

Changing Trends in the Demographic Profile and Attitudes of Female Sterilization Acceptors

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Introduction

Sterilization is one of the most popular and widely used methods of contraception in the world today. The family welfare program of the Government of India has relied heavily on sterilization as a birth control method. It is estimated that in India, about 30 per cent of all eligible couples seek family limitation by permanent methods.

Since 1971, family welfare services at the Lady Hardinge Medical College and Smt. Sucheta Kriplani Hospital in New Delhi are being provided under the All India Post-partum Program. This study was undertaken to see whether there are any changes in the demographic features and attitudes of female sterilization acceptors over a decade that is, between 1981-82 and 1991-92, and if so, whether these changes could help policy makers to improve the services.

Data

All sterilizations performed, during 1st April 1981 to 31st March 1982 (1981-82) and 1st April 1991 to 31st March 1992 (1991-92) the family welfare department of the Lady Hardinge Medical College and Smt. Sucheta Kriplani Hospital in the maternity and labor wards and at laparoscopic camps held in the villages of Palam, Dabri or Najafgarh were included in the study.

The acceptors were divided into two groups: The first group consisted of sterilizations performed during 1981-82 and included acceptor data collected from the hospital wards only as the camp approach was started from 1984 onwards. The second group comprised acceptors who had been operated during 1991-92 and included both in-hospital cases as well as camp cases. The acceptor data included demographic characteristics such as age, parity, religion, literacy status of the couple, and obstetric status. The data was analyzed statistically.

Observations

Table 1 presents a distribution of the family planning acceptors serviced by the Lady Hardinge Medical College and Smt. Sucheta Kriplani Hospital during 1981-82 and 1991-92.

Table 1: Method-wise distribution of family planning acceptors, 1981-82 and 1991-92

Method	1981-82	1991-92
Sterilization	1,627 (23.7)	2,318 (23.6)
Tubectomy	1,413	2,298
Vasectomy	214	20
IUD	2,079 (29.6)	1,596 (16.2)
Conventional contraceptives	3,317 (47.1)	5,777 (58.7)
Oral pill	16 (0.2)	144 (1.5)
Total	7,039 (100.0)	9,835 (100.0)

The numbers in brackets denote percentages.

The findings indicate that almost a fourth (24 per cent) of the family planning acceptors had adopted sterilization as a method of contraception. However, although the acceptance of sterilization seems to have remained almost the same during 1981-82 and 1991-92, that of vasectomy showed a sharp decline - from 214 in 1981-82 to 20 in 1991-92. Among spacing methods, the use of the IUD fell sharply - by nearly half - during this period while the acceptance of the oral pill and conventional contraceptives increased.

Table 2 presents a distribution of the tubectomy acceptors for the two years, 1981-82 and 1991-92, by age (panel A) and number of living children (panel B).

The results presented in Table 2 indicate a positive trend in the acceptance of the permanent female surgical method by young, low parity couples. Thus, the percentage of acceptors below 30 years of age increased by as much as 15 per cent across the 1981-91 decade while those above 35 years of age declined by nearly 10 per cent during the same period (Table 2, panel A). The proportion of acceptors in the age group 40-44 years in 1991-92 was only a fourth of that in 1981-82.

TABLE 2: Distribution of acceptors of female sterilization by age, parity and education of self and husband, 1981-82 and 1991-92

		1981-82	1991-92
A.	Age (years)		
	20-24	151 (9.3)	301 (13.0)
	25-29	641 (39.4)	1,144 (49.3)
	30-34	527 (32.4)	669 (28.9)
	35-39	227 (13.9)	177 (7.6)
	40-44	72 (4.4)	26 (1.1)
	45/45+	9 (0.6)	1 (0.1)
B.	No. of living children		
	One	1 (0.1)	1 (0.1)
	Two*	148 (9.1)	441 (19.0)
	Three #	649 (39.9)	1,294 (55.8)
	Four	515 (31.6)	439 (18.9)
	Five & more	314 (19.3)	143 (6.2)
	TOTAL	1,627 (100.0)	2,318 (100.00)

The numbers in the brackets denote percentages.

* $z = 8.9, p < .001$ # $z = 10.1, p < .001$

Table 2, panel B which gives the parity, distribution of the acceptors of female sterilization over the 1981-91 decade reinforced this finding in that the percentage of acceptors with four or more children declined significantly ($p < .01$) from 51 per cent in 1981-82 to 25 per cent in 1991-92. On the other hand, acceptors who had two and three living children increased significantly from 9 per cent to 19 per cent ($z = 8.9, p < .001$) from 39.9 per cent to 55.8 per cent ($z = 10.1, p < .001$) respectively over the same period.

Overall, during the 1981-91 decade, the average age of the women declined from 30.3 years to 28.7 years and the number living children from 3.6 to 3.1.

No change was observed with respect to the acceptance of female sterilization when analyzed in relation to the religious background of the acceptors during both years (not given in table). As expected, Hindus formed over 90 per cent of the acceptors while Muslims, Sikhs and Christians formed less than 10 per cent during both 1981-82 and 1991-92.

Table 3 presents the educational status of the women acceptors and their husbands. The findings indicate a significant increase in the proportion of literate acceptors of sterilization in 1991-92 as compared to 1981-82. The educational status of the male partner also showed an improvement during this period.

TABLE 3: Distribution of acceptors of female sterilization by own and husband's education.

