

## Young Females Undergoing Voluntary Tubal Sterilisation: Introspection into Socio-Demographic Correlates and Underlying Factors

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### Abstract:

**Background:** Voluntary female sterilization is the most widely used method of modern contraception in India and the state of Jammu & Kashmir is no exception. The study was planned to identify socio-demographic correlates of females seeking voluntary tubal sterilization and to find out the factors that influence young females to use permanent method of contraception.

**Material and methods:** A cross-sectional study was conducted in the field practice area of Government Medical College Srinagar, Kashmir India wherein 91 married Muslim females with previous normal vaginal deliveries and fulfilling the criteria for sterilisation participated in a four day voluntary sterilisation camp. With the help of pretested questionnaire, information was obtained regarding socio-demographic characteristics, reproductive history and reasons underlying their choice for sterilisation. Data was entered into Microsoft Excel and analysed using Statistical Package for Social Sciences (SPSS) version 16.0.

**Results:** Most of the females undergoing sterilisation were less than 30 years of age(69.2%), illiterate(86.8%), housewives(94.5%) and belonging to lower socioeconomic class. About 78% were married before the age of 18 years and past contraceptive use was found in only 23.1%. Significant positive correlation was obtained between age at marriage and parity with the age at ligation. The most common underlying factor for females seeking sterilisation was financial constraint(51.6%) followed by completed family (24.2%). Nearly two third of women perceived that financial dependency on males make them unlikely to undergo sterilisation.

**Conclusion:** Our study findings clearly indicate that female sterilisation as a contraceptive method does not represent a choice, rather it is imposed by circumstances of life especially the financial constraints.

**Keywords:** contraceptive, counseling, sterilization, voluntary, young, Srinagar

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### I. Introduction

India was the first country in the world to launch family planning programme in the year 1952. Since then, the approach of the government towards family planning changed from time to time in order to achieve the aim of reducing population growth.<sup>1</sup> At the start of the programme, the only method recommended was one of the natural methods of contraception that is the rhythm method. Then in 1956, the clinic approach was adopted in which various contraceptives such as condoms, diaphragms and spermicidal jellies were given to couples free of charge.<sup>2</sup> This “clinic approach” was further modified to “extension approach” in 1960s and intrauterine device and vaginal foam tablets were added to the already existing methods of contraception. Besides, an educational component was also included to bring about change in the behavior of people.

In 1966, after introduction of permanent methods of sterilisation, the method specific targets were established for health workers.<sup>3</sup> After a year, a scheme of cash incentives was introduced to attract people towards sterilisation. In 1970s, aggressive sterilization camps were held all over the country and about 8.3 million sterilizations were carried out, out of which two-thirds were male sterilisations.<sup>3</sup> Due to political fallout over forceful sterilisation, a new agenda of voluntary acceptance of family planning evolved in 1980s.<sup>4</sup> This period also witnessed a shift from male to female sterilisation. The reasons could be myths and misconceptions about the safety of vasectomy, introduction of laparoscopic techniques for female sterilisation and development

of women centred programmes such as the Reproductive and Child Health programme (RCH) .<sup>5</sup> According to centrally sponsored incentive scheme of 1991, the acceptors of female and male sterilisation were given Rs. 300 and Rs. 200 respectively.<sup>6</sup> This was revised in 2006 to Rs. 600 for female sterilisation and Rs. 1,100 for male sterilisation to compensate for the lost wages.<sup>7</sup> However, these amounts are flexible and can be modified by the state governments.

According to the National Family Health Survey (NFHS)-3 carried out in the year 2005–2006, about 37% of currently married women adopted female sterilization compared with 34% in NFHS-2 and 27% in NFHS-1.<sup>8</sup> Thus, there has been a steady increase in the percentage of women adopting sterilization in India. In 2005–2006, the country's contraceptive prevalence was 56%, and 66% of users reported female sterilization as their method.<sup>8</sup> As per NFHS-3, the male sterilization was used by 3%, compared with 2% and 4% as reported by NFHS-2 and NFHS-1 respectively.

Female sterilisation is the most widely used modern method of contraception in the world, including developing regions and many developed countries such as United States. National Family Health Survey-3 report of Jammu & Kashmir indicates a low level of contraceptive use (52.6%) as compared to National (56.3%) rates, with sterilization adopted by 26.3% of females and 2.6% of males. At the state level, studies are too limited to give a clear picture about various factors influencing the females of reproductive age to prefer sterilization than other methods of contraception. Therefore, the study was planned to identify socio-demographic correlates of females seeking voluntary tubal sterilization and to find out the factors that influence young females to use permanent method of contraception.

