

## A Comparative Study of Laparoscopic Sterilization (Then and Now)

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### Summary

Randomly selected 500 cases undergoing laparoscopic sterilization in 1997 are compared with similarly chosen 500 cases of laparoscopic sterilization 10 years back. The aim is to study the impact of various motivation programmes and literacy drive on the age of marriage, age, parity, religion, education of husband and wife and the preference for the male child and also to compare the complication rates during these two periods. The study did not indicate any change in the proportion of cases coming from different communities. There is a shift of cases from 20-24 years age group to 30-34 years which may be reflecting improved literacy and late marriages taking place a decade later. Women having two children adopting laparoscopic sterilization have increased four fold and those having four and more children have decreased as compared to 10 years earlier. People have started accepting this permanent method even after 1 child which may be a daughter which is very encouraging. Illiterate masses comprised majority of cases 10 years back but now the number of acceptors having primary education has increased more than 3 fold as also those who are graduates and postgraduates. Majority of cases are having at least one male child but a few cases have accepted this method even after one or two daughters only in recent years.

An analysis of operative and post-operative complications shows total absence of operative complications as compared to 10 years earlier when we had a few complications like uterine perforation, tubal transection and surgical emphysema. The post operative complications also show considerable reduction and there is practically no failure in our study, which used to be there 10 years ago. This is due to better infrastructural facilities, training of doctors and stringent quality control measures, thus making laparoscopic sterilization a better accepted procedure.

### Introduction

Social Services has been identified as the Key Business Process in Tata Steel and Family Initiatives (Welfare) as an integral part of social services. Tata Steel established an independent Family Welfare Department in 1953 and is a pioneer in the country to do so. There are 25 centres all over Jamshedpur at present catering to community as a whole. All services are free to everyone

including non-employees. Laparoscopic sterilization was introduced in 1982 and one of the centres was used as a temporary site for the camps initially. For the last eight years, a fully equipped air conditioned operation theatre is made available in a central location in town. Family Welfare Department along with Community Development & Social Welfare Department takes part in literacy drives and various awareness generation programmes in the community.

**AIM**

- A. To study the impact of literacy drives and various awareness generation programmes on various parameters of acceptors of laparoscopic sterilization.
- B. To compare the complication rates over a period of 10 years.

**Material and Methods**

Randomly selected 500 cases who have undergone laparoscopic sterilization during 1997 are compared with similarly chosen 500 cases performed 10 years earlier to study the trend of cases as regards age, age of marriage, parity, religion, education of the couple and preference for male child and to compare the complication rates.

**Discussion**

Fig 1 does not show much change in the number of cases coming from different communities. Fig 2 shows a reduction of number of women marrying between 16-

20 years and an increase in the number of women marrying beyond 20 years during 1997 as compared to 1987. In line with that, Fig 3 reveals that though majority of women accepted sterilization between 25-29 years then and now but the number of cases accepting sterilization in the age group 20-24 years have reduced from 120 to 77 whereas the number of women accepting sterilization in the age group 30-34 years have increased to 132 from 85 during 1997 as compared to 1987. Fig 4 shows parity-wise analysis. Though Para III is still dominating in both these years, number of Para IV and above is significantly reduced. There is a small number of acceptors having one child during 1997 which is heartening whereas there was none in 1987. Fig 5 shows education-wise analysis of wives. Majority of them were illiterate 10 years back but now number of acceptors having primary education has increased more than three fold as also those who are graduates and postgraduates. Exactly the same picture is visible from Graph VI regarding education of husband. Though education is not directly related to the acceptance of small family norm, it plays a major role for its timely implementation and planned parenthood.

