

# Profile of Post partum Female Sterilization at Tertiary care Government Hospital, Jaipur

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**Abstract**— One of the most important and indirect cause of maternal deaths is multiparity of women and that too from unwanted conception. Female sterilization is one of the adopted contraceptive methods to limit the number of children. So this study was done to find out the profile of females adopting sterilization. A record base analysis was done on records of women who underwent sterilization in Mahila Chikitsalay Jaipur in year 2014 were analysed. Women who underwent sterilization were studied with respect to parity and educational status. Out of 15911 total deliveries were conducted in year 2014, 1002 women got sterilized i.e. 6.30% post partum sterilizations were done. Out of these women who went for sterilization, 10.58% got sterilized in puerperal period after normal delivery, 59.98% were sterilized with LSCS and 16.87% women went for sterilization with MTP. After hysterotomy and ectopic pregnancy women went for sterilization significantly more than normal delivery. Maximum sterilizations were done after 2<sup>nd</sup> para and more than 4<sup>th</sup> para. Education and preference of male child was also found to be associated with acceptance of sterilization i.e. as the education increases the acceptance for sterilization also increases.

**Keywords**— Sterilization, contraceptive method, Primigravida, Multigravida

## 1. Introduction

Population growth is a big challenge for India and the government put a lot of effort in the family welfare program. In 1951, India launched the national family welfare program in order to "reducing the birth rate to the extent necessary to stabilise the population at a level consistent with the requirement of the National economy." <sup>1</sup> A new plan with new goals to reduce the birth rate is launched every fifth year. The program is financed by the government. In the beginning there was a focus on decreasing the birth rates by direct methods like sterilization and contraceptive pills. Surgical female sterilization is an effective and permanent contraceptive method. Most patients prefer a laparoscopic procedure. Voluntary sterilization is the single most common form of fertility control world wide.<sup>2</sup>

Almost half a million women die every year in world from complications during pregnancy and childbirth. About 99% of these women are from developing world with over 90% concentrated in Africa and Asia.<sup>3</sup> India contributes approximately 63,000 maternal deaths each year .National average of MMR is 212/100000 live births.(RGI 2007-2009) <sup>4</sup> So apart from social advantages, family planning also helps to preserve the health of women<sup>5</sup>.

NFHS –III<sup>6</sup> phase data reported that the small family norm is widely accepted (the wanted fertility rate for India as a whole is 1.9 (NFHS-3) Nationwide and the general awareness of contraception is almost universal (98% among women and 98.6% among men: NFHS-3). Then also the contraceptive use among married women (aged 15-49 years) was 56.3% .

There are many methods available to prevent unwanted pregnancy. Sterilization is a permanent way of preventing pregnancy i.e. limiting offspring. Female sterilization is tubectomy done by various methods and is one of the most adopted contraceptive methods to limit the number of children. So this study was done to find out the profile of females adopting sterilization.

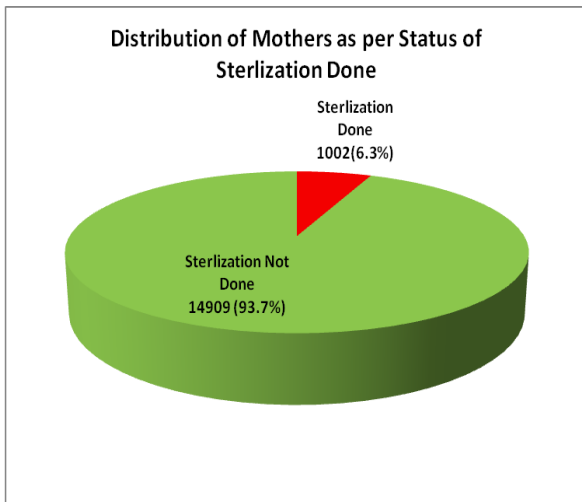
## 2. Methodology

This descriptive analytic study was carried out on records of women who attended Mahila Chikitsalay Jaipur, which is a tertiary level hospital attached to SMS Medical College, Jaipur for delivery in year 2014. For study records of women delivered over that period of one year were selected out of that cash sheets of women went on sterilization were identified. Information available in the records of these women were recorded regarding their parity with sex of children, education, preference of male child along with general information. Then proportion of women who went for sterilization and who did not went for sterilization in various categories were compared and inferred by Chi-squared test. Analysis of these variables was done with MS Excel 2007 and statistical software Primer version 6.