Educational status	Husband		Wife	
	1981-82	1991-92	1981-82	1991-92
Illiterate	422 (25.9)	323 (13.9)	914 (56.2)	975 (42.1)
Upto primary	307 (18.9)	607 (26.2)	341 (20.9)	733 (31.6)
Middle	295 (18.2)	349 (15.1)	175 (10.8)	209 (9.0)
High school/ Intermediate	492 (30.2)	830 (35.8)	164 (10.1)	324 (14.0)
Graduate & over	111 (6.8)	209 (9.0)	33 (2.0)	77 (3.3)
Total	1627 (100.0)	2318 (100.0)	1627 (100.0)	2318 (100.0)

The numbers in the brackets denote percentages.

An analysis of the female sterilization acceptors by their delivery status indicated that obstetric cases opting for a sterilization following delivery which formed 75 per cent of all female sterilizations in 1981-82 but had declined to 68 per cent of all female sterilizations in 1991-92. Concomitantly, sterilizations requested by women who sought medical termination of pregnancy (MRP) increased from 25 per cent of all female sterilizations in 1981-82 to 32 per cent in 1991-92, suggesting thereby that sterilization combined with medical termination of pregnancy was becoming popular.

Table 4 presents a distribution of the fertilization acceptors analyzed in relation to the time lag between acceptance of sterilization operation and delivery or MTP.

TABLE 4: Distribution of female sterilization acceptors by duration between acceptance and delivery/ MTP.

Acceptor type	1981-82	1991-92
<i>Direct Acceptors</i>		
Immediate acceptors	1,118 (68.7)	1,642 (70.8)
Late acceptor	36 (2.2)	224 (9.7)
<i>Indirect acceptors</i>	473 (29.1)	425 (19.5)
Total	1,627 (100.00)	318 (100.0)

The numbers in the brackets denote percentages.

'Direct' acceptors were defined as women who accepted the sterilization operation following a delivery or MTP at the hospital, and were categorized as 'immediate' or 'late' direct acceptors. The former were women who had undergone sterilization prior to being discharged after their last delivery or MTP and the latter were those who had adopted sterilization within three months of being discharged from the hospital following termination of the last delivery or MTP. While the proportion of 'immediate' direct acceptors remained unchanged during the 1981-91 decade, the percentage of 'late' direct acceptors increased from 2.2 per cent of all female sterilization's in 1981-82 to 9.7 per cent in 1991-92. Further analysis of these 'late' acceptors revealed that the majority had delivered six or more weeks earlier and had preferred laparoscopic sterilization to the minilaparotomy procedure used in the immediate post-partum period.

Discussion

The findings of the study suggest that female sterilization has grown in popularity between 1981 and 1991 as opposed to male sterilization. This is in keeping with the general trend observed throughout the country. The popularity of female sterilization is due to the introduction of laparoscopic ligation and its increasing safety even under camp conditions. This has been observed by several workers. Khandwalal compiled data from about 500,000 laparoscopic operations performed by 69 members of the Indian Association of Gynecological Endoscopists from all over India and concluded that it was a very safe method of female sterilization. This study revealed a total complication rate of 17.8 per 1000, of which 98.7 per cent were minor complications and major complications accounted for only 0.24 per 1000 patients. From their study of 42,275 tubal ligations, Agarwal et al concluded that this technique offers a simple, safe and easy method of female sterilization.

The average age of the acceptors of female sterilization was observed to have fallen during the 1981-91 decade from 30.3 years to 28.7 years; concomitantly, the percentage of acceptors below 30 years of age had increased from 48.7 per cent to 62.3 per cent of all female sterilization acceptors. This is perhaps due to a decline in the average parity from 3.6 to 3.1 - the percentage of acceptors with two living children had increased significantly from almost nine per cent to 19 per cent with a concomitant and statistically significant decline in the percentage of acceptors with four or more children. This trend is in keeping with that reported by several workers throughout the country. The number of women requesting female sterilization with two children has increased significantly inspite of the fact that it is a permanent method of contraception. This suggests that both policy makers and surgeons should take note of the fact that they are dealing with young, low parity women. This calls for an emphasis on techniques that use the isthmic portion of the fallopian tubes and preserve an adequate length of the tube so that successful reversal of tubal ligation is possible, if required, at a later date.

The proportion of educated acceptors female sterilization and the educational status of their husbands increased significant over the 1981-91 decade. The percentage males and females who had attained graduation or above however, increased only marginally. Responses of the women included in the present study to questions concerning their family planning practices, indicated that although 90 per cent of women who were undergraduates had knowledge of all the family planning methods, the use of temporary methods was largely limited to those who had attained graduation or higher levels of education, or where other family members had successfully used temporary methods. This could perhaps be due to the fact that women with higher education were able to understand the functioning of the devices and were less fearful of complications. Hence, it is expected that sterilization will remain popular for a long time to come.

Another significant attitudinal change brought out by the study was the higher association of female sterilization with medical termination of pregnancy. Again, although there was an increase in the direct acceptors of female sterilization, the majority of them were 'late' direct acceptors who had refused postpartum sterilization soon after delivery but had turned up later for laparoscopic sterilization due to its greater safety and the fact that the operation does not require an overnight stay in the hospital and the woman can be discharged on the day of surgery. This again serves to emphasize the greater need to strengthen laparoscopic sterilization services and facilities by health care providers at all levels of functioning.

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References

1. Agarwal, S.L., Chandrawati and Tandon, P.: "Acceptance of laparoscopic ligation in last decade", *Journal of Obstetrics and Gynecology of India*, 43(4): 616-620 (1993).
2. Khandwala, S.D.: 'Laparoscopic sterilization: Indian Association of Gynecological Endoscopists' (IAGE) membership surveys", *Journal of Obstetrics and Gynecology of India*, 43(3): 305-314 (1993).
3. Gupta, S. and Dube, S.: "Problems of laparoscopic tubal sterilization", *Journal of Obstetrics and Gynecology of India*, 43(2): 281-284 (1993).