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ORIGINAL ARTICLE

Knowledge and Willingness to Accept Vasectomy as a Method of Family Planning among Married Male Workers in the University of Nigeria, Enugu Campus, Enugu State, Nigeria

Connaissance et Volonté d'Accepter la Vasectomie Comme Méthode de Planification Familiale chez les Travailleurs Masculins Mariés de l'Université du Nigeria, Campus d'Enugu, État d'Enugu, Nigeria

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ABSTRACT

BACKGROUND: Vasectomy is a safe and effective contraceptive option available to men, yet the practice is very low. The study aimed to assess the knowledge and willingness to accept vasectomy as a method of family planning among male married workers in a university in Enugu, Nigeria.

METHODS: This was a cross-sectional study conducted among 405 male married workers in a tertiary institution in Enugu, Nigeria. Samples were selected using multistage sampling technique. Data was collected using pretested structured questionnaire and analyzed using proportion, chi – square and logistic regression. Statistical significance was set at < 0.05.

RESULTS: Very few of the respondents, 10.6% had good knowledge of vasectomy and about 20.7% showed willingness to accept vasectomy as a contraceptive option. Educational level (AOR = 2.441, C.I = 1.158 – 5.146), wife support (AOR = 0.201, C.I = 0.071 – 0.571) and completed family size (AOR = 0.063, P = 0.030 – 0.136) were found to be the predictors of willingness to use vasectomy as a contraceptive among male workers of University of Nigeria, Enugu.

CONCLUSION: Knowledge of vasectomy and willingness to accept it as a contraceptive were found to be poor. Awareness campaign and health education on vasectomy and ensuring that family planning services are attended by couples with completed family size will improve knowledge and willingness to accept vasectomy. **WAJM 2023; 40(2): 190–195.**

Keywords: Knowledge, Willingness, Vasectomy, Family planning, Male, Nigeria.

RÉSUMÉ

CONTEXTE: La vasectomie est une option contraceptive sûre et efficace offerte aux hommes, mais sa pratique est très faible. L'étude visait à évaluer les connaissances et la volonté d'accepter la vasectomie comme méthode de planification familiale chez les travailleurs mariés de sexe masculin dans une université d'Enugu, au Nigeria.

MÉTHODES: Il s'agit d'une étude transversale menée auprès de 405 hommes mariés travaillant dans une institution tertiaire à Enugu, au Nigeria. Les échantillons ont été sélectionnés à l'aide d'une technique d'échantillonnage à plusieurs degrés. Les données ont été recueillies à l'aide d'un questionnaire structuré prétesté et analysées à l'aide de proportions, du chi carré et de la régression logistique. La signification statistique a été fixée à < 0,05.

RÉSULTATS: Très peu de répondants, 10,6 %, avaient une bonne connaissance de la vasectomie et environ 20,7 % étaient prêts à accepter la vasectomie comme option contraceptive. Le niveau d'éducation (AOR = 2,441, C.I = 1,158 - 5,146), le soutien de l'épouse (AOR = 0,201, C.I = 0,071 – 0,571) et la taille de la famille (AOR = 0,063, P = 0,030 - 0,136) se sont avérés être les prédicteurs de la volonté d'utiliser la vasectomie comme moyen de contraception parmi les travailleurs masculins de l'Université du Nigeria, Enugu.

CONCLUSION: La connaissance de la vasectomie et la volonté de l'accepter comme moyen de contraception sont faibles. Une campagne de sensibilisation et d'éducation sanitaire sur la vasectomie et l'assurance que les services de planification familiale sont fréquentés par des couples ayant une taille de famille complète amélioreront la connaissance et la volonté d'accepter la vasectomie. **WAJM 2023; 40(2): 190–195.**

Mots clés: Connaissance, Volonté, Vasectomie, Planification familiale, Homme, Nigeria.