## II. Material And Methods

A cross-sectional study was conducted in the field practice area of Government Medical College Srinagar, Kashmir India. Ninety one married females underwent sterilisation in a four day voluntary sterilisation camp at Primary Health Centre- Hazratbal. Only those females were registered for the camp who were having at least two living children, previous normal vaginal deliveries, and age more than 20 years but less than 45 years. A pretested semistructured proforma was used to obtain information regarding socio-demographic characteristics of females. Socio-economic class was assessed by using Modified BG Prasad's scale for 2009. Information about reproductive history, reasons underlying their choice for sterilization, motivator for undergoing the procedure, family support and decision regarding number of children in the family was also obtained.

About a month prior to the camp, intensive educational campaigning about benefits, risks and irreversible nature of laprologation was carried in the Block Hazratbal of District Srinagar which comprises of four primary health centers and twelve subcentres and caters a population of 75,000 with 19,713 women in reproductive age group. Out of 11,879 eligible women, 91 consented to undergo sterilization. The educational campaigning was carried out through door-to-door visit by ANMs and ASHAs. In addition eligible females were counselled and screened by the Medical Officers at all the four Primary Health Centres of Block Hazratbal about a week prior to the camp. Those females who consented to undergo sterilization were registered in their respective Primary health centers and were escorted by the motivators who included ANMs, ASHAs and CHOs to Primary Health Centre Hazratbal where the facility to perform sterilization services were provided. Interval tubal sterilisation procedure was performed laparoscopically by two trained and experienced gynaecologists using fallope rings.

**Statistical analysis:** Data was entered into Microsoft Excel and analysed using Statistical Package for Social Sciences (SPSS) version 16.0. In the first step, frequencies and percentages were obtained. In the second step, association between various variables was analyzed using Chi square and Pearson's correlation. The association was considered statistically significant at *P*-value of less than 0.05.

## III. Results

A total of 91 married Muslim females participated in a voluntary sterilization camp. Majority of the subjects (69.2%) were 21 to 30 years of age with a mean age of 29.78 ±4.133. Most of the females were illiterate (86.8%), housewives(94.5%) belonging to class IV (68.4%) of socioeconomic class(as per modified BG Prasad's scale for the year 2009) (Table 1).

With regard to the reproductive history of subjects, about 78% were married before the legal age of 18 years and mean age at marriage was found to be 17 years. Most of them had parity of less than or equal to 3(69.2%). Regarding the number of living children, majority of them had either 2 or less than 2 living sons(90.1%) or daughters(86.8%). History of abortion was present in only 27.5% and 23.1% of females were using temporary methods of contraception. Regarding the type of contraceptive use, oral contraceptive pills were used by the majority(43%), followed by intra-uterine contraceptive devices(33%), natural methods(10%), condoms(9%) and injectable hormonal contraceptives(5%) (Table 2).

Considering the literacy of the subjects, about 54(68.4%) of illiterate females and 9(75%) of literate females were ligated before 30 years of age and the relationship between literacy and age at ligation was not found to be statistically significant( $P>0.05$ ). Similarly, the association of past abortion and use of temporary contraceptives with age at tubal ligation was not statistically significant( $P>0.05$ ). All the literate females had parity  $\leq 3$  and significant association was found between literacy and parity with  $P$ - value  $\leq 0.05$  (Table 3).

Age at marriage and age at ligation presented a significant positive correlation with  $P= 0.037$  and  $r = 0.219$ . The parity also showed significant positive correlation with the age at ligation with  $P= 0.002$  and  $r = 0.318$ . A positive correlation was observed between number of sons and age at ligation( $r = 0.134$ ) however, it was not statistically significant. Similarly, a positive correlation was observed between number of daughters and age at ligation with  $r = 0.197$ . However, the correlation was not found to be statistically significant.

Considering the reasons for undergoing tubal sterilisation, financial constraint was the factor responsible in about half of the participants, followed by completed family in 24.2%, multiple reasons (combination of above two factors) in 15.4%, health reasons (5.5%), monetary benefit (2.2%) and many daughters in 1.1% of participants (Table 4). In majority of the cases (81%), the motivator for sterilisation was ASHA, followed by ANM(9%), medical officer(6%), neighbor/relative(3%) and link worker(1%). Family support for the procedure was present in almost all the cases except one (Table 4).

When looking at the reasons for not opting male sterilisation, most of the participants (62.6%) claimed financial dependency on husband as the reason. Some of them (3.3%) were not aware of male sterilisation and about 2.2% believed that it is a sin in Islam for males to undergo sterilisation (Table 5).

