



# Factors explaining the dominion status of female sterilization in India over two decades(1992-2016): A multilevel study



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## BACKGROUND & OBJECTIVE

- ❖ Female sterilization is a permanent method of contraception practiced widely in India.
- ❖ Relatively less research has been conducted that explores particularly female sterilization .
- ❖ The present study explores the relationship between both past and present context, on women's contraceptive use in India, in terms of temporary and permanent method over the past two decades.

## INTRODUCTION

- ❖ In spite of being the world's first country to launch the family planning program, India is the country where most sterilizations are performed in the world.
- ❖ Later in 1966, method acceptance shifted towards the permanent method, initially, the family planning program centered on the advancement of male sterilization.
- ❖ If we have a look on the female sterilization statistics we find that 37% of women in India aged between 15 and 49 are sterilized.
- ❖ Most of the sterilization performed is between age 20 and 35 years, with half of the women population in India being sterilized by the age of 35 years.
- ❖ The NFHS survey reveals that one in every three women sterilized, reported that they were not informed that it is a permanent method.
- ❖ According to the data of United Nations, India alone was responsible for 37 percent of the world's female sterilization in 2011.
- ❖ A report stated that between 2017-18, 93.1% of the sterilizations performed in India were on women.
- ❖ Sterilization should be offered only as one of the options among other safe, non-hazardous, non-invasive, long-acting methods of contraception, through an improved basic primary health-care system.
- ❖ Instead of studying the use vs. non use of contraceptives we have focused exclusively on female sterilization use and why its popularity has remained substantial.

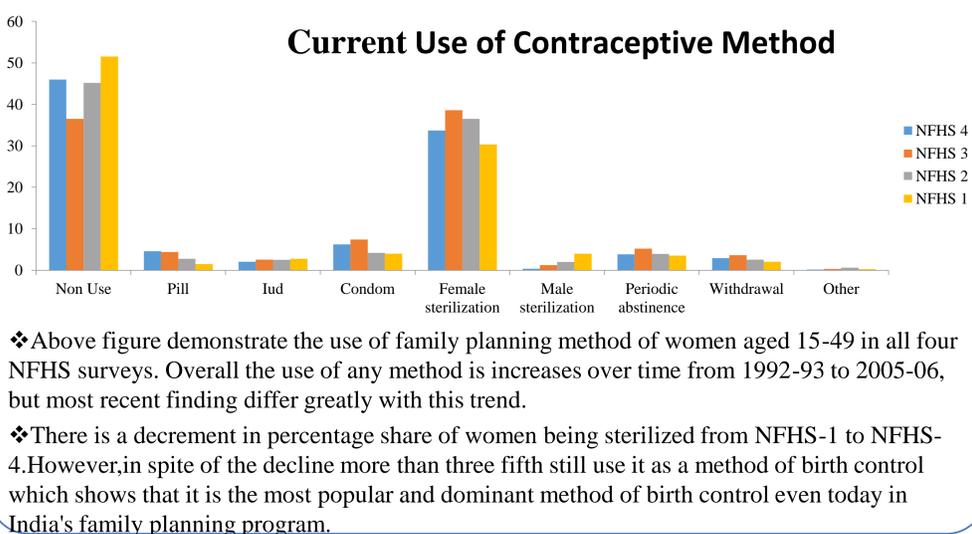
## MATERIALS & METHODS

- This study utilizes pooled data from four rounds of 1992-93, 1998-99, 2005-06 and 2015-16 National Family Health survey(NFHS).
- To identify the socio-demographic determinants governing the pioneering study behavior, multivariable techniques have been used in the analysis.
- Modeling the multinomial variables(i.e. sterilization vs. modern vs. traditional) together against two separate binomial logistic models (i.e. sterilization vs. modern; sterilization vs. traditional) is that the previous one allows the random effects in the two contrasts to be correlated.

## RESEARCH QUESTION

- Which characteristics of women are linked with the use of female sterilization?
- The share of female sterilization being almost constant in the last two decades, does the characteristics of other two methods been similar in the last 20 years?