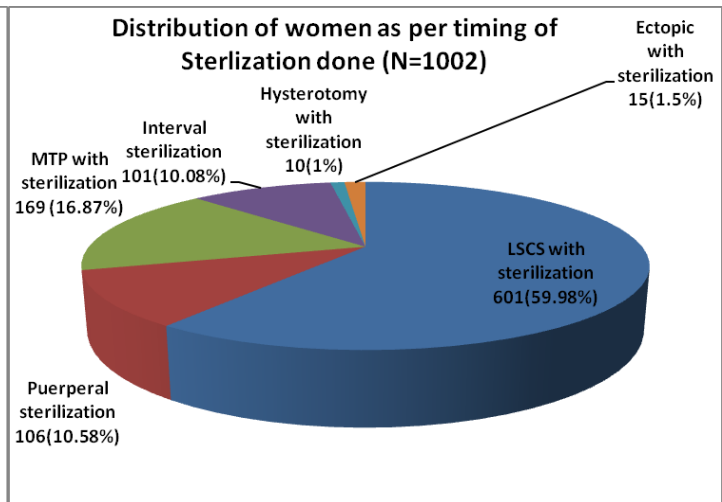
## 3. Results

Present study observed that total deliveries conducted during the study period were 15911, out of these 1002 female went for sterilization. It depicts that post-partum female sterilization rate 6.3%. (Fig. 1) Out of these women who went for sterilization maximally (59.98%) were sterilized with LSCS followed by with MTP, normal vaginal deliveries etc. (Fig 2)