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INTRODUCTION

Family planning (FP) services are aimed at preventing unwanted pregnancies, securing desired pregnancies, space pregnancies and limiting the size of the family via interruption of events that lead to conception.[1] Though FP has a lot of socio-economic benefits yet its practice among couples in Nigeria is generally poor.[2] For quite some time in Nigeria, FP has targeted women, probably because of the need to free them from excessive childbearing, reduce maternal and infant mortality and curb population growth. Yet the population growth rate is still an issue that needs public attention.[3] Vasectomy is safe, simple, effective and even less expensive when compared to female tubal ligation. It is still the least used. In sub-Saharan Africa, including Nigeria, the rate is too low and the prevalence of vasectomy uptake does not exceed 1%.[4] Few studies noted acceptance rates to vasectomy among married men in Africa to range from 1.6 to 26%.[2,5,6] There is a need to reassess the reasons and create more awareness among the male folk.

Because of the culture, men in developing countries make most of the decisions in the families and as such decide the type of FP that should be used and women are left to bear the burden and most men do not like getting involved in FP matters.[5,7] Vasectomy is one of the options available to men in developing countries with benefits such as effectiveness, quick and simple, low risk of side effects or long term effects and no decrease in libido or sexual performance.[8] However, the practice is low among men with only two cases of vasectomy performed over a 30-year period at University College Hospital, Ibadan.[9] In Jos north-central Nigeria, only ten cases of vasectomy were done over sixteen years as against three thousand, six hundred tubal ligations on women over the same period with an incidence rate of 0.3%.[7]

Several factors have been identified as hindrances to the uptake of the procedure, a study in Tanzania showed that economic factors, spousal influence, religion, provider reputation and availability, uncertainty about the future and poor vasectomy knowledge were major factors that influenced vasectomy decision-making among men.[10] Findings of a study among men in Ekpoma, Nigeria in 2013 revealed that the majority of literate men had inadequate knowledge about vasectomy as a method of contraception.[5]

A study among married men in Mumbai revealed that there were many misconceptions that plagued the uptake of vasectomy which include; men becoming physically weaker, reduced sexual function (poor erection, impotence, reduced sexual desire, incapable of enjoying sex or satisfying a woman, impaired ejaculation), blood loss.[11] Another study in Pakistan revealed that the men felt that vasectomy could cause impotence and is exclusively meant for prisoners.[12]

Healthcare providers are also not excluded from vasectomy knowledge deficiency as evidenced by the two surveys among community health workers in low-resource settings which revealed that there was little knowledge of the details of the procedure.[13] There is also a negative attitude towards vasectomy among health care providers as a study among Nigeria resident doctors showed that only 41.3% would opt for vasectomy while 89.4% of doctors counseled their clients often on bilateral tubal ligation, only 5.8% did on vasectomy.[14] In a study among health workers in Ibadan, 145(58.0%) of the respondents were unwilling to accept sterilization as a contraceptive procedure while 48 (19.2%) were willing to accept it.[15] Level of education and socio-economic status both impact vasectomy acceptance as the level of education and income becomes higher among those who chose vasectomy compared to those who chose tubal ligation in an Iranian study.[16] Low income resource countries including Nigeria are noted to have very low uptake of vasectomy among men and are limited by socio – economic factors, mostly cultural and religious factors. Reversing this trend requires consistent efforts at a paradigm shift from female-dominated uptake of FP service programs. This study will not only add to the body of knowledge but will help to identify gaps in knowledge and practice of vasectomy, guide targeted interventions in health education and service provision of FP services to improve vasectomy uptake among married men. This study aimed to assess the knowledge and willingness to accept vasectomy as a method of family planning among male married workers at a university in Enugu, Nigeria.

MATERIALS AND METHODS

A cross-sectional study was carried out among married male workers employed at the University of Nigeria, Enugu from January 2021 to March 2021. Married males without a child were excluded from the study.

The minimum sample size was determined using the formula for single proportion where 26% acceptance rate to vasectomy was used.[2] Minimum sample of 405 was obtained for the study.

