

# Profile of beneficiaries of permanent sterilization from urban slum of Guwahati city of Assam

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## **ABSTRACT**

**Objectives:** To assess the profile of beneficiaries adopting female sterilization from Urban slum areas of Guwahati city at Marwary Maternity Hospital for a period of 10 years. **Methodology:** Retrospective analysis of 1981 women undergoing sterilization was done according to age, parity, education, income etc. from 2002 to 2012. **Results:** Out of 1981 women adopting sterilization, 1091 (55.1%) adopted sterilization between 25-29 years of age and mean age was 28 years. 1016 (51.3%) women adopted sterilization with parity 2 and 114 (11.2%) undergone sterilization with 2 girl child. 706 (35.6%) illiterate women adopted sterilization from the slum. 980 (49.5%) women were from income group of Rs. 1000 to Rs. 2000 per capita per month. **Conclusion:** It has been observed from present analysis that low literacy and poor economic condition is not a hinderance in adopting Family Planning methods. The access of information and quality service availability to the slum dwellers motivates the uses.

**Keywords:** Female sterilization, age, parity, religion, education, income.

**Conflict of interest:** None. **Disclaimer:** Nil.

Rapid growth of a country's population is a major hindrance towards the overall development of a country. Although India is the first country to start Family Planning Program in 1952 but the present utilization of modern methods are not satisfactory and the target replacement level 2.1 by National Population Policy (2000) is yet to be achieved [1].

One goal of Reproductive and Child Health Program (RCH) is to stabilize the population growth and to bring the Total Fertility Rate

(TFR) to 2.1 by 12-th five year plan period. Availability and access of modern methods are being expanded during the last two decades through RCH-1 and RCH-2 program, and now under National Rural Health Mission (NRHM) with an aim of increase utilization of family planning (FP) methods [2].

The expansion of service delivery of RCH has hardly resulted in any progress in the family planning sector in Assam. Although the Contraceptive Prevalence Rate (CPR) of state as

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mentioned in District Level Household and Facility Survey -2 (DLHS-2) in 2002 to 2004 was 55.6%, however use of modern methods was only 26.9% (DLHS-2, 2002-04) [3]. The improvement of utilization of modern methods of family planning in the state was very sluggish during the last decade and modern methods of contraceptive were utilized only by 31.2% as per DLHS-3 (2007-08) showing an increase of only 4.3% in six years [4]. Out of the 26.9% of modern methods of family planning used in the state, during DLHS -2 it showed only 11.6 % had sterilization and 12% used oral pill (DLHS-2, 2002-03). The scenario of FP users has also showed no improvement significantly though efforts are there and only 10.7% had sterilization during DLHS-3 (2007-08) [4].

The DLHS focuses district wise performances of FP activities and there was a better performance of Kamrup district of Assam in comparison to the overall state figure (DLHS-3, 2007-08) and 35.5% had utilized modern methods of FP. Out of them 19.2% had sterilization and 13.5% had oral pill. Amongst the user of modern methods, sterilization users were highest in Kamrup (Metro) district (DLHS-3, 2007-08).

The RCH program in urban areas has increased the assess of services to urban poor through public private partnership (PPP). In Guwahati city, Marway Maternity Hospital (Charitable Hospital) is providing RCH services, particularly in slum population of southern part of the city.

To improve the RCH services the Govt. of Assam entered in a Memorandum of Understanding (MoU) with Marway Maternity (MM) Hospital to provide RCH outreach services in urban slum of selected areas from April 2002. Out of the services delivered under the RCH, Family Planning service was one of the most highly focused services provided in the Marway Maternity hospital. Accordingly, female laparoscopic sterilization services were made available free of cost for all beneficiaries coming from slum areas under the program.

<b>Table 1: Basic characteristics of beneficiary</b>		
	<b>Category</b>	<b>Number ( % )</b>
Religion	Hindu & Others	1626 (82.1)
	Muslim	355 (17.9)
Age	Up to 19 years	1 (0.1)
	20 – 24 years	215 (10.9)
	25 – 29 years	1091 (55.1)
	30 – 34 years	560 (28.3)
	35 – 39 years	110 (5.6)
	40 & Above	4 (0.2)
Education Status of Patients	Illiterate	706 (35.6)
	Class I to IV	101 (5.1)
	Class V to VII	449 (22.7)
	Class VIII to X	637 (32.2)
	Class X Above	88 (4.4)
Income	No data	34 (1.7)
	Up to 999	4 (0.2)
	1000 to 1999	980 (49.5)
	2000 & above	963 (48.6)
Parity	1	6 (0.3)
	2	1016 (51.3)
	3	676 (34.1)
	4	216 (10.9)
	4+	67 (3.4)
Number of Male Children	0	169 (8.5)
	1	1015 (51.2)
	2	672 (33.9)
	3	108 (5.5)
	3+	17 (0.9)
Number of Female Children	0	238 (12.0)
	1	1119 (56.5)
	2	500 (25.2)
	3	89 (4.5)
	3+	35 (1.8)

During the long 10 years, from 2002-03 to 2011-2012 total of 1981 women had laparoscopic sterilization in this hospital and the demographic and socioeconomic profile of them are being analyzed in this study.