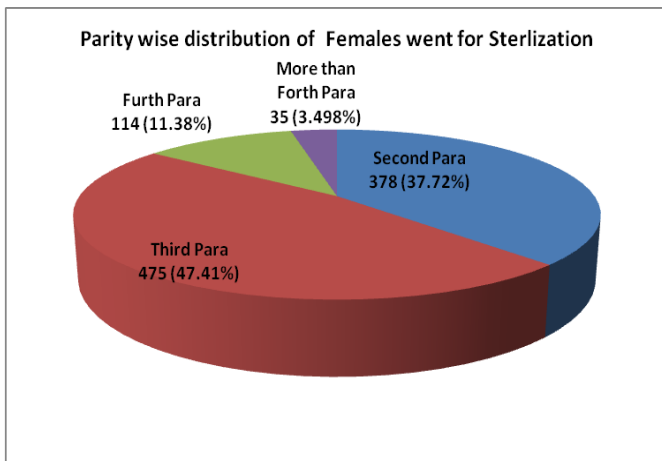
**Figure 1**



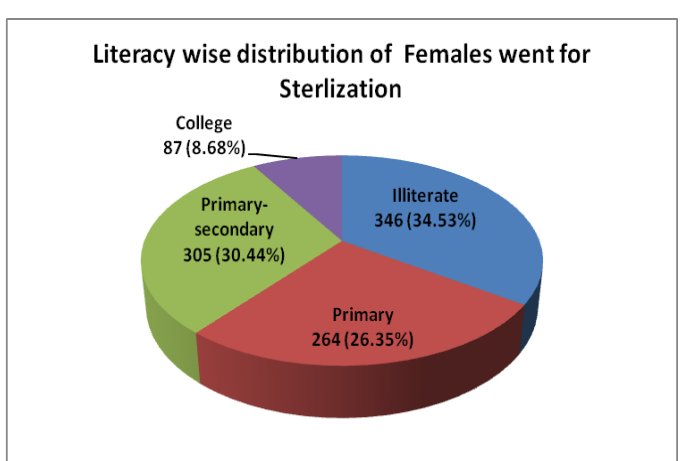
**Figure 2**



**Figure 3**



**Figure 4**



Likewise among 1002 women who went for sterilization, 47.41% women were third para at the time of sterilization followed by 2<sup>nd</sup> Para (37.72%), 4<sup>th</sup> Para (11.38%) and more than 4<sup>th</sup> Para (3.49%). (Fig. 3) When the education of these women were concerned maximum 34.53% were illiterate followed by primary to secondary, primary and collegiate women (Fig. 4)

Although overall sterilization rate was 6.3% among women attended at hospital during study period but when proportion of women went for sterilization among the total women came for that procedure, it was found that all women who has done hystotomy was get their sterilization done whereas only 1.17% of women came for normal delivery get their sterilization done. Even 78.95% of women who had ectoic pregnancy were also get their sterilization done but only 9.26% of women who had LSCS were get their sterilization done. This variation in proportion of women who went for sterilization as per procedure preceded was found significant ( $p < 0.001$ ). (Table 1)

**Table 1**  
**Association of Female sterilization with Preceded procedure**

S. No.	Condition/Procedure preceded by Sterilization	Total No of Female	No of Female Succeeded with Sterilization	
			No	%
1	LSCS	6487	601	9.26
2	Normal Delivery	9051	106	1.17
3	MTP	243	169	69.55
4	Hysterotomy	10	10	100.00
5	Ectopic pregnancy	19	15	78.95
6	None (Interval sterilization)	101	101	100.00
7	Total	15911	1002	6.30

Chi-square = 3968.824 with 5 degrees of freedom;  $P < 0.001$

LS=S

Likewise, when proportion of women went for sterilization as per the parity total women attended was concerned, it was found that maximum proportion was of 2<sup>nd</sup> Para, followed by more than 4<sup>th</sup> Para, 3<sup>rd</sup> and 4<sup>th</sup> Para. This variation in proportion of women as per the parity of women was found significant ( $p < 0.001$ ). (Table 2)

**Table 2**  
**Association of Female sterilization with parity of Women**

S. No.	Parity	Total No of Female	No of Female went for Sterilization	
			No	%
1	<b>Second Para</b>	4967	378	<b>7.61</b>
2	<b>Third Para</b>	8112	475	<b>5.86</b>
3	<b>Furth Para</b>	2371	114	<b>4.81</b>
4	<b>More than Forth Para</b>	461	35	<b>7.59</b>
5	Total	15911	1002	<b>6.30</b>

**Chi-square = 27.413 with 3 degrees of freedom; P < 0.001 LS=S**

It was also revealed from this study that proportion of women went for sterilization as per the education of women was found significant ( $p < 0.001$ ). Women who were collegiate were maximally get their sterilization done and as the education decreases the proportion of women getting their sterilization done decreases. (Table 3)

**Table 3**  
**Association of Female sterilization with Education Status of Women**

S. No.	Educational Status	Total No of Female	No of Female went for Sterilization	
			No	%
1	<b>Illiterate</b>	6117	346	<b>5.66</b>
2	<b>Primary</b>	4312	264	<b>6.12</b>
3	<b>Primary-secondary</b>	4635	305	<b>6.58</b>
4	<b>College</b>	847	87	<b>10.27</b>
5	<b>Total</b>	15911	1002	<b>6.30</b>

**Chi-square = 27.782 with 3 degrees of freedom; P < 0.001 LS=S**

When presence of male child is concerned, it was observed from this study that proportion of women went for sterilization were significantly more who has male child ( $p < 0.001$ ). It was also revealed that this difference was significantly more in women who were more than 2<sup>nd</sup> para i.e. either they went for sterlization while on 2<sup>nd</sup> parity otherwise they wait more for male child. (Table 4)