Multistage sampling was used to select five of the seven faculties by simple random sampling using balloting technique. Second was selection of 81 married males in all Departments per faculty to give a total 405 respondents. Data was collected using self-administered questionnaire adapted from the literature consisting of sections on socio-demographic, knowledge of vasectomy, willingness to accept vasectomy and reasons for acceptance of vasectomy.[5,6] Questionnaires were pretested and validated at Enugu University Teaching Hospital, Enugu. Data were entered and analyzed using IBM SPSS Statistics version 25. The knowledge section contained 6 right / correct and wrong responses. The right / correct responses were coded as 1 while wrong responses were coded as 0. A knowledge score less than the mean estimation of respondents' scores was considered poor while score above or equal to the mean estimation of respondents' scores as good.[6] Variables were presented in frequency tables as proportions and percentages. Associations were analyzed using bivariate analyses and logistic regression. Statistical significance was set at p-value <0.05.

Ethical approval for the study was obtained from the Health Research Ethics Committee of University of Nigeria Teaching Hospital [UNTH], Ituku-Ozalla, Enugu. Informed consent was obtained from all participants.

RESULTS

Majority of respondents, 36.3% and 37.0% were within the age range 30–39 and 40 – 49 years respectively. More than half of the respondents, 57.3% had tertiary education and 32.1% had secondary education. About 85.7% were employed as non-academic staff in the university. About 27.9% of respondents had three children while 12.3% had more than four children. See Table 1.

More than half of respondents, 58.8% were aware of vasectomy as a contraceptive method. About one-fifth, 25.7% had their sources of information from health workers and 4.0% had information from their spouse or partner. About one-third, 33.6% of respondents knows that vasectomy is a permanent method of contraception while 3.5% knows that it prevents STIs. Only 10.6% had good knowledge of vasectomy. See Table 2.

About one-fifth of respondents, 20.7% were willing to accept vasectomy as a contraceptive. About 16.0% of respondents noted completion of family will influence their decision while 6.4% noted religious and cultural support. See Table 3.

Educational Level ($\chi^2 = 11.430$, P = 0.001) and employment status ($\chi^2 = 4.971$, P = 0.036) were found to be statistically associated with knowledge level of vasectomy. See Table 4.

Educational Level ($\chi^2 = 21.884$, P < 0.0001), earnings ($\chi^2 = 12.169$, P = 0.001), knowledge level ($\chi^2 = 4.087$, P = 0.049), wife support ($\chi^2 = 64.954$, P < 0.0001), religious support ($\chi^2 = 28.131$, P < 0.001), cultural support ($\chi^2 = 14.469$, P = 0.001), completed family size ($\chi^2 = 132.897$, P < 0.0001) and good counselling ($\chi^2 = 17.199$, P < 0.001) were statistically associated with willingness to accept vasectomy as a contraceptive among workers of University of Nigeria, Enugu. See Table 5.

Educational Level (AOR = 2.441, C.I = 1.158 – 5.146), wife support (AOR = 0.201, C.I = 0.071–0.571) and completed family size (AOR = 0.063, P = 0.030–0.136) were found to be the predictors of willingness to use vasectomy as a contraceptive among male workers of University of Nigeria, Enugu. See Table 6.

Table 1: Socio-demographic Characteristics

Variables	Frequency	Percentage (%)
Age		
20 – 29	26	6.4
30 – 39	147	36.3
40 – 49	150	37.0
50 – 59	71	17.5
≥ 60	11	2.7
Mean (STD Deviation)	41.9 ± 9.15	
Ethnicity		
Igbo	371	91.6
Hausa	7	1.7
Yoruba	17	4.2
Others	10	2.5
Religion		
Christianity	391	96.5
Islam	6	1.5
Traditional	8	2.0
Education		
Primary	43	10.6
Secondary	130	32.1
Tertiary	232	57.3
Employment		
Academic	58	14.3
Non-academic	347	85.7
Number of Children		
1	57	14.1
2	88	21.7
3	113	27.9
4	97	24.0
>4	50	12.3
Earnings (Monthly in Naira)		
<₦30,000 ($71.60)	32	7.9
₦30,000 – ₦99,000 ($71.60 – $236.30)	157	38.8
₦100,000 – ₦299,000 ($238.70 – $713.60)	168	41.7
₦300,000 – ₦500,000 ($716.0 - $1193.30)	34	8.4
>₦500,000 (>$1193.3)	13	3.2

$ = ₦419

DISCUSSION

The mean age of the respondents found in this study were older comparable to a similar study in Ogun State, South western part of Nigeria.[4] The predominant Igbo ethnic group in our study emphasizes on certain socio-cultural and economic heights before marriage. Hence delayed age of marriage commonly found among them distinctive from other regions in Nigeria. The educational levels were same with other studies in Nigeria.[4] This is because the study areas were conducted in Tertiary institutions.

