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KNOWLEDGE AND ACCEPTABILITY OF BILATERAL TUBAL LIGATION AMONG ANTENATAL CLINIC ATENDEES IN USMANU DANFODIYO UNIVERSITY TEACHING HOSPITAL SOKOTO.

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ABSTRACT

Background: Bilateral tubal ligation, is a surgical sterilization procedure that is a relatively simple, safe, and extremely effective in preventing future pregnancy. The procedure may be performed in the postpartum or post abortal period or as an interval operation. **Aim:** The purpose of the study was to investigate the knowledge and acceptance of bilateral tubal ligation (BTL) among women attending antenatal clinic at Usmanu Danfodiyo University Teaching Hospital Sokoto. **Methodology:** A descriptive cross-sectional study was carried out at the ANC of Usmanu Danfodiyo University Teaching Hospital Sokoto from the 1st of April-30th August 2017. Patients were recruited after obtaining informed consent. A structured questionnaire was then administered and analysed to determine the factors that influenced uptake or not of BTL. Data analysis was done using Statistical Package Social Scientist (SPSS) version 21. **Results:** A total of 365 adequately filled questionnaires during the period of study were analysed. The findings showed that almost all the participants in the study were aware of family planning, out of which 148(40.5%) participants were aware of BTL as a method of family planning however only 9.3% knew what it entails and only 26.8% of the respondents accepted it as a family planning method. Majority (73.1%) did not accept BTL. Reasons given were: 27.4% for no reason, 17.8% wanted more children, 8.6% held religious beliefs against it,7.1% had uncertainty about the future and 2.7% feel the procedure is risky since it requires operation. Women of higher parity were more likely to accept BTL. **Conclusion:** The knowledge and acceptance of BTL was low in this study population. Improvement on female reproductive health education and counselling may help to dispel some of the misconceptions associated with the procedure.

KEYWORDS: Sokoto, BTL, knowledge, contraception.

INTRODUCTION

Female sterilization, which is also called tubal ligation or tubal occlusion, is a surgical procedure, which aims at permanent contraception.[1] It involves surgical disruption of the fallopian tube patency and may be carried out endoscopically, by mini-laparotomy or during caesarean section.[2]

Female sterilization by tubal ligation has become increasingly popular since the late 1960s, and it is reported to be the most commonly used method of fertility regulation especially in the developed world.[3] However, it has not been accepted as a popular method of contraception in developing countries like Nigeria. This may be due to the reported aversion to operative procedures and the permanent nature of the method.[3,4,5] Religious opposition, legal restrictions and lack of available services also contribute to the poor uptake of this method in developing countries.[3,6,7-10]

Bilateral tubal ligation as a method of contraception may be requested for personal or social reasons when a couple has completed their desired family size, especially when other methods are unsuitable. It is also indicated for women in whom a pregnancy would pose a serious risk to the mother following multiple previous caesarean section, serious cardiac, renal or hepatic conditions, or for reasons of grand-multiparity.[5, 6,10-12] However, good pre-operative counselling about the intended permanence of the procedure is central to reducing the incidence of regret, which several studies have shown to be higher with women sterilized at caesarean section.[6,7,8,13,]

Unfortunately, female sterilization is practiced only on a limited scale in most developing countries.[3,11,12,14]. In

Nigeria, the percentage of female sterilization was found to be 0.3%.[1] This is probably due to the great desire for large families, aversion to operative procedures as well as the permanent nature of the method. Religious opposition is also a contributory factor.[7, 8]

Sterilization, though a simple and safe procedure is a major decision. A woman's decision to undergo sterilization must be her own choice and not forced on her by her family, partner, or healthcare provider.[9,10,15] Therefore, the client's informed choice and written consent must be obtained.

Female sterilization involves the blocking of both fallopian tubes by ligatures, clips, rings, or electrocoagulation.[10] Sterilization can be done by laparotomy (concurrent with Caesarean section), mini-laparotomy, laparoscopy, minilaparoscopy, vaginal (by colpotomy) and, now, by a transcervical route guided by hysteroscopy.[11]

Sterilization can be performed after delivery, after an abortion, or in conjunction with another surgical procedure. Ideally, postpartum procedures are performed immediately after childbirth or within 72 hours when the uterus is most accessible, although the procedure may be done up to seven days later. Delaying the procedure for more than 7 days increases the difficulty of the procedure and the risk of infection.[2,3, 15,16] On the other hand, interval bilateral tubal ligation (BTL) is performed after the end of puerperium.[7,16] A pregnancy test should be done before an interval BTL as this reduces the likelihood of concurrent pregnancy.[15]

There is no medical condition that absolutely restricts a woman's eligibility for permanent contraception, although the procedure should be postponed until some conditions are evaluated or treated. These include: severe cardiopulmonary conditions, pregnancy, current pelvic inflammatory disease, uncertainty about the use of permanent contraception.[16]

Tubal ligation provides an ongoing, cost effective and coital independent method of contraception. It has also been shown to reduce the risk of ovarian cancer but does not protect against sexually transmitted infections and so correct and consistent use of condom is recommended in those at risk.[15,16]

The objectives of this study were to assess the knowledge and acceptance of bilateral tubal ligation among women attending the antenatal clinic of Usmanu Danfodiyo university teaching hospital sokoto.