**Table 4**  
**Association of Female sterilization with presence of Male Child**

S. No.	Parity	Presence of Male Child	Total No of Female	No of Female went for Sterilization		Chi-squire Test P Value LS
				No	%	
1	<b>Second Para</b>	No	1726	59	<b>3.42</b>	<b>65.198</b> <b>P&lt;0.001 S</b>
		Yes	3241	319	<b>9.84</b>	
2	<b>&gt; Second Para</b>	No	2163	6	<b>0.28</b>	<b>146.273</b> <b>P&lt;0.001 S</b>
		Yes	8781	618	<b>7.04</b>	
3	Total		15911	1002	<b>6.30</b>	

**Chi-square Between 2<sup>nd</sup> Para and > 2<sup>nd</sup> Para = 85.732 with 1 degrees of freedom; P < 0.001 LS=S**

#### 4. Discussion:

Present study observed female sterilization rate 6.3% among the total females came for delivery. Almost similar observations were made by other author<sup>7</sup>, who reported which accounts for sterilization after 8–9% of all live births. This fact that women do not desired sterilization in post-partum period is also supported by other authors.<sup>8,9</sup>

Among 1002 women who went for sterilization in this study, 47.41% women were third para at the time of sterilization followed by 2<sup>nd</sup> Para (37.72%), 4<sup>th</sup> Para (11.38%) and more than 4<sup>th</sup> Para (3.49%). Although some states in India have two child policy<sup>10</sup>. But poor people who need the extra hands and protection against high infant mortality. So to adopt a permanent method of contraception as sterilization, the women have to be ensured that their children survive

It was also found in this study that women who has done hysterotomy and who had ectopic pregnancy were maximally get their sterilization done whereas only 9.26% and 1.17% of women who had LSCS and who had conducted normal delivery get their sterilization done respectively. This type of variation was observed by other authors also. Other author<sup>11</sup> also observed that intrapartum tubal ligation was higher when the last delivery had been a cesarean section.

It was also found that maximum proportion was of 2<sup>nd</sup> Para, followed by more than 4<sup>th</sup> Para, 3<sup>rd</sup> and 4<sup>th</sup> Para. That women either get their sterilization done after 2 child otherwise they went on waiting till 4<sup>th</sup> child or more. This may be explained that government job employees have boundation of two child norm policy.

It was also revealed from this study that as the education decreases the proportion of women getting their sterilization done decreases. A survey from UP states also observed that sterilization is significantly associated with female education.<sup>12</sup>

Preference of male child was also observed in women went for sterilization in this study. It was also revealed that this preference was significantly more in women who were more than 2<sup>nd</sup> para i.e. either they went for sterilization while on 2<sup>nd</sup> parity otherwise they wait more for male child. Similar observations have been reported by many other studies.<sup>13,14</sup> There are other cultural differences in terms of marriage practices, kinship structure, property inheritance rights and status of the women.<sup>15,16</sup> Strong preference for the son is mainly due to the traditional religious beliefs and old age support for the parents. So preference for male child over the female in Indian culture is because the male members especially the son plays an important role during family rituals like cremation of parents. Son is considered to be one, who will carry forward the family and the property.

#### CONCLUSIONS

Sterilization rate among women came for delivery during study period was 6.3% . Out of these women who went for sterilization more than half were sterilized with LSCS. After hysterotomy and ectopic pregnancy women went for sterilization significantly more than normal delivery. Maximum sterilizations were done after 2<sup>nd</sup> para and more than 4<sup>th</sup> para. Preference of male child and education of female also found to be associated with acceptance of sterilization i.e. as the education increases the acceptance for sterilization also increases. Women either get their sterilization done after 2 child otherwise they went on waiting till 4<sup>th</sup> child or more for male child.

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