There was generally very poor knowledge of vasectomy from this study with less than one-third of respondents admitting to be knowledgeable about vasectomy as a contraceptive method. This came from equally low level of awareness on vasectomy obtained from this study. Only one-quarter admitted acquiring information about vasectomy from healthcare workers while less than one-tenth source information from other internet, media, family, friends and partners. Educational level and employment status were found to be significantly associated with knowledge level. This agreed with studies in Ogun, Ekpoma and Enugu.[4,17] This poor knowledge could be due to the fact that

Table 2: Knowledge of Vasectomy among Married Men Workers in University of Nigeria, Nsukka

Variables	Frequency	Percentage (%)
Awareness		
Yes	167	41.2
No	238	58.8
Sources of Information		
Health worker	104	25.7
Mass media	21	5.2
Internet	39	9.6
Family and Friends	23	5.7
Spouse or partner	16	4.0
Knowledge Questions	**Correct Responses**	
Is vasectomy permanent?	136	33.6
Does vasectomy prevent STIs?	14	3.5
Is it a safe contraception?	68	16.8
Is it equivalent to castration?	63	15.6
Is it safer and economical to use?	31	7.7
Is it a sterilization only for women?	106	26.2
Knowledge Level		
Good knowledge	43	10.6
Poor knowledge	362	89.4

Table 3: Willingness and Identifiable Factors to accept Vasectomy

Variables	Frequency	Percentage (%)
Willingness to accept		
Yes	84	20.7
No	321	79.3
Identified factors		
Wife support	45	11.1
Religious support	26	6.4
Cultural support	26	6.4
Completed family	65	16.0
Counselling	55	13.6

invasive contraceptive methods are mostly undertaken by the opposite couple and are mainly women driven. Thus, there is limited emphasis on the benefit of vasectomy as a contraceptive that is best safe and effective. It will be best stated that more targeted awareness and health education campaigns should be on vasectomy through the media, hospital campaigns and at the FP clinics point of care, with both couples in attendance as against only female attending FP clinics.

The willingness to accept vasectomy as a contraceptive among respondents were very low. This agreed with studies in Lagos and Ekpoma, Nigeria and Ethiopia. Identifiable reasons noted were poor wife support, contraceptive use is not religiously and culturally acceptable method of FP in our society and also counselling during FP were poor on vasectomy as most times only the woman attends FP clinics. This agreed with similar studies with obvious religious and cultural misconceptions on vasectomy.[4,5,17–20] Educational level, earnings, knowledge level, wife support, religious support, cultural support, completed family size and good counselling were the socio-demographic and identifiable factors found to be significantly associated with willingness to accept vasectomy as a contraceptive method of FP. However, educational level, wife support and completed family size were the predictors of willingness to accept vasectomy as a contraceptive method of contraception. Those with tertiary education were 2.4 times more willing to accept vasectomy compared to those with secondary education and below. The more the level of education the more likely they are to access information and be well informed. Those without wife support were 0.2 times less willing to accept vasectomy compared to those with wife support. Wife support are necessary for the stability of the family. Those who have not completed their family were 0.06 times less willing to accept vasectomy. Completed family size is very important for any permanent contraceptive method. The public health importance is that uptake of vasectomy will be best achieved if couples with completed family size together attends FP clinic rather than only the female.

CONCLUSION

There was poor knowledge of vasectomy and poor willingness to accept vasectomy among male workers in tertiary institution in Enugu State, Nigeria. Educational level, wife support and completed family size were the predictors of willingness of accept vasectomy as FP method.

Recommendation

To ensure uptake of vasectomy in our environment, there is need for improved male educational level above secondary school, wife support of the procedure and the couple should have completed family size.