METHODOLOGY

The study was a descriptive cross-sectional study carried out from April to August 2017 at the antenatal care clinic (ANC) of Usmanu Danfodiyo University Teaching Hospital Sokoto. Usmanu Danfodiyo university teaching hospital is the tertiary hospital in Sokoto. It has all the major clinical departments and provides all levels of care. The Department of Obstetrics and Gynaecology has four units which operate the antenatal, postnatal and gynaecological clinics on all weekdays. Three hundred and seventy-four subjects were recruited for the study. All consenting pregnant women who attend the antenatal clinic in Usmanu Danfodiyo University Teaching Hospital (UDUTH) were interviewed using a structured interviewer administer questionnaire. The questionnaire was used to seek data with respect to socio demographic variables of the clients, knowledge about family planning, client understanding of BTL, and the acceptance of the procedure. The information obtained was analysed using SPSS version 21. Tables and figures were used to display the results. Chi square test was used to test for associations. The level of significance was set at $p< 0.05$.

RESULTS

A total number of 374 questionnaires were administered to the respondents but 365 were adequately filled giving a response rate of 97.6%. further analysis was limited to these 365.

Table 1: Socio-demographic and clinical characteristics of the respondents.

Characteristics	Number of subjects	Percentage (%)
Age		
Less than 20 years	18	4.9
20 to 29 years	206	56.5
30 to 39 years	129	35.4
Greater than 40 years	12	3.2
Total	365	100
Ethnicity		
Hausa/Fulani	234	64.1
Igbo	53	14.6
Yoruba	46	12.6
Others	32	8.7
Total	365	100
Occupation		
House wife	253	70.5
Civil servant	75	19.2
Business	37	10.1

Total	365	100
Religion		
Islam	278	77.8
Christianity	81	22.1
Total	365	100
Marital status		
Married	365	100
Single	0	0
Total	365	100
Educational status		
No formal education	13	4
Primary	23	5.3
Secondary	101	29.2
Tertiary	228	61.5
Total	365	100
Husbands educational status		
No formal education	7	1.9
Primary	10	2.7
Secondary	55	15.1
Tertiary	293	80.3
Total	365	100
Family setting		
Monogamy	246	67.4
Polygamy	119	32.6
Total	365	100
Parity		
Primigravida	160	43.8
Multipara	183	50
Grand multipara	22	6.3
Total	365	100
Knowledge of family planning		
Yes	350	96
No	15	4
Total	365	100
Previous contraceptive use		
Yes	226	61.9
No	139	38
Total	**365**	**100**

Socio-demographic characters of respondents

The respondents age ranged between 16 to 41 years with mean age of 27± 5.0. Majority of the patients (56.5%) were in the age group of 20-29 years and all were married. The Hausa/Fulani (64.1%) ethnic group was the most common and the majority of the subjects were Muslims (77.8%). Though more than half (61.5%) of the clients had tertiary education, majority 253 (70.5%) were housewives, while 75 (20.5%) were civil servants. Table 1. General knowledge about family planning was high (96%) and 61.9% had actually used a modern method before. The distribution of the respondents on knowledge about different methods of contraception showed that most women were aware of implants 265(74.0%), COCP 225(63.4%) and injectable contraceptives 222(62.4%), while 148(40.5%) knew BTL. Ninety-eight (30.4%) and 87 (27.1%) were aware of IUCD and natural methods respectively.