#### **IV. Discussion**

Our study revealed that majority of females who participated in a voluntary sterilization camp at our Primary Health Centre were young Muslim females with a mean age of 29.78 years, mostly illiterate and homemakers belonging to lower socioeconomic class. A study by Arora N, Choudhary S and Rangunandan C in rural India also reported young females below 30 years of age (65.1%) opting for female sterilization.<sup>9</sup> About 78% of females in our study were married before the legal age of 18 years and only 23.1% were using temporary contraceptives in the past. This observation points to the various factors such as illiteracy, ignorance, poverty and lack of knowledge about other contraceptive methods that force young females to opt for permanent method of contraception.

According to NFHS- 3 report in India, about 39.7% of illiterate currently married females were sterilised and it was observed that current use of female sterilization generally decreased with an increase in the educational level of women. In India, the principle of too early, too many and too frequent is usually followed. Therefore, as soon as the females achieve their desired family size, they are sterilized.<sup>10</sup> Thus, sterilisation tends to occur relatively early, and age at sterilisation is declining significantly in some states of India. According to NFHS-1, the median age at sterilisation in India was 27 years and it declined to 25 years as reported by NFHS-3. Further, about 81% of women reported being sterilised before age 30 as per NFHS-3.<sup>8</sup>

In our study, a significant association was observed between literacy level and parity and none among the literate females had parity more than 3. These findings are consistent with another study by Abu Ahmed A et al. in the Arab village in which it was reported that as the educational level rises, there are fewer children in family.<sup>11</sup> A positive correlation between parity and age at ligation was found in our study. Similar findings were reported in another study in Brazil which clearly indicates that as the parity increases, the age at ligation also increases.<sup>12</sup> Number of sons and daughters had no significant correlation with the age at ligation in our study.

The two main reasons for opting female sterilization as cited by the females were financial constraints and completed family. As most females who underwent sterilisation belonged to lower socioeconomic class, so they felt that it was the need of time to avoid future pregnancies and prevent their families from the economic burden. A study in Burkina Faso reported that achievement of family size was the primary reason for sterilisation in their study.<sup>13</sup> Another study in Brazil also reported that satisfaction regarding number of children was the main reason for females undergoing voluntary sterilization.<sup>14</sup>

When reasons regarding male partner not opting for sterilisation was explored, majority of the females cited reasons like “males are the earning members of the family”, “females are financially dependent on males”, “health reasons of husband” and “unwillingness of husband” and only a few cited religion, and lack of knowledge about male sterilisation as a reason.. This is a pointer towards male dominance in family issues in this part of world. Many studies done in last two decades have tried to explore the dynamics of decision making in sterilisation within the scope of male dominance, religion, culture and region and the studies have come up with varied results.<sup>15</sup>

#### **V. Conclusion**

Considering the above findings, we concluded that the peculiarities of the studied group ratified the need for offering strategies to empower these women in their decisions about family planning, guarding the

principle of autonomy. But for this woman to choose the most appropriate contraceptive method, it is necessary that the family planning services make available other options, guaranteeing the continuity of the selected method.

