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Demographic Trends of Female Tube Sterilization Acceptors

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ABSTRACT

Objective: The objective of this study was to assess the demographic frequency distribution of bilateral female tube sterilization acceptors clients.

Methodology: A cross sectional study was conducted selecting 613 married voluntary female clients from 20-45 years of age by non-probability convenience sampling technique at family planning and reproductive health centre, Bahawal Victoria Hospital Bahawalpur for the period of 1 year from July1, 2009 to June 30, 2010. Face to face interview was conducted after informed consent with the help of a pre-designed Questionnaire Performa. Variables such as residential status, current age of wife and husband, family socio-economic status, educational status of husband, duration of marriage, working status of clients and total alive children born both boys and girls separately were included. The data was collected, condensed and analysed by SPSS-16.

Results: Out of 613 clients studied, 518 (84.502%) were from rural area, 95 (15.497%) from urban area, 609 (99.347%) from 21 to 40 years of age and 4 (0.652%) above 40 years of age. There were 508 (82.871%) husbands from 21 to 40 years but 105 (17.128%) more than 40 years of age. There were 568(92.659%) from lower class, 610(99.510%) were housewives and 540 (88.091%) illiterate. Education of husband revealed 454 (74.061%) illiterate. There were 316 (51.549%) clients married for <10 yeas, 290 (47.308%) from 11-20 years and 7 (1.141%) from 21- 30 years. Total full term live births revealed 298 (48.613%) clients with less than 5 while 313 (51.06%) with 6-10 and 2 (0.326%) clients with more than 10 births.

Conclusion: Frequency of female tube sterilization was demographically more common among clients from educated husbands, rural area residents, poor socio-economics and illiterate housewives with high parity, from 21-40 years of age and daughters production.

Key words: Fallopian tube, Sterilization, Married, Rural, Education.

INTRODUCTION

Permanent method of female sterilization is bilateral fallopian tube ligation and cut down to prevent conception through mini-laparotomy. The voluntary services for the purpose are affected by demographic factors. The incidence of female sterilization was 1% while mean age and parity were 36.9 and 6.04% respectively[1]. There is a positive trend in the acceptance of this method by young and low parity couples. There was a significant decline of sterilization age from 40–44 years towards younger age group after a decade[2].

The average age of the woman accepting tube sterilization has been decline from 30.3 to 27.7 years and the number of living children declined from 3.6 to 3.1. Similarly the proportion of high parity with 4 or more children has also been significantly declined to 2- 3 children from 51% to 25%. The attitude to accept sterilization is influenced by literacy. There was significant increase in the proportion of literate acceptors of sterilization as compared to illiterate[2].

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The use of temporary method is largely accepted to graduate or higher educated females. There were 90% under graduate women who accepted permanent method. An educational status of male partner is also influential to accept it.[2] Women of 25 to 35 years of age like sterilization twice more as compared to older or younger women[3]. Tube sterilization is widely accepted in United States of America. Its tendency rose from 4.7 to 11.7 per thousand women of the reproductive age from 1970 to 1975. Four demographic variables; age, residential area, race and marital status were studied[3].

The percentage of below 30 years of age acceptors has increased as much as 15% in a decade while the proportion of acceptors more 40 years of age was only 1/4th in 1990 to 1992 than that of 1981 to 1982.[4] However it was found that the literate acceptors of sterilization as well as higher educational status of male partner have been increased after a decade. It is found that women living in rural areas are nearly twice as likely to have tube sterilization as compared to urban.[4] It is the human right to determine a number and spacing of children in a family[5].

In certain areas of the world such as Puerto Rico Island the tube sterilization is practiced without

awareness and consent of sufferer women. There were no alternative family planning method available also[6].

In certain regions of the world where access to contraception is limited, fertility rate and maternal mortality remains high.[7] Because of the rapid and extensive fertility decline in China over the past 30 years, the country's population growth rate has slowed considerably[8].

The preference of male gender is practiced in Pakistan as well as many other countries of the world. It boosts up more children production due to male dominant society and socio-economic reasons[8]. The application of simple one clip at the mid isthemic portion through laparoscope technique provides most successful chance of reversal of fallopian tube functions when she wants children by new life partners[9]. Another acceptable method is use of female condoms as practiced in Brazil. It provides contraception as well as preventions from Aids.

METHODOLOGY

A cross sectional study was conducted at family planning and reproductive health centre located at out patients department Bahawal Victoria Hospital Bahawalpur for the period of 1 year from July1, 2009 to June 30, 2010. It is a tertiary care teaching hospital. Total number of 613 female clients was included through non-probability convenience sampling technique. They came at this centre for their permanent sterilization by bilateral fallopian tubes ligation method with their own accord, accompanied by their husbands or health workers.

