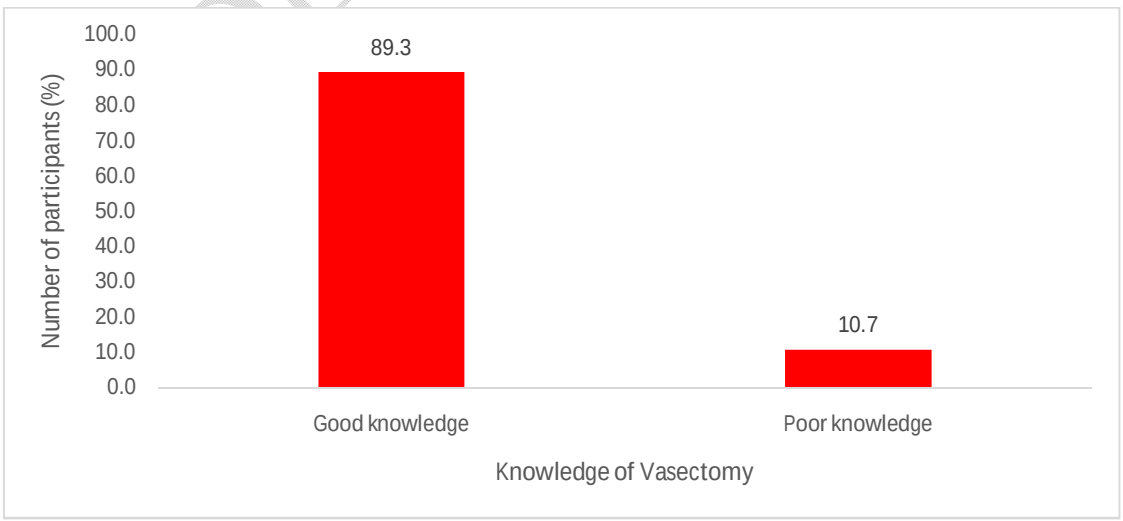

Figure 1: Overall Awareness of Vasectomy as a family planning method (n = 319)

Demographic predictors of knowledge of vasectomy as a family planning method

The study revealed that of participants aged between 30-39 years, 96.0% of them had good knowledge compared to participants aged between 20-29 years (59.6%) and 40-49 years (80.0%) respectively. This difference was statistically significant ($\chi^2 = 57.359$, p = 0.001). Similarly, knowledge was significant with marital status ($\chi^2 = 27.394$, p = 0.001), Religion ($\chi^2 = 3.885$, p = 0.049) and Cadre of participants ($\chi^2 = 52.490$, p = 0.001) respectively.

ACCEPTANCE OF VASECTOMY

From this study, despite the high level of awareness of vasectomy as a family planning method, the level of acceptance of vasectomy was very low 22(6.9%). Similarly, only 93(29.2%) would recommend vasectomy to family and people close to them as family planning method. However, about half of the participants 168(52.7%) agreed that vasectomy is a good choice to couples who have completed their family size (table 4).

Table 3: Acceptance of Vasectomy (n=319)

Acceptance	f	%
I would accept vasectomy as a form of contraception		
Agree	22	6.9
Neutral	117	36.7
Disagree	180	56.4
I will recommend vasectomy to family,		

friends and people close to me		
Yes	93	29.2
No	226	70.8
Vasectomy is a good choice to couples who have completed their family size		
Yes	168	52.7
No	151	47.3

BARRIERS TO ADOPTION OF VASECTOMY AS A FAMILY PLANNING METHOD.

The reasons why they opposed vasectomy were regrets experienced by couples after the procedure (74.5%), personal belief (13.0%) erectile dysfunction (5.4%), religious belief (4.9%) and loss of status in the family/society (2.2%). This showed that regrets experienced by couples after the procedure formed the major barrier to adoption of vasectomy as a family planning method.