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### References

- [1]. Ledbetter R, Thirty years of family planning in India, *Asian Survey*, 1984, 24(7):736–758.
- [2]. <http://dx.doi.org/10.2307/2644186>
- [3]. Srinivasan K, Population policies and programmes since independence: a saga of great expectations and poor performances, *Demography India*, 1998, 27(1):1–22.
- [4]. Gwatkin DR, Political will and family planning: the implications of India’s emergency experience, *Population and Development Review*, 1979, 5(1):29–59. <http://dx.doi.org/10.2307/1972317>
- [5]. Basu AM, Family planning and the emergency: an unanticipated consequence, *Economic and Political Weekly*, 1985, 20(10):422–425.
- [6]. National Population Stabilization Fund, Why is it that fewer couples opt for male sterilization? 2007, <<http://www.jsk.gov.in/faq.asp#b24>>, accessed Apr. 23, 2012.
- [7]. Government of India, Manual for Family Planning Insurance Scheme (To Be Operated by Oriental Insurance Company), New Delhi: Ministry of Health and Family Welfare (MOHFW), 2005
- [8]. <<http://mohfw.nic.in/WriteReadData/1892s/FPIS%202005%20manual15916277.pdf>>, accessed Apr. 23, 2012.
- [9]. Government of India, Manual for Family Planning Insurance Scheme: Implemented Through ICICI Lombard General Insurance Company, New Delhi: MOHFW, 2011, <<http://mohfw.nic.in/WriteReadData/1892s/FPIS%20Manual%20201136994846.pdf>>, accessed Apr. 23, 2012.
- [10]. International Institute for Population Sciences (IIPS) and Macro International, National Family Health Survey (NFHS3), 2005–06: India, Vol. 1, Mumbai: IIPS, 2007.
- [12]. Arora N, Choudhary S, Raghunandan C, Young women opting for tubal sterilisation in rural India: reasons and implications, *J Obstet Gynaecol*. 2010 Feb; 30 (2) : 175-8.
- [13]. Matthews Z et al., Does early childbearing and a sterilization focused family planning programme in India fuel population growth? *Demographic Research*, 2009, 20(28):693–720. <http://dx.doi.org/10.4054/DemRes.2009.20.28>
- [15]. Abu Ahmed A, Tabenkin H, Steinmetz D, Knowledge and attitudes among women in the Arab village regarding contraception and family planning and the reasons for having numerous children, *Harefuah*. 2003 Dec ; 142 (12):822-5,879,878.
- [16]. Ana Izabel Oliveira Nicolau, Maria Leonor Costa de Moraes, Diego Jorge Maia Lima, Priscila de Souza Aquino, Ana Karina Bezerra Pinheiro, Reproductive history of women with tubal ligation, *Acta Paul Enferm*. 2010; 23 (5) : 677-83.
- [17]. Dao B, Bambara M, Toure B, Koalaga AP, Bazie AJ, Voluntary female sterilisation via minilaparotomy: report from Burkina Faso, *East Afr Med J*. 1997 Feb; 74 (2) : 100-2.
- [18]. Fernandes AM, Bedone AJ, Leme LC, Yamada EM, Intrapartum and interval tubal sterilization, *Rev Assoc Med Bras*. 2006 Sep-Oct; 52 (5) : 323-7.
- [19]. Engender Health. From contraceptive sterilisation:Global issues and trends. Chapter 5. Factors influencing sterilisation and outcome. 2002

**Table 1** Socio-demographic characteristics of women who underwent sterilisation

Characteristics	Number (N=91)	Percentage (%)
<b>Age (years)</b>		
21-30	63	69.2
31-40	28	30.8
<b>Education</b>		
Illiterate	79	86.8
Primary	0	0
Middle	8	8.8
High	2	2.2
Higher secondary	2	2.2
<b>Occupation</b>		
Housewife	86	94.5
Weaver	4	4.4
Housemaid	1	1.1
<b>Socioeconomic class</b>		
I (Rs 3653 & above)	1	1.1
II (Rs 3652-1826)	1	1.1
III (Rs 1825-1096)	14	15.4
IV (Rs 1095-548)	62	68.1
V (Rs 547 & below)	13	14.3

**Table 2** Reproductive history of females

	Number (N=91)	Percentage (%)
<b>Age at marriage (years)</b>		
<18	71	78.0
≥18	20	22.0
<b>Parity</b>		
≤3	63	69.2
>3	28	30.8
<b>Number of sons</b>		
≤2	82	90.1
>2	9	9.9
<b>Number of daughters</b>		
≤2	79	86.8
>2	12	13.2
<b>History of abortion</b>		
Yes	25	27.5
No	66	72.5
<b>Past contraceptive use</b>		
Yes	21	23.1
No	70	76.9

**Table 3** Relationship of socio-demographic and reproductive factors with age at ligation and parity

	Age at ligation (in years)		Total N=91	P- value
	21-30 (n=63)	31-40 (n=28)		
<b>Literacy</b>				
Illiterate	54	25	79	P=0.897
Literate	9	3	12	
<b>History of Abortion</b>				
Yes	18	7	25	P=0.725
No	45	21	66	
<b>Past contraceptive use</b>				
Yes	13	8	21	P=0.407
No	50	20	70	
	Parity		Total	
<b>Literacy</b>	≤3	>3		
Illiterate	51	28	79	P=0.032
Literate	12	0	12	

**Table 4** Reasons for tubal sterilisation

Reasons	Number (N=91)	Percentage (%)
Financial constraints	47	51.6
Completed family	22	24.2
Health reasons	5	5.5
Monetary benefit	2	2.2
Many daughters	1	1.1
Multiple reasons	14	15.4

Note: Multiple reasons is the combination of financial constraints and completed family.

**Table 5** Reasons for not opting male sterilization

Reasons	Number (N=91)	Percentage(%)
Financial dependency	57	62.6
Health reason	14	15.4
Unwillingness of husband	10	11.0
Past accident/surgery of husband	5	5.5
No knowledge	3	3.3
Religious belief	2	2.2