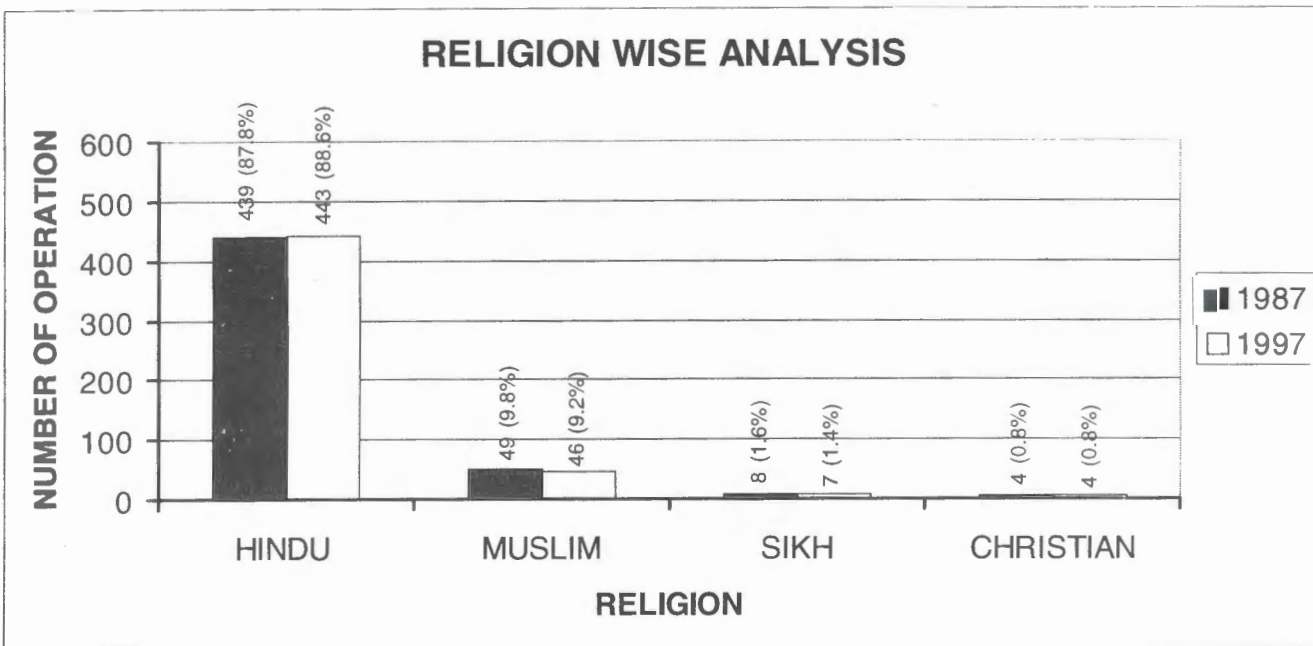


Fig 1

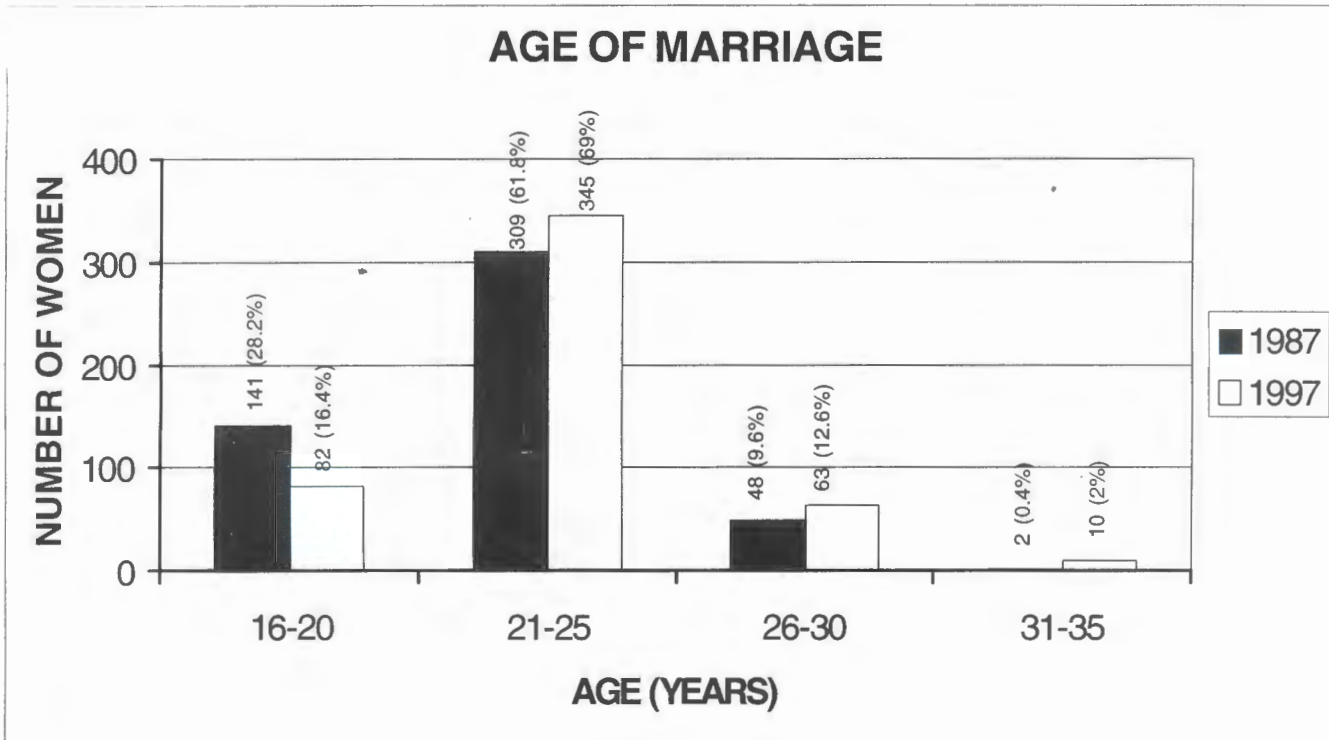


Fig 2

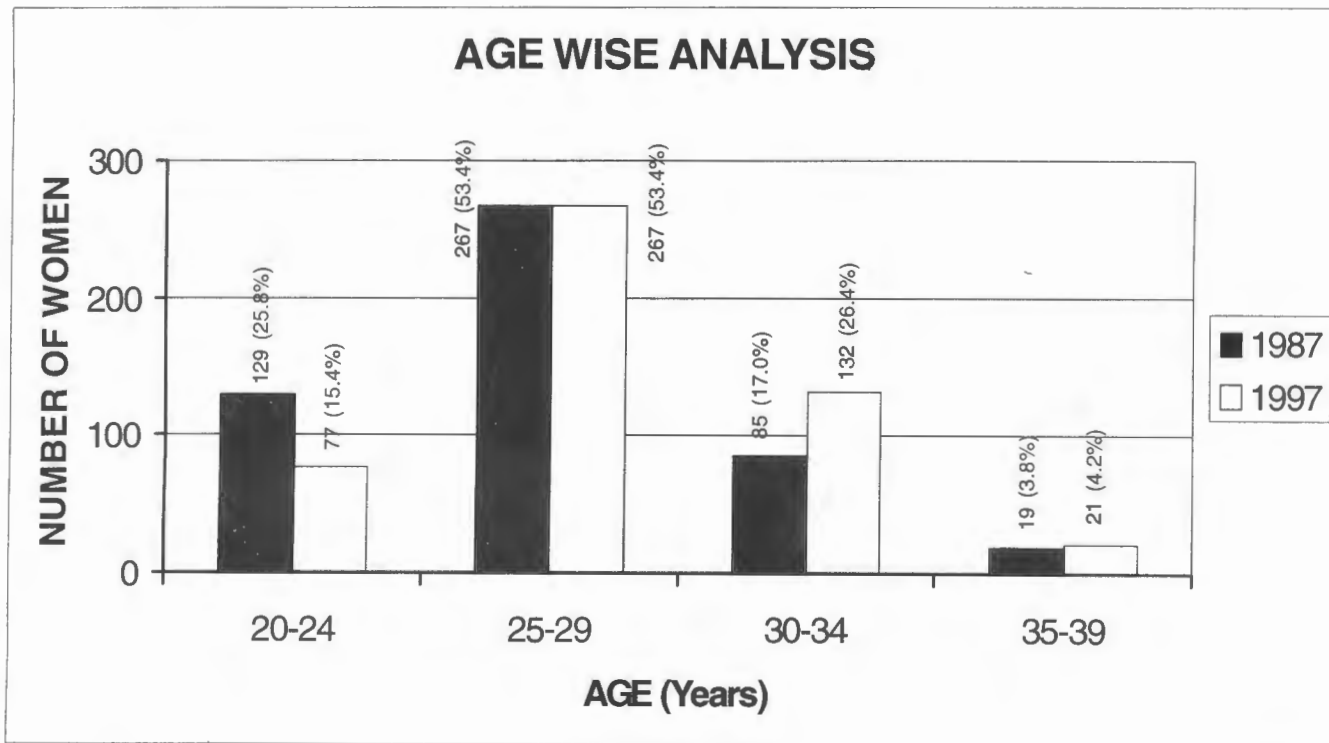


Fig 3

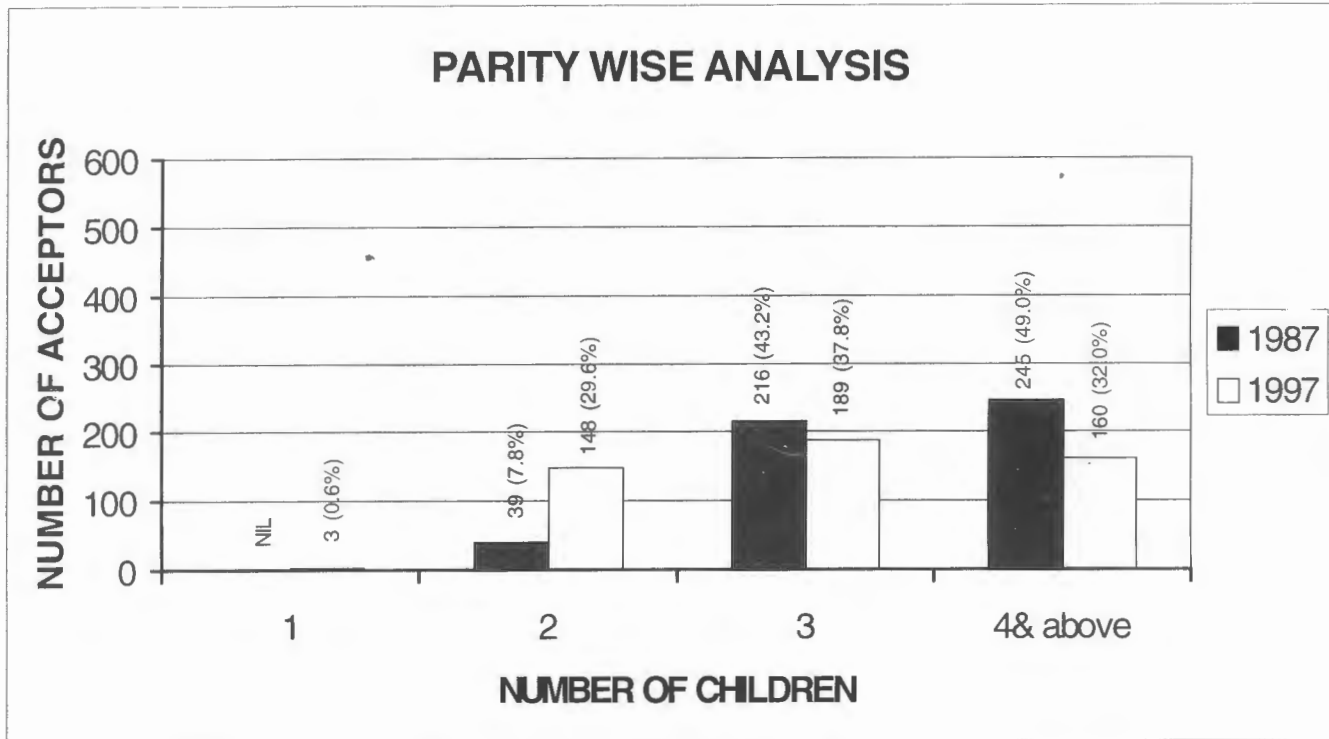


Fig 4

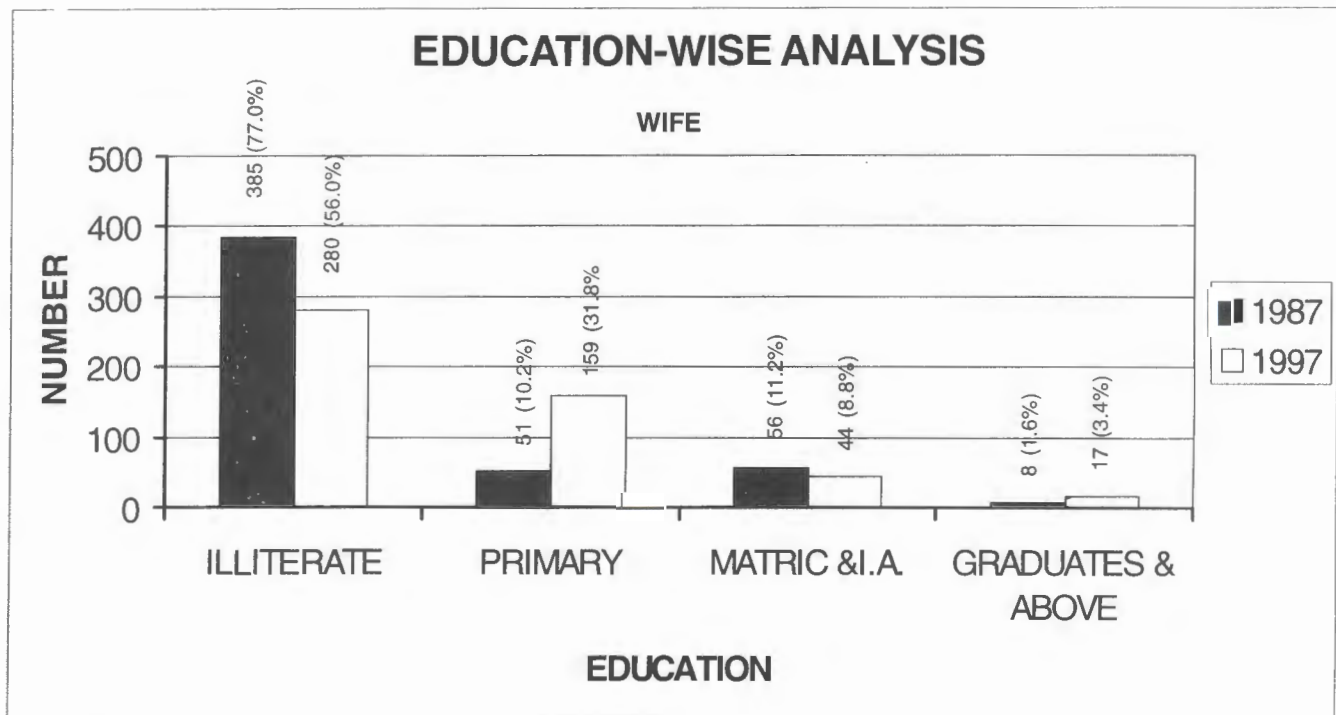


Fig 5

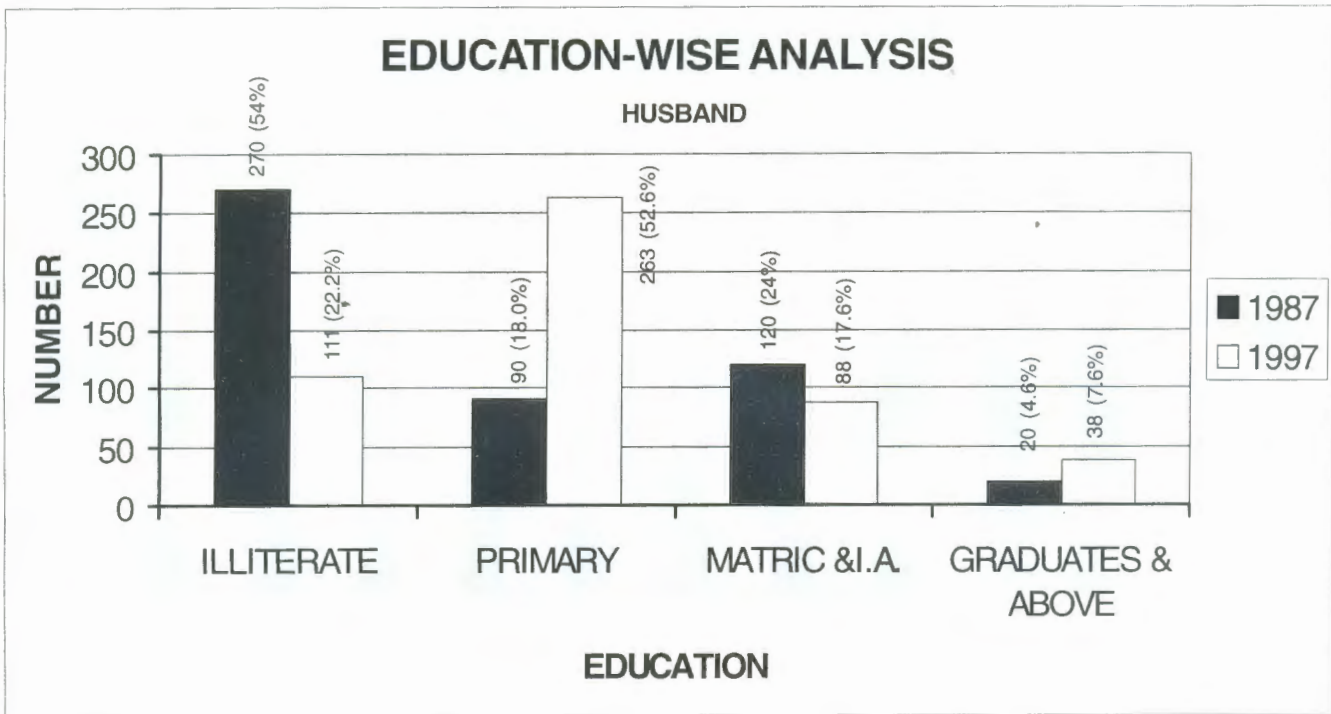