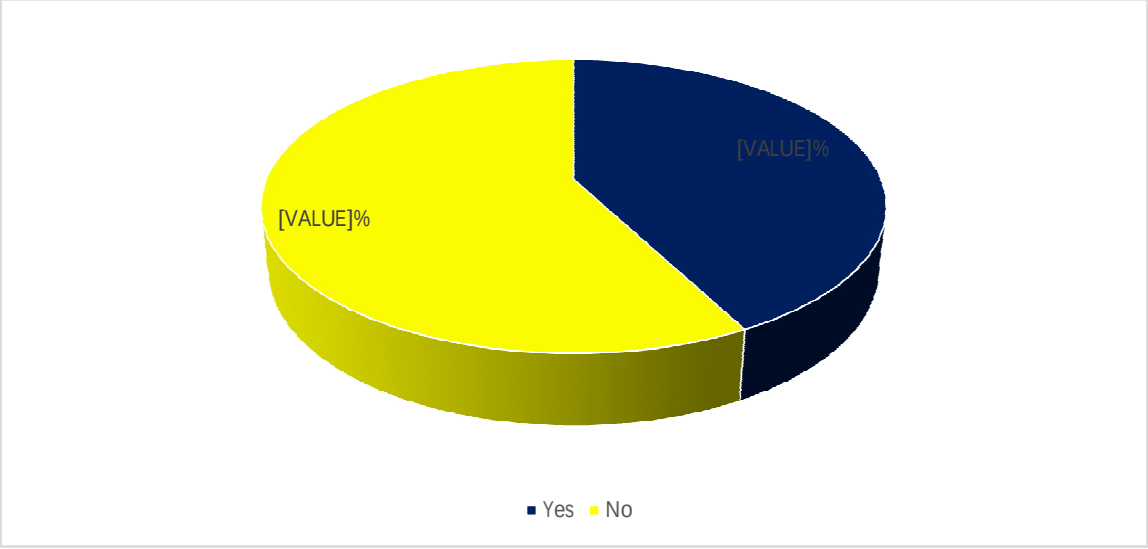

Figure 2: Adoption of vasectomy because it is a permanent method of contraception (n=319)

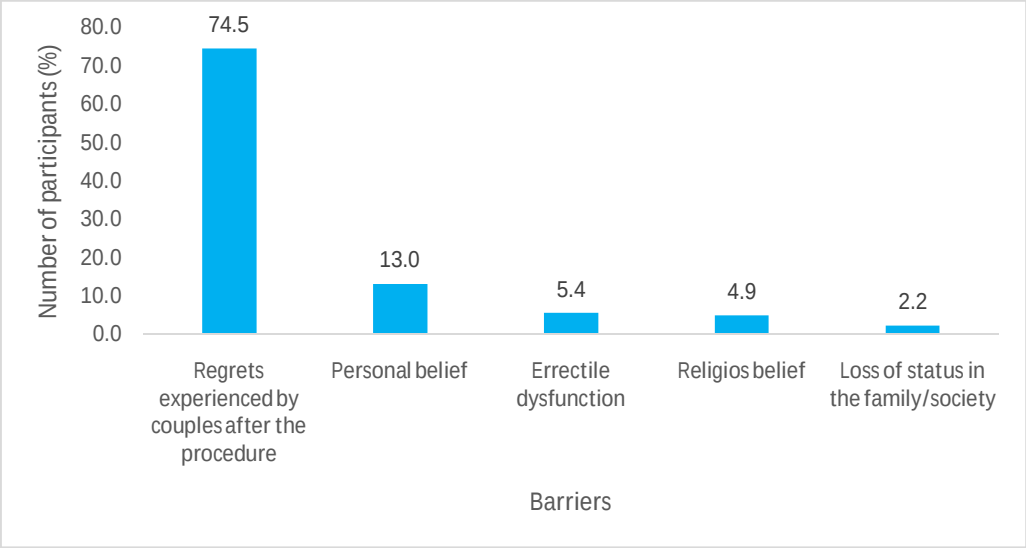

Figure 3: Barriers to Adoption of Vasectomy as a family planning method (n=184)

DISCUSSION

This study sought to identify the awareness, acceptance and barriers of vasectomy as a family planning option among male medical resident doctors in Jos University Teaching Hospital. The study revealed that majority of the participants 247(77.4%) were aged between 30-39 years. This age group in this present study is similar to the age group in another study conducted in Ibadan[10] and Ogun- Nigeria[11].

The result of this study showed that majority of the participants (89.3%) had good knowledge of vasectomy as a family planning method which would be expected of resident doctors in a

training programme. A previous study among Nigerian health workers in Ibadan[10] and among resident gynecologist[3] showed good knowledge of vasectomy but level of knowledge among the general population of males has been shown to be considerably lower[12]. This was also in agreement with a study carried out in Ekpoma, Nigeria among literate married men that showed that a good number of men were aware of vasectomy as a family planning method.[13]

Another important finding in this study was that of knowledge of vasectomy. There was a statistically significant association between participants level of knowledge and their marital status, religion and cadre. In an Iranian population, a positive significant association was found between education levels among men and women and choosing to have a vasectomy[14]. A contrary finding was found in a study done in Ogun-Nigeria where participants' educational qualification did not have a significant association with their level of knowledge about vasectomy[11].

