

Perception and Acceptability of Bilateral Tubal Ligation Among Women Attending Antenatal Clinic

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Abstract

Objective: To determine perception and acceptability of bilateral tubal ligation among women attending antenatal clinic.

Methodology This cross-sectional study was conducted at the department of Obstetrics & Gynecology, Federal Government Services Hospital Islamabad. All the pregnant women visiting gynae OPD, aged between 25 to 45 years and having parity more than 3 were included. Patients were subjected to questions drafted in the performa which was asked and filled by the researcher herself. All the information such as age, gestational age, educational status, occupation status, residence, rate of acceptance of BTL and causes of refusal of BTL were recorded on a separate performa. Data was collected and entered using SPSS version 23.

Results: Average age of the study subjects 31.60 ± 5.05 years. Out of all 68.4% women possessed knowledge about Bilateral Tubal Ligation (BTL), while the overall rate of acceptability for BTL was found to be 21.60%. Unwilling to undergo a surgical procedure, irreversible nature of the procedure, fear of potential regret, husband's hesitancy, cultural barriers and religious beliefs were the refusal causes of BTL. Acceptability did not show any statistically significant differences based on age, parity, education, and occupation ($p > 0.05$), while it was significantly influenced by socioeconomic status (SES) and residential status ($p \leq 0.050$).

Conclusion: There was valuable knowledge and limited acceptance of bilateral tubal ligation (BTL), primarily influenced by cultural and religious beliefs. Additionally, the fear of regret played a significant role in deterring individuals from considering BTL, despite a considerable level of awareness regarding the procedure among the majority of respondents.

Keywords: Interpregnancy interval, cesarean delivery, preterm delivery, apgar score, low birth weight

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Introduction

Family planning plays a crucial role in attaining numerous Sustainable Development Goals.¹ Governments and stakeholders globally have placed great importance on allocating resources to enhance the availability and utilization of family planning methods.¹ Worldwide, 585 000 women die every year from complications of pregnancy and childbirth, 99% of them in developing countries of the tropics.² By enabling women to effectively manage the timing and number of their children, family planning empowers them to have greater control over their family size. Consequently, this leads to improved educational and employment opportunities for women, as well as enhanced health and nutrition outcomes for children.^{1,3} With the second highest fertility rate in South Asia, Pakistan faces a

considerable challenge in terms of its escalating population growth, which poses a significant obstacle to the country's journey towards progress and development.⁴ Family planning has been a topic of controversy in Pakistan for many years. Despite widespread awareness of various family planning methods, the overall rate of contraceptive use remains remarkably low at 35%.^{4,5} Traditional methods play a significant role in the limited range of methods utilized by individuals in the country.⁴

Bilateral tubal ligation (BTL) is a procedure widely recognized as a permanent contraceptive method, although it may, in some cases, be reversible.⁶ It is widely regarded as an extremely effective means of contraception.⁶ It can be conducted during a caesarean

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section while the patient is still under anesthesia. Bilateral tubal ligation (BTL) is frequently recommended in cases of grand multiparity, multiple previous Caesarean sections, ruptured uterus, and medical complications during pregnancy. These conditions serve as common indications for undergoing the procedure. Although it has been reported that, in Pakistan on barriers to contraceptive uptake has commonly treated "family planning" as a broad behavioral concept, without explicitly acknowledging the potential variations in barriers and motivations associated with specific contraceptive methods.⁷ Studies reported a negative perception and limited acceptance of bilateral tubal ligation (BTL), primarily influenced by cultural and religious beliefs, as well as concerns about potential regret.^{8,9} Interestingly, despite the majority of respondents being aware of BTL, their overall attitude towards the procedure remained unfavorable.^{8,9} Bilateral tubal ligation plays an important role in prevention of unplanned pregnancies thus improving women health. The aim of study is to evaluate the knowledge and acceptability of bilateral tubal ligation in women attending antenatal clinic.