Fig 6

Table I shows the M:F ratio in the children of the acceptors. Ten years back there was no acceptor having one child but it is heartening to know that during 1997 three couples with only one daughter and no male child accepted the permanent method.

**Table I**  
Male: Female Ratio

Children	M:F	1987	1997
1	1:0	0	0
	0:1	0	3*
2	2:0	14	63
	1:1	24	78
	0:2	1	7*
3	3:0	28	21
	2:1	128	97
	1:2	56	66
4	0:3	3	5
	4:0	9	1
	3:1	41	21
	2:2	73	54
	1:3	18	22
	0:4	0	4*

Table II and III clearly show a significant reduction in operative and post-operative complications during 1997 as compared to 1987.

**Table II**  
Operative Complications

	1987	1997
Perforation of Uterus	4 (0.8%)	Nil
Transection of Tubes	4 (0.8%)	Nil
Surgical Emphysema	2 (0.4%)	Nil
Failed Pneumoperitoneum	1 (0.2%)	Nil

**Table III**  
Post-operative Complications

	1987	1997
<u>Immediate</u>		
Bleeding From Operative Site	20.40%	0.5%
Bleeding P/V	10.20%	Nil
Omental Prolapse	1.26%	0.02%
Rigors	2.00%	Nil
<u>Late</u>		
Failure	2 (0.4%)	Nil
1 IU Pregnancy		
1 Secondary Abdominal Pregnancy		
Wound Sepsis	5	Nil