There is need for increased health education on vasectomy among males mainly those with secondary education and below. Attending FP services by couples with completed family size will enhance uptake of vasectomy more often than with one partner.

Limitations

This study is specific to one area and therefore the findings cannot be generalized. The study findings are limited to the period of time during which it was conducted as a cross sectional study.

Table 4: Socio-demographic Factors associated with Knowledge Level of Vasectomy

Variables	Knowledge Level		Statistical Test	
	Poor	Good	Chi-square	P-value
Age (Years)				
<40	291 (90.1)	32 (9.9)	0.848	0.421
≥40	71 (86.6)	11 (13.4)		
Education Level				
Secondary and below	165 (95.4)	8 (4.6)	11.430	0.001*
Tertiary	197 (84.9)	35 (15.1)		
Employment				
Academic	47 (81.0)	11 (19.0)	4.971	0.036*
Non - academic	315 (90.8)	32 (9.2)		
Earnings				
<₦100,000	171 (90.5)	18 (9.5)	0.446	0.523
>₦100,000	191 (88.4)	25 (11.6)		
Number of children				
≤3	232 (89.9)	26 (10.1)	0.218	0.738
≥4	130 (88.4)	17 (11.6)		

Table 5: Factors associated with Willingness to Accept Vasectomy

Variables	Willingness to Accept		Statistical Test	
	No	Yes	Chi-square	P-value
Age (Years)				
< 40 years	255 (78.9)	68 (21.1)	0.094	0.765
≥ 40 years	66 (80.5)	16 (19.5)		
Education Level				
Secondary and below	156 (90.2)	17 (9.8)	21.884	< 0.0001*
Tertiary	165 (71.1)	67 (28.9)		
Employment				
Academic	45 (77.6)	13 (22.4)	0.115	0.861
Non-academic	276 (79.5)	71 (20.5)		
Earnings				
<₦100,000	164 (86.8)	25 (13.2)	12.169	0.001*
>₦100,000	157 (72.7)	59 (27.3)		
Number of children				
≤3	201 (77.9)	57 (22.1)	0.791	0.445
≥4	120 (81.6)	27 (18.4)		
Knowledge level				
Poor	292 (80.7)	70 (19.3)	4.087	0.049*
Good	29 (67.4)	14 (32.6)		
Wife support				
Yes	15 (33.3)	30 (66.7)	64.954	<0.0001*
No	306 (79.3)	54 (15.0)		
Religious support				
Yes	10 (38.5)	16 (61.5)	28.131	<0.0001*
No	311 (82.1)	68 (17.9)		
Cultural support				
Yes	13 (50.0)	13 (50.0)	14.469	0.001*
No	308 (81.3)	71 (18.7)		
Completed family size				
Yes	17 (26.2)	48 (73.8)	132.897	<0.0001*
No	303 (89.4)	36 (10.6)		
Good counselling on vasectomy				
Yes	32 (58.2)	23 (41.8)	17.199	<0.0001*
No	289 (82.6)	61 (17.4)		

**Significance*

Conflict of Interest

The authors declare that they have no conflicts of Interest.

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Table 6: Predictors of Willingness to Accept Vasectomy

Variables	Odds Ratio (Exp B)	Lower C.I.	Upper C.I.	Significance
Education				
Secondary and below	0			
Tertiary	2.441	1.158	5.146	0.019*
Earnings				
<₦100,000	0			
>₦100,000	1.071	0.536	2.138	0.847
Knowledge level				
Poor	0			
Good	1.622	0.675	3.900	0.280
Wife support				
Yes	0			
No	0.201	0.071	0.571	0.003*
Religious support				
Yes	0			
No	1.012	0.218	4.688	0.988
Cultural support				
Yes	0			
No	0.733	0.177	3.040	0.668
Completed family size				
Yes	0			
No	0.063	0.030	0.136	<0.0001*
Good counselling on vasectomy				
Yes	0			
No	1.861	0.696	4.980	0.216

**Significant **C.I, Confidence Interval.*

acceptability in Tanzania. *Int Fam Plan Perspect.* 2007; **33:** 13–21. doi: 10.1363/3301307. PMID: 17462984.

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