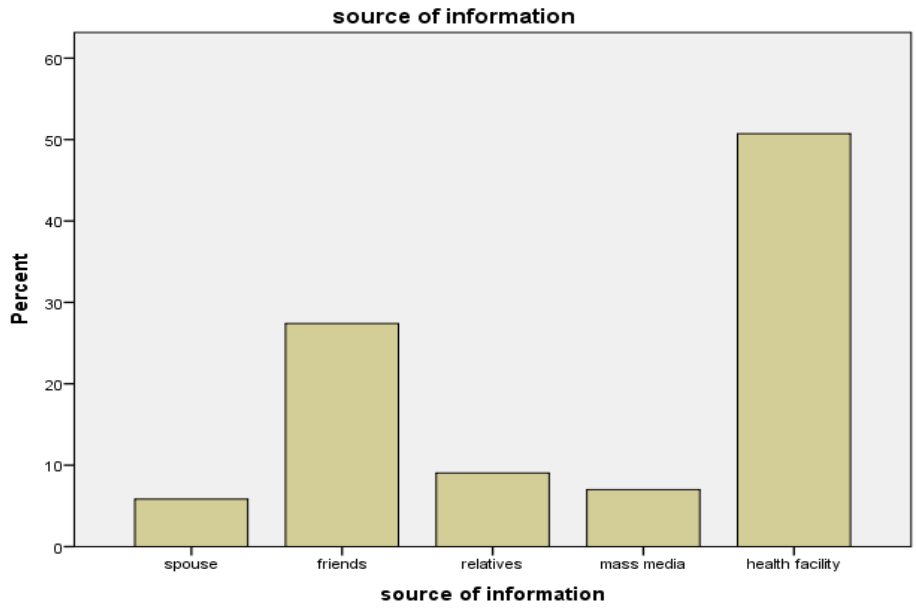

Figure 1 : Sources of information about family planning.

Sources of information on family planning

Figure 1 depicts that 184 (50.4% respondents) of the respondents got their information from the health facility and 99 (27.1% respondents) heard it from friends, while the remaining clients said their source of information was from their relatives (9.8%), mass media (6.8%) and spouses (5.8%).

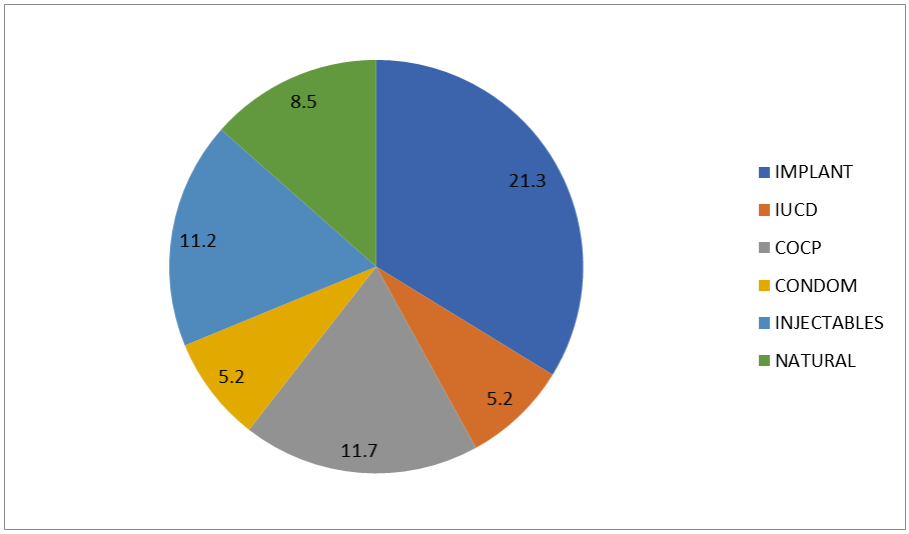

Figure 2: Types of contraceptives used among respondents.

Figure 2 depicts the types of modern contraceptive methods that the respondents had used in the past. About 21.3% had used Implanon while 11.7% and 11.2% had used the pills and the injectables respectively.

Table 2: Knowledge on bilateral tubal ligation procedure.

BTL procedure	Number	Percentage (%)
Fallopian tube tied	34	9.3
Uterus removed	31	8.4
Cervix tied	16	4.3
Ovaries removed	5	1.36
I don't know	255	69.8
Uterus turned upside down	24	6.5
Total	365	100

From this study most subjects 255 (69.8%) do not know what the procedure for PTL entails. Only 9.3% of the client knew how BTL is performed, 8.4% said the uterus is removed, 6.5% thought the uterus is turned upside down while the remaining 4.3 and 1.36% of the clients thought that the cervix and ovaries were tied respectively.

Table 3: Acceptance rates for BTL and the reasons for the choices among respondents

Acceptance of BTL	Number of women	Percentage (%)
Can you accept BTL?		
Yes	98	26.8
No	267	73.2
Total	385	100
Reasons for accepting BTL		
Completion of family size	61	16.7
Side effects of other methods	2	0.5
Spouse prefers it	4	1.1
Presence of a disease condition	31	8.5
Reasons for not accepting BTL		
Not allowed in my religion	32	8.6
It's against my culture	3	0.8
My spouse is against it	18	4.9
I still want more children	65	17.8
Fear of surgery	10	2.7
Uncertainty of the future	26	7.1
I just don't like it	100	27.4
Prefer other methods	13	3.6
Total	365	100

Acceptance rate of BTL and its reasons among the clients

Table 3 shows the acceptance rate of BTL by the respondents. The majority of the respondents 267 (73.2%) did not accept BTL as a family planning method while only 98 (26.8%) would consider it. The main reasons cited by most of the client who did not accept BTL was that they do not like it as a family planning method because of its invasiveness and permanent nature and they still desired more children. Attainment of desired family size was the main reason for accepting BTL among the respondents