Methodology

This cross-sectional study was conducted at the Department of Obstetrics & Gynecology, Federal Government Services Hospital Islamabad. Study was done over six months, from November 2022 to April 2023 after taking necessary approval from the Hospital's Ethical Committee and REU department of CPSP Karachi. All the pregnant women visiting gynae OPD, aged between 25 to 45 years, parity more than 3 and those who were willing to provide informed consent to participate in the study and have the capacity to understand the study's purpose were included. All the participants who do not possess sufficient language proficiency to understand and respond to the study materials and interviews and non-pregnant women visiting Gynae OPD for other obstetric problems were excluded. The minimum sample size for the study was obtained using an acceptance rate of bilateral tubal ligation for contraception of 21.7% from a previous study.¹⁰ The minimum sample size obtained was 282. Patients were thoroughly briefed about the research nature of this study, and they were ensured about their confidentiality. Patients were subjected to questions drafted in the performa which was asked and filled by the researcher herself. All the information such as age, gestational age, educational status, occupation status, residence, rate of acceptance of BTL and causes of

refusal of BTL were recorded on a separate performa. Data was collected and entered using SPSS version 23. Mean and SDs were calculated for numerical variables like age and gestational age. Frequencies and percentages were calculated for categorical variables like, educational status, occupation status, residence, rate of acceptance of Bilateral tubal ligation and causes of refusal of Bilateral tubal ligation. Both rate of acceptance and causes of refusal of Bilateral tubal ligation was stratified with age, educational status, social class, occupation status and residence in order to stratification. Post stratification chi-square test was applied keeping p-values ≤ 0.05 as statistically significant.

Results

This study aimed to evaluate knowledge and acceptability. A total of 282 women participated, with an average age of 31.60 ± 5.05 years. The majority of the women (41.5%) had parity V, followed by 36.5% with parity IV, 19.9% with parity VI, and only two women with parity VII. Urban residents accounted for the largest portion of the participants, comprising 60.6% of the women. Among them, 67.0% were housewives, primarily belonging to a lower socioeconomic status. Among all participants, 25.2% had a history of previous C-sections, 65.2% had previous births through normal

Table I: Descriptive statistics of demographic and clinical characteristics (n=282)

Variables		Statistics	
Age			
Mean +SD		31.60+5.05 years	
Parity	IV	103	36.5%
	V	117	41.5%
	VI	56	19.9%
	VII	06	02.1%
Educational status	Illiterate	94	33.3%
	Primary and above	93	33.0%
Residence	Secondary and above	95	33.7%
	Rural	111	39.4%
Occupation	Urban	171	60.6%
	Employed	93	33.0%
Occupational status	House Wife	189	67.0%
	Middle Class	69	24.5%
	Poor	151	53.5%
Previous mode of delivery	Rich	62	22.0%
	Cesarean Section	71	25.2%
	Instrumental Vaginal Delivery	27	9.6%
	Normal Vaginal Delivery	184	65.2%

vaginal deliveries, and 9.5% had a history of instrumental vaginal delivery. Table I

Among all the women included in the study, 68.4% possessed knowledge about Bilateral Tubal Ligation (BTL), while the overall rate of acceptability for BTL was found to be 21.60%. Figure 1

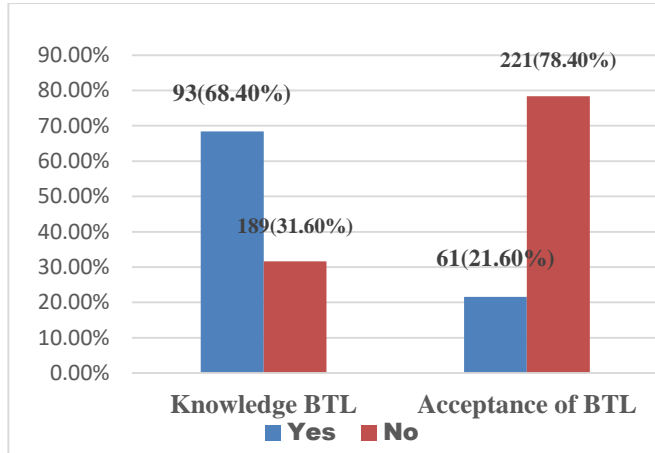


Figure 1. Knowledge and acceptability of BTL (n=282)