### **Materials and methods**

Present study is a record based retrospective study of family planning services provided in the selective slum area of Guwahati city from 2002-03 to 2011-2012 by Marway Maternity Hospital. The data, of the 10 years service delivered under the MoU in Marway Maternity Hospital were collected from record of the hospital in the form of different variables like age, religion, education, occupation, income of the family and

parity of women. All the data obtained from the above sources were tabulated and analyzed in the form of ratio and percentage.

**Result and observation**

1981 women were sterilized during the period from 2002 to 2013 from slum areas under the PPP program of Marwari Maternity Hospital. It was observed from Table 1 that maximum no. of female 1091 (55.1%) undergoing sterilization was in the age group of 25 - 29 yrs. Majority were from Hindu i.e. 1626 (82.1%). Mean age of the women having sterilization was 28 years. Out of total sterilisation done in the series, 706 (35.6%) women were illiterate and 88 (4.4%) women had education level of Class X above. Income of the family of the women coming for the sterilization was mostly poor. 980 (49.5%) women were from income group of Rs. 1000 to Rs. 2000 per capita per month. Most of the family had income from daily wage earners and workers in unorganized service sector.

In relation to the parity it was observed that maximum number 1016 (51.3%) of sterilization was done in parity 2. Majority 724 (71.26%) women had 1 Male and 1 female child. Ratio of women having only 2 female and 2 male child undergoing sterilization was approximately 1:1.6 (114/178). (Table 2)

Table 3 shows that 82.1% of sterilization were done to Hindu women in comparison to 17.9% of Muslim women. In relation to parity, majority women are of Para 2 in both the religion. 543 (33.4%) Hindu women and 133 (37.5%) of Muslim had sterilization at parity 3 followed by 217 (13.3%) Hindu and 66 (18.6%) Muslim women underwent sterilization with Para 3+.

From the table 4 it is seen that maximum

**Table 2: Distribution of the beneficiary according to parity with special reference to gender of child.**

Parity		Number (%) [ N- 1981]
Parity 1		6 (0.30)
	1 Male (M)	4 (66.67)
	1 Female (F)	2 (33.33)
Parity 2		1016 (51.29)
	1 M & 1 F	724 (71.26)
	2 M & 0 F	178 (17.52)
	2 F & 0 M	114 (11.22)
Parity 3		676 (34.12)
	3 M	50 (7.40)
	3 F	35 (5.18)
	2 M & 1 F	351 (51.92)
	2 F & 1 M	240 (35.50)
Parity 3+		283 (14.28)

(35.63%) women were illiterate followed by 32.2% in VIII to X standard, 22.7% in V to VII and X above was 4.4%.

Family having income of Rs. 1000-2000 per capita per month had sterilization with parity 2 for 490 (50%) women followed by 335 (34.2%) with parity 3 and 151 (15.4%) with parity 3 and above. In higher income group of more than Rs. 2000 per capita per month slightly more women, 511 (53.1%) women had sterilization with parity 2 and 331 (34.4%) with parity 3 and 119 (12.4%) women with parity 3 and above.

**Table 3: Distribution of the beneficiary according to parity with reference to religion.**

Religion	Parity ( Numbers & Percentage)				Total (%)
	Para 1	Para 2	Para 3	Para 3+	
Hindu & others	4(0.2)	862(53.0)	543(33.4)	217(13.3)	1626(82.1)
Muslim	2(0.6)	154(43.4)	133(37.5)	66(18.6)	355(17.9)
Total	6(0.3)	1016(51.3)	676(34.1)	283(14.3)	1981(100)

**Table 4: Distribution of the beneficiary according to parity with reference to education.**

Education status	Parity (Numbers & Percentage)				Total
	Para 1	Para 2	Para 3	Para 3+	
Illiterate	3(0.4)	261(37.0)	273(38.7)	169(23.9)	706
Class I – IV	0	45(44.6)	41(40.6)	15(14.9)	101
Class V – VII	1(0.2)	210(46.8)	181(40.3)	57(12.9)	449
Class VIII-X	2(0.3)	429(67.3)	167(26.2)	39(6.1)	637
Class X above	0	71(80.7)	14(15.9)	3(3.4)	88
Total	6(0.3)	1016(51.3)	676(34.1)	283(14.3)	1981