Table 4: **Relationship between client's sociodemographic variables and acceptance of BTL**

	Acceptance			
Educational status	**Yes n (%)**	**No n (%)**	χ^2	**p value**
Quran	3(0.9)	9(2.6)	0.967	0.332
Primary	4(1.2)	14(4.1)		
Secondary	27 (7.8)	70(20.3)		
Parity Nullipara	42(12.4)	108(31.8)	1.000	0.006
Multipara	47(13.8)	122(35.9)		
Grandmultiparae	6 (1.8)	21 (6.2)		

Relationship between client's sociodemographic variables and acceptance of BTL

Table 4 presents a comparison between knowledge and willingness to have BTL. Although, increasing educational status appears to positively influence their choice, there was no statistically significant difference in the acceptance of BTL between the different educational levels. ($p > 0.332$). There was however a statistically significant difference (p=0.006) in the acceptance of BTL with parity. The grandmultiparae are more likely to accept BTL.

DISCUSSION

The study set out to assess the knowledge and acceptability of bilateral tubal ligation amongst antenatal clinic attendees of Usmanu Danfodiyo university teaching hospital sokoto. The majority of the clients were between the ages of 20-29 which constitute 56.5% of the entire study population. This represents the active reproductive age group of women attending the antenatal clinic in UDUTH. The finding is similar to the experience from Ilorin.[1] All the clients were married and mostly in monogamous relationships. This is the usual norms in our environment as most pregnancies take place in the marital context.

This study revealed a very high knowledge of family planning among the participants (95.6%) this is similar to findings from Delta state[17] and Osun state in Nigeria.[18] The knowledge of the respondents on modern family planning methods was generally high especially for implants pills and injectables. However, the level of knowledge of the condom and BTL were below average. This is in contrast to the studies from, Osun[18] Delta[17] and Cameroon[19] where the most known FP methods were condom. The poor knowledge of condoms is not surprising as the studied population were all married women and predominantly Muslims. Difference in cultural settings may account for this.

Implants were the predominant method of contraceptive used previously by most of the clients in this study. This finding however contrasts with what was found in other centres like Zaria[5] and Jos[6] where injectable contraceptive was found to be the most common method chosen by clients and the IUD was preferred in Ilorin.[1] Differences in patients' preferences may account for this. In addition, the implants are a fairly recent improvement in the contraceptive method mix and may not feature prominently in the previous years.

Regarding source of information about family planning, more of the respondents got their information from health facility (50.4%), followed by friends (27.7%) and relatives (8.7%) while 7.1% got their information from mass media and it is comparable with the finding from Delta[17] and Dubai.[20] This underscores the huge role health care providers have to play in improving the women's knowledge of family planning and awareness of different contraceptive methods. The mass media would need to improve its public enlightenment on birth spacing.

Only 9.3% of the clients knew about what BTL is and the procedure it entails. Most completely misunderstood what BTL is all about. This limited understanding may contribute to the low level of acceptance. Similar findings have been reported.[4] This means a lot of the patients at the ANC will benefit from more enlightening health talk on BTL as a contraceptive method.

Overall, only 98 (26.8%) considered BTL and their main reasons were for limitation of family size and the presence of a medical condition that may risk their life with pregnancy. This is much lower than the level of acceptance reported by others.[2,21,22] Although the majority of the respondent who would not want BTL had no cogent reasons, the reasons expressed by most of the participant were, disliking the method, desire to have more children, religious beliefs, uncertainty of the future and fear of surgery. This may be because most of the participants were still young and of low parity and so desire to have more children. Uncertainty of future survival of the children has been shown to hinder the acceptance of family planning. However, it was noteworthy that although level of education didn't influence the choice of a BTL the higher the woman parity the more likely she was to choose a BTL when she completed her family.

The limited awareness of and common misperceptions about this method indicates that more enlightenment of our women on BTL is needed in this setting.

CONCLUSION

Although the general knowledge about some methods of family planning was high the knowledge and acceptance of BTL was low in the studied population. Ignorance, desire for more children, religious beliefs and uncertainty about the future were principal reasons for low acceptance. An improvement in enlightenment to dispel myths and misconceptions may improve acceptance. Similarly, provision of non-surgical techniques in low resource setting may also increase acceptance.

LIMITATION

Participants were drawn from an antenatal clinic in UDUTH, and their attitudes about BTL may not be representative of women in the general population who wish to end childbearing. More so, only those who presented for the antenatal clinic and willing to participate were eligible for this study, and therefore, women with interest in BTL, may not have participated. In addition, women in this sample group were mostly young and as such may be less willing to use BTL as a method of limiting family size.

The authors declare no conflict of interest.

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