Regarding the reasons for refusing bilateral tubal ligation, it was found that 31.70% of women were unwilling to undergo a surgical procedure, 24.40% expressed concerns about the irreversible nature of the procedure, 9.50% had a fear of potential regret, 7.70% experienced refusal due to their husband's hesitancy, 10.90% faced cultural barriers, 8.60% refused based on religious beliefs and 7.20 % had many other causes. Figure 2.

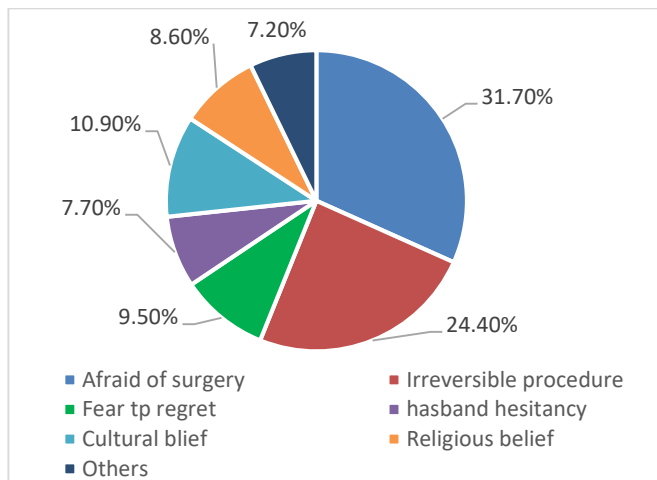


Figure 2. Causes of the refusal of bilateral tubal ligation (n=282)

The acceptability of Bilateral Tubal Ligation (BTL) did not show any statistically significant differences based on

age, parity, education, and occupation ($p>0.05$). However, the acceptability of BTL was significantly influenced by socioeconomic status (SES) and residential status ($p\leq 0.050$). Table II

Table II: Acceptability of BTL according to effect modifiers (n=282)

Variables	Acceptance of BTL		p-value	
	No	Yes		
Age groups	< 35 Years	159(56.4%)	47(16.7%)	0.426
	> 35 Years	62(22.0%)	14(5.0%)	
Parity	4	81(28.7%)	22(7.8%)	0.622
	5	91(32.3%)	26(9.2%)	
	6	43(15.2%)	13(4.6%)	
	7	6(2.1%)	--	
Education	Illiterate	79(28.0%)	15(5.3%)	0.253
	Primary & above	71(25.2%)	22(7.8%)	
	Secondary & above	71(25.2%)	24(8.5%)	
Occupation status	Employed	67(23.8%)	26(9.2%)	0.070
	House Wife	154(54.6%)	35(12.4%)	
	Middle Class	48(17.0%)	21(7.4%)	
Socioeconomic status	Poor	126(44.7%)	25(8.9%)	0.058
	Rich	47(16.7%)	15(5.3%)	
	Rural	78(27.7%)	33(11.7%)	
Residential status	Urban	143(50.7%)	28(9.9%)	0.008