The objective of this study was to assess the demographic frequency distribution of female sterilization clients visiting to family planning and reproductive health centre. Married women with two or more children, within reproductive age from 20-45 years were included in the study.

The clients having any serious medical or surgical emergency diseases, widows, unmarried and without written consent of their husbands were excluded. Face to face interview was conducted after informed consent with a pre-designed Questionnaire Performa, as shown in Annexure-I. The help of trilingual local medical staff was taken to minimise translation bias. Variables such as residential status, current age of wife and husband, family socio-economic status, educational status of husband and duration of marriage were included along with working status of clients and total alive children born both boys and girls separately. Different demographic groups were compared. The data was collected, condensed and analysed by SPSS-10. Suitable test of significance applied for comparison of multiple groups where necessary.

RESULTS

Total number of 613 female tube ligation clients was interviewed. It revealed that 518 (84.502%) belong to rural area while 95 (15.497%) were from urban area as shown in Table-1. According to the socio-economic status, 568 (92.659%) belonged to lower class, 44(7.177%) from middle class and 1(0.163%) from upper class as shown in Table-1.

The number of rural area clients was significantly ($P<0.05$) higher than that of urban area. There were 609(99.347% clients from 21 to 40 years of age while only 4 (0.652%) were above 40 years of age as shown in Table-2 Similarly age of husband was inquired. There were 508 (82.871%) husbands from 21 to 40 years of age but 105 (17.128%) were from more than 40 years of age as shown in Table 2. The husbands were having significantly ($P<0.05$) higher age than their wives to decide tube ligation. Education of wives revealed illiterate 540 (88.091%), primary educated 68(11.092%) middle school passed 4(0.652%), high school and above educated 1(0.163%). Education of husband was found to be illiterate 454(74.061%), primary passed 109(17.781%), middle 44(7.177%), high school educated 6(0.978%) (Table 2). The husbands were having significantly ($P<0.05$) higher educational status than their wives for tube sterilization decision.

Working status of these women revealed that 610 (99.510%) were housewives while 3 (0.489%) were working ladies as shown in Table-3. Duration of her marriage was also asked. It was found that 316 (51.549%) were having marriage duration less than 10 yeas, 290 (47.308%) from 11-20 years and 7(1.141%) from 21-30 years as shown in Table-3 Total number of their full term children born was inquired. It revealed 298 (48.613%) women have less than 5 children, 313(51.06%) having 6-10 children and 2(0.326%) having more than 10 children as shown in Table-4

Total live children both boys and girls separately were inquired to know the gender difference. It revealed that the number of boys were one boy among 5 (0.815%) clients, 2 in 125 (20.391%), 3 in 223 (36.378%), 4 in 174 (28.384%), 5 in 60 (9.787%), 6 in 21 (3.425%) and 7 boys in 5 (0.815%) clients families. It revealed maximum number of clients was having 3 boys alive in their family before bilateral tube ligation decision. Similarly number of live girls was asked. It was found that 120 (19.575%) women were having 1 girl while 2 in 239 (38.988%), 3 in 151 (24.632%), 4 in 67 (10.929%), 5 in 25 (4.078%), 6 in 9 (1.468%) and 7 girls in 2(0.326%) clients families showing earlier tendency of sterilization on daughters production. It revealed maximum number of women who preferred tube ligation was having 2 live girls in their families as shown in Fig-1

Table 1: Residential and socio-economic variations

Variable	Rural	Urban	Lower	Middle	Higher	Total
Residential*	518(84.502%)	95(15.497%)	-	-	-	613
Socioeconomic	-	-	568(92.659%)	44(7.177%)	1(0.163%)	613

*p<0.05 (2SE=2.9232)

Table 2: Age and education variations

Variable		Wives	Husbands
Age years*	a. 21-40	609(99.347%)	508(82.871%)
	b. >40	4(0.652%)	105(17.128%)
Total		613	613
Education**	a. Illiterate	540(88.091%)	454(74.061%)
	b. Primary	68(11.092%)	109(17.781%)
	c. Middle	4(0.652%)	44(7.177%)
	d. High school & above	1(0.163%)	6(0.978%)
Total		613	613

*p<0.05 (chi=102.719,df=1,Table=3.84), **p<0.05 (chi=54.8422; df=3,Table=7.82)