**Table 5: Distribution of the beneficiary according to parity with reference to income.**

Income	Parity (Numbers and Percentage)				Total
	Para 1	Para 2	Para 3	Para 3+	
No data	0	13(38.2)	8(23.5)	13(38.2)	34
Up to 999	0	2(50.0)	2(50.0)	0	4
1000-1999	4(0.4)	490(50.0)	335(34.2)	151(15.4)	980
2000 & above	2(0.2)	511(53.1)	331(24.4)	119(12.4)	963
Total	6(0.3)	1016(51.3)	676(34.1)	283(14.3)	1981

### Discussion

Amongst the women undergoing sterilization in the present analysis, 55.1% of women were in the age group of 25 - 29 yrs. Similarly, one study from slum areas of Surat done by Ketan B P et al. showed that maximum number of woman who had adopted permanent sterilization were in age group of 25 – 29 years [5]. But, Khan et al. reported mean age of females  $30.44 \pm 8.44$  yrs who adopted permanent sterilization, which is little bit higher than our study [6].

In the present study 35.6% women were illiterate followed by 32.2% in VIII to X standard, 22.7% in V to VII and X above was 4.4%. So, education in our study population was decisively poor. This might be due to the fact that the study group is only constituted by the slum population of the city. Hayat [7] also reported 45.6% illiterate women adopted permanent sterilization. Similarly, Shweta et al [8] found that 31.8% women having education level above high school and 17.6% illiterate women adopted sterilization in her study. In a study done by Dhingra et al. in Jammu and Kashmir, women education was 67% which was also higher than our study [9].

In the present study 51.3% women undergo sterilization at parity 2 and 34.1% with parity 3. Similar result was also found by Edmeades et al [10]. Reddy et al [11] also found 95% of women had undergone tubectomy after parity 2.

In relation to the parity it was observed that maximum no. 1016 (51.3%) of sterilization was done in parity 2. Majority 724 (71.26%) women had 1 Male and 1 female child. Other studies have found the sterilization behavior is also influenced by son preference. Leone (2003) found that in Nepal, where, as in India, sterilization is the predominant form of contraception, the proportion that had stopped

childbearing was much higher among women whose last child was a boy than among women whose last child was a girl [12]. In Malaysia, having one or more sons was found to “induce parents to adopt more effective or

permanent methods of birth control” (Pong 1994) [13]. Hussain (2000) found in Pakistan that both son preference and parity had an influence such that women stopped childbearing when they had either at least one son or three daughters [14]. But, in this study 11.2% of women with parity 2 undergone sterilization with 2 girl child. This was very impressive one which highlights the changing attitude of the couple regarding the girl child. 6 women had sterilization with only one living child and out of that 2 were Muslim women. Reddy et al [11] in their study also observed that sterilization of 45% (9/20) women with parity 2 having two female child.

In the present study 82.1% women were Hindu and 17.9% were Muslim. Comparable results were also observed by Rahman S [15] with 66.7% of Hindu and 26% of Muslim adopting tubectomy. Utilization of any method of contraceptive was found in 85.6% of Hindu and 14.4% of Muslim by Sharma V et al [16]. Anant T et al [17] reported that in their study 85.6% were Hindu and 14.4% were Muslim. Speizer et al [18] in their study also reported that Muslim women are less likely to be sterilized than non Muslim women. Regarding acceptance of sterilization with 2 child, Hindu and Muslim equally adopted the method from slums of Guwahati, against the common belief of religious stigma of permanent sterilization.

In the present study 38 (1.9%) women were in the family with per capita income below 1000/month and 49.5% women were in the group of 1000 – 2000 per capita income. Rahman S [15] reported that in his study conducted in urban slum of Guwahati City found that 8.7% were with the per capita income of above 1000 and 70% were with the income of below 900 per capita income per month.

## Conclusion

From the analysis of the cases of Guwahati slums, it has been revealed that access of FP services in the slums areas through the PPP model of MM Hospital, was a significant factor of motivation of eligible women to come forward to accept the permanent sterilization in spite of their low literacy, low income. Therefore, information and access of quality service of FP in slum areas and motivation through community workers to beneficiaries to utilize available services under the Govt. program, the utilization of all FP methods may be increased to have an impact in reproductive health and quality of life of slum women.

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