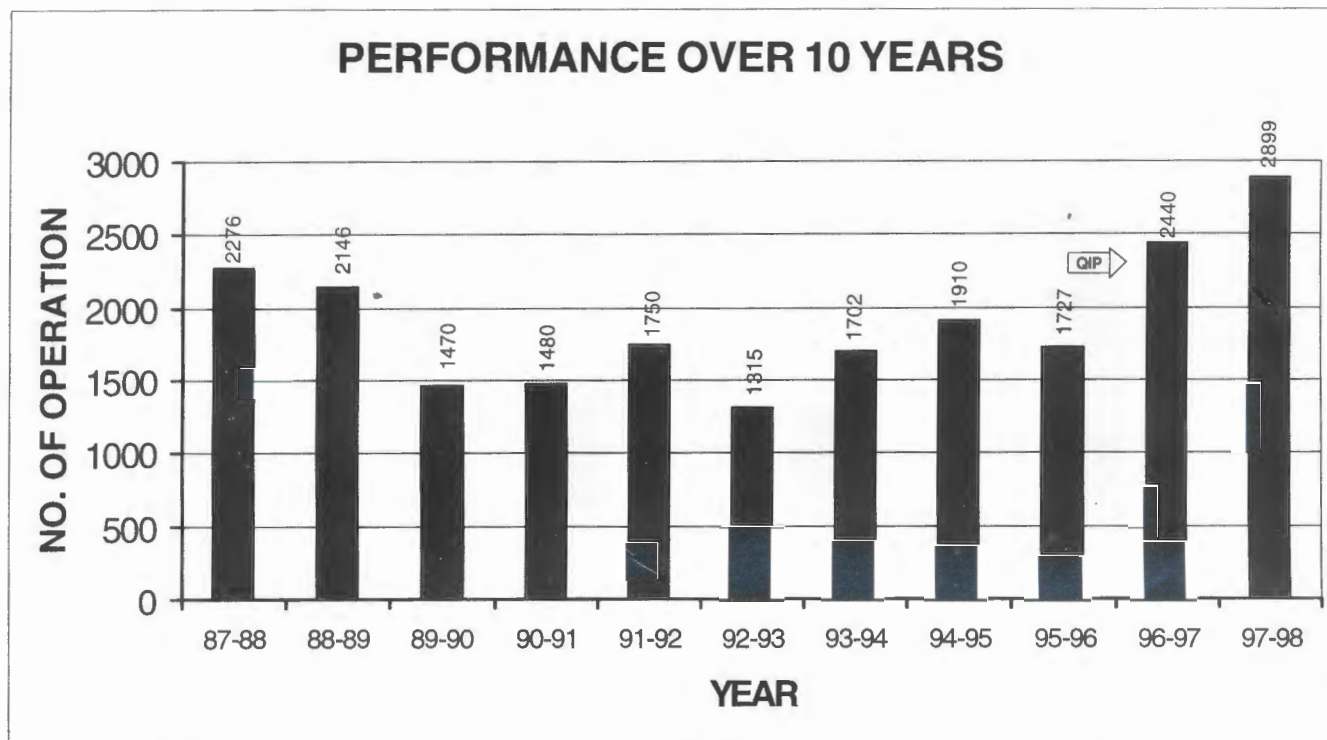


Fig 7

Fig 7 shows the performance of laparoscopic sterilization over a period of 10 years. After implementation of quality improvement project in the year 1996-97, there is an unprecedented increase in the number of cases which may be because of reduced complications as a result of stringent quality control measures.

**Acknowledgement**

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**Conclusion**

A. The impact of literacy drive and various awareness generation programmes is evident from:

- Improvement in literacy more so at a primary level.
- Increase in the age of marriage and a subsequent shift in the age group of acceptors to higher side.
- Decrease in the parity of acceptors.

A marginal but welcome improvement in attitude towards girl child.

B. Better infrastructural facilities.  
Better training facilities.

Stringent quality control measures in line with COMPANY'S QUALITY POLICY has resulted in reduction of operative and postoperative complications to a minimum, thus making laparoscopic sterilization a safe and better accepted procedure as seen from the increased performance in the last two years.