Table 3: Working status and marriage durations

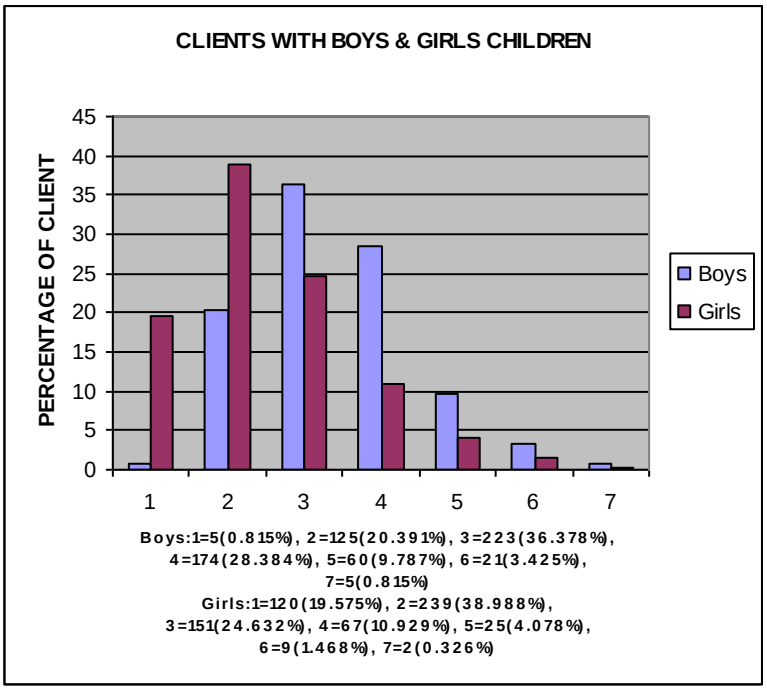
Variable	House wife	Working	<10Years	11-20 Years	21- 30 Years	Total
Working status*	610(99.510%)	3(0.489%)	-	-	-	613
Marriage Years	-	-	316(51.549%)	290(47.308%)	7(1.141%)	613

*p<0.05 (2SE=8.0747)

Table 4: Number of alive children born

Variable	<5 children	6-10 children	>10 children
Total live births	298(48.613%)	313(51.549%)	2(0.326%)

FIG. 1



DISCUSSION

Bilateral surgical female fallopian tube ligation is a permanent method of sterilization with the consent of both husband and wife. In a previous study[1], the mean age of husbands who allowed their wives for this procedure was found to be 23.8 to + - 5.8 years. It is concordant with our study where majority of the husband were from 21-40 years of age. We have found that maximum female tube sterilization acceptors were from 21 to 40 years of age. However tube ligation frequency dropped down sharply after 40 years of age. It is consistent with earlier researchers Aisten OA and Oronsaye AU[1] who mentioned mean age for sterilization to be 36.9 years. It is within our age range.

Previous workers Gupta U and Kumar P[2] mentioned age decline for female sterilization acceptors from 30.3 to 27.7 years, which is similar to our age range mentioned, further support this study. However this lower younger age shift may be attributed to the awareness and field services for sterilization at their doorstep through field surgery camps. Similar study was conducted by Layde PM and Fleming D[3] who mentioned maximum number of female sterilization acceptors range from 25-35 years of age which is further supportive to our findings where 99.347% of clients were from 21-40 yrs of age.

The residential pattern was studied by the past researchers Bass LE and Warehime MN[4] who mentioned twice higher number of rural ligation acceptors as compared to urban area. We have found 84.502% clients who belonged to rural area, which is the same as quoted in above study. It may be related to the lack of proper training and high rate of complications to use methods other than surgery.

It has been discussed in previous literature[10] that there was higher tendency of female ligation acceptors as parity increased. It is consistent with our study findings where 51.06% clients were having 610 live births before ligation. It is also mentioned[10] that a number of ligation acceptors were higher among clients with 2-3 daughters as compared to 3-4 sons. It is very similar to our results where maximum number of clients was having 3-4 sons in their family. Production of daughters increases tendency and acts as booster stimulus for early female tube sterilization acceptance. It is probably related to our social customs to have more sons in this male dominant society due to socio-economic reasons.

We studied educational status of wives as well as their husbands. It was found that husbands of these clients were having higher educational background as compared to their wives. The same has been quoted in the study[10] mentioned above which is supportive to our findings. Bibi S and Memon A[10] have also quoted that 97% clients were housewives. It is very concordant with our finding where 99.51% clients were housewives according their working status. There was no husband at 20 or below 20 years of age who accepted tube ligation of their wives that is consistent with a previous study[10] where only 0.5% husbands belonged to this age range.

Similarly we have found that 92.659% clients belonged to lower socio-economic status, which is the same as quoted in the past literature[10]. We should encourage voluntary bilateral fallopian tube ligation sterilization by providing maximum facilities and consultation at the doorstep of clients.

CONCLUSION

Female tube sterilization tendency is common among clients of educated husbands, rural area residents, poor socio-economics and illiterate housewives with high parity from 21-40 years of age.

RECOMMENDATIONS

1. Number of female tube sterilization clients can be strengthened through field camps at their door step.
2. Family Planning counselling at urban area is required through intensive health education by family planning motivators and field staff.
3. Higher education of the husbands is essential to increase the family planning acceptors.

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