In this study, despite the good knowledge about vasectomy, acceptance is poor. Majority of participants would neither accept nor recommend vasectomy for family and friends. This finding is similar to a previous study among Nigerian resident gynaecologists which reported that despite good knowledge about vasectomy among doctors, majority were poorly disposed towards use of vasectomy[3]. This was also in accordant with a study carried out in Ekpoma that showed poor acceptance of vasectomy as a male contraceptive method, Also the study showed poor knowledge of vasectomy and this may be a reason for the ppor acceptance. [13] This indicates a need for effective national training programmes targeted at health workers to enhance their knowledge of vasectomy as well as break barriers to personal use of and counselling for vasectomy. [11]

This study also showed that negative attitude towards vasectomy was influenced by need for more children as most of the participants had concerns about regrets experienced by couples after the procedure. Similar findings were reported in a study done in Nigeria [1]

This study identified that religious beliefs of participants were not a major barrier associated with attitudes towards vasectomy or its acceptance. This is in contrast with a study done in a suburban Nigerian population, where apart from a fear of side effects (70.4%), the other major reason for nonapproval of family planning by men was their perception that family planning was against religion (52.1%). [12] This study also didnot agree with a study done in Oyo state, Nigeria that revealed that the major barrier of vasectomy was due to fear of side effects of surgery and a good number of participants also saw it as a "sin against God". [15,16]

CONCLUSION

Male Resident Doctors in JUTH have a good level of knowledge about vasectomy, nevertheless, the acceptance of this procedure is poor. This study showed that the knowledge of the respondents did not significantly influence their perception and attitude towards vasectomy.

Hence, it is recommended that strategies should be developed to tackle major indentified barriers especially to personal use of vasectomy. Training programmes which are focused on evidence-based facts on male sterilisation would help promote proper counseling in birth control consultations

RECOMMENDATIONS

1. More campaigns should be carried out to enlighten the public in various clinics especially on the advantages of vasectomy as a family planning method
2. Men be incorporated in family planning issues. Moreso, the misconceptions and myths that serve as barriers should be properly discarded.

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Appendix

QUESTIONNAIRE ON AWARENESS, ACCEPTANCE AND BARRIERS OF VASECTOMY AS A FAMILY PLANNING METHOD AMONG MALE MEDICAL RESIDENT DOCTORS AT THE JOS UNIVERSITY TEACHING HOSPITAL

I am a resident doctor with the department of Obstetrics and Gynecology at the Jos University Teaching Hospital. I am conducting a study on the above topic in fulfillment of my part 1 training.

The aim is solely for academic purpose. Information obtained will be treated confidentially as names will not be requested on the questionnaire

SECTION A

Age_____

Sex_____

Marital status_____

Religion_____

Cadre_____

SECTION B : KNOWLEDGE OF VASECTOMY AS A FAMILY PLANNING METHOD

1. Vasectomy is a contraceptive method that involves transecting the Vas deferens

    a. True b. False c. Don't Know

2. Vasectomy is an irreversible method of family planning

    a. True b. False c. Don't Know

3. Vasectomy requires a minor surgical procedure

    a. True b. False c. Don't Know

4. Seminal fluid is present shortly after vasectomy

    a. True b. False c. Don't Know

5. With vasectomy, the normal functioning of the Testis is altered

a. True b. False c. Don't Know

6. Vasectomy is a known risk factor for testicular cancer

    a. True b. False c. Don't Know

7. Ejaculation is impaired with vasectomy

    a. True b. False c. Don't Know

8. Sexual satisfaction is altered with vasectomy

    a. True b. False c. Don't Know

SECTION C: ACCEPTANCE OF VASECTOMY

9. I would accept vasectomyas a form of contraception.

    a. Agree b. Neutral c. Disagree

10. I will recommend vasectomy to family, friends and people close to me

    a. Yes b. No

11. Vasectomy is a good choice to couples who have completed their family size

    a. Yes b. No

SECTION D: BARRIERS TO ADOPTION OF VASECTOMY AS A FAMILY PLANNING METHOD

12. I will not recommend a vasectomy because it is a permanent method of contraception

    a. Yes b. No

13. If No, what could be the possible reason(s)? Kindly specify

    a. Personal beliefs, Specify:
    b. Religious beliefs, Specify:
    c. Regrets experienced by couples after the procedure
    d. Erectile dysfunction
    e. Loss of status in the family/society
    f. Other _____