Discussion

Contraception refers to a range of methods, both temporary and permanent, that are used to prevent pregnancy. Bilateral tubal ligation, which is a surgical procedure, is considered a permanent form of contraception.¹¹ It is typically offered to women who have either completed their desired family size or need to limit the size of their family due to medical reasons.¹¹ This study assessed the knowledge and acceptability of contraception among 282 women, with an average age of 31.60 ± 5.05 years. Majority of the participants (60.6%) were urban residents, most of the women were housewives belonging to a lower and middle socioeconomic status. Previous C-sections history was in 25.2% of the participants, while 65.2% had previous births through normal vaginal deliveries, and 9.5% had a history of instrumental vaginal delivery. Consistently İbik Y et al¹² reported that, in the group that underwent bilateral tubal ligation, the average age at which the procedure was performed was 37.33 ± 4.6 years. In another study by Tesfaw M et al¹³ reported that the average age of the women who underwent bilateral tubal ligation (BTL) was 30 years. The study conducted by

Makhathini BS et al⁹ also provided supporting evidence for our findings regarding age and residence.

In this study among all the women included in the study, 68.4% had knowledge about Bilateral Tubal Ligation (BTL), while the overall rate of acceptability for BTL was found to be 21.60%. In the comparison of this study, Yakubu A et al⁸ indicated that 73% of the participants had knowledge about bilateral tubal ligation (BTL), but only 44% of them held a positive perception of the procedure. Furthermore, a significant majority of the respondents (63.8%) expressed their disapproval of using BTL as a method of contraception.⁸ In another study by Enyindah CE et al¹⁴ reported that the respondents demonstrated a low level of knowledge regarding bilateral tubal ligation. Approximately 52.5% of them had never heard of bilateral tubal ligation, while only 35.5% had a correct understanding of its meaning. Furthermore, only 18.3% of the participants expressed their willingness to consider undergoing bilateral tubal ligation in the future once they had completed their desired family size.¹⁴

In this study 31.70% of women were unwilling to undergo a surgical procedure, 24.40% expressed concerns about the irreversible nature of the procedure, 9.50% had a fear of potential regret, 7.70% experienced refusal due to their husband's hesitancy, 10.90% faced cultural barriers, 8.60% refused based on religious beliefs and 7.20 % had many other causes. On the other hand, Yakubu A et al⁸ reported that the primary reasons cited by the respondents for rejecting bilateral tubal ligation (BTL) were cultural beliefs (33.3%), feelings of regret (31.6%), religious beliefs (26.6%), and concerns about undergoing surgery (8.5%). In the study by Sajid A et al¹⁵ reported that the primary reasons cited for not using any contraceptive method were the belief of being sterile, concerns about potential side effects, and the desire to have more children. In this study, the acceptability of Bilateral Tubal Ligation (BTL) did not show any statistically significant differences based on age, parity, education, and occupation ($p > 0.05$). However, the acceptability of BTL was significantly influenced by socioeconomic status (SES) and residential status ($p \leq 0.050$). Our Findings were also supported by the other studies.¹⁶⁻¹⁸ The study had several limitations, like participants may have been selected based on certain criteria, which may have introduced bias and affected the study's results. Participants may have given responses that they thought were socially acceptable rather than their true opinions, leading to inaccurate results. The study may have been conducted in a

specific geographic area, and the results may not be generalizable to other regions or populations with different cultural backgrounds. However, implement educational campaigns to increase awareness about bilateral tubal ligation (BTL) and address misconceptions and cultural beliefs surrounding the procedure. These programs should target both the general public and healthcare providers to ensure accurate information dissemination. Provide comprehensive counselling services to individuals considering BTL as a contraceptive method. This counselling should include information about the procedure, its benefits, potential side effects, and alternative contraceptive options, allowing individuals to make informed decisions.

Conclusion

There was valuable knowledge but limited acceptability of bilateral tubal ligation (BTL), primarily influenced by cultural and religious beliefs. Additionally, the fear of regret played a significant role in deterring individuals from considering BTL, despite a considerable level of awareness regarding the procedure among the majority of respondents. By addressing the specific challenges associated with illiteracy, poor SES, and rural residency, efforts can be made to improve knowledge and acceptability of BTL among these populations. This, in turn, can empower individuals to make informed decisions regarding their reproductive health and enhance their access to effective contraceptive methods.

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