## RESULTS & DISCUSSION



## RESULTS & DISCUSSIONS(Continued...)

Background Characteristics	Modern(versus)steril vs. Sterilization Relative risk ratio (95%CI)	Traditional vs. Sterilization Relative risk ratio (95%CI)
<b>Residence</b>	Reference	Reference
Rural	1.582** (1.305-1.865)	1.073* (1.003-1.151)
Urban		
<b>Religion</b>	Reference	Reference
Hindu		
Muslim	4.521** (4.185-4.888)	3.114** (2.859-3.391)
Others	1.553** (1.444-1.672)	1.478** (1.342-1.627)
<b>Caste</b>		
SC		
ST	0.773** (0.708-0.845)	0.588** (0.528-0.655)
Others	0.994 (0.940-1.051)	0.967 (0.905-1.032)
<b>Maternal Education</b>		
None		
Primary	1.431** (1.349-1.518)	1.104** (1.039-1.173)
Secondary	2.484** (2.360-2.615)	1.812** (1.710-1.920)
Higher and above	6.642** (6.156-7.167)	3.738** (3.408-4.099)
<b>Women's age</b>		
15-24		
25-34	0.439** (0.415-0.463)	0.538** (0.506-0.572)
35+	0.164** (0.154-0.175)	0.415** (0.387-0.446)
<b>Parity</b>	Reference	Reference
0		
1	0.930* (0.759-1.140)	0.541** (0.441-0.664)
2	0.134** (0.126-0.140)	0.073** (0.060-0.090)
3	0.089** (0.804-0.122)	0.048** (0.039-0.060)
4+	0.123** (0.099-0.151)	0.064** (0.051-0.079)
<b>No. of living sons</b>		
0		
1	0.558 (0.527-0.585)	0.503 (0.472-0.536)
2	0.287 (0.269-0.306)	0.270 (0.251-0.290)
3	0.290 (0.264-0.319)	0.302 (0.275-0.331)
4+	0.491 (0.432-0.559)	0.417 (0.369-0.473)
<b>FP Awareness</b>		
No		
Yes	1.295** (1.237-1.354)	1.040 (0.992-1.100)
<b>Household member</b>		
<5		
5+	1.289** (1.191-1.388)	1.225** (1.171-1.281)
<b>Wealth index</b>		
Poorest		
Poorer	1.026 (0.948-1.110)	0.836** (0.778-0.899)
Middle	0.990 (0.914-1.072)	0.733** (0.681-0.789)
Richer	1.339** (1.085-1.652)	0.764** (0.709-0.820)
Richest	1.620** (1.485-1.767)	0.941 (0.853-1.039)
<b>Zones</b>		
North		
Central	0.874** (0.821-0.930)	1.629** (1.508-1.760)
East	0.768** (0.710-0.830)	1.891** (1.732-2.064)
North East	2.462** (2.196-2.761)	7.505** (6.688-8.363)
West	0.268** (0.248-0.289)	0.289** (0.243-0.339)
South	0.067** (0.062-0.072)	0.117** (0.106-0.129)

\*\* p<0.01, \*p<0.05

- From the above table we find that women residing in rural areas were significantly more likely to use permanent method as compared to those residing in rural areas.
- A significant increase in risk ratio is noticed as we move from women with no education to women with higher education who have used permanent method.
- The relative risk for using modern contraceptive and traditional method relative to female sterilization reduces by a factor of 0.553 for women with one son. Likewise, the relative risk for using modern contraceptive relative to sterilization reduces by a factor of 0.287 for women with two sons
- A slight increase in modern methods can be noticed during the last decade(2005-2016) whereas the use of traditional methods shows almost no change.
- Younger women are less probable to use female sterilization method over modern and traditional methods compared with women age 35+, who are approaching the end of their reproductive years.
- Women with no children( zero parity) and those with children are significantly more likely to use modern contraceptive methods compared with their counterparts.
- Regional patterns generally displayed distinctions. As compared to the north zone we found that women of south zone are more likely to use sterilization.

## CONCLUSION & RECOMMENDATION

- Clearly, the foregoing analyses confirm the persistent dominance of sterilization use amongst the poorer strata of the Indian society highlights the weakness of the national family planning programme in promoting wider method choices. The poor quality of services and exclusive focus limited to permanent methods prevent people to adopt modern methods of contraceptives. The poor and uneducated population of the country totally depend on these services.
- There is a need to strengthen these services in the right direction promoting the effective modern methods of family planning instead of making them rely only on permanent methods.
- Religion wise comparison revealed that Muslim women dominates in using temporary methods while Hindu women prefers female sterilization.
- Reliance over female sterilization was observed in almost all parts of the country with southern India being the leading zone. The exceptionally high acceptance of sterilization at in the southern region could be correlated with high demand for limiting fertility and better network of family planning services.
- A positive effect of women's education can be noticed on modern contraceptive method use. As evident from the regression analysis, highly educated women are more likely to use modern methods.
- This result highlights the modest success of family planning programs in promoting the use of modern methods.
- Our study shows that more than two-third of currently married women rely on sterilization as a method of birth control over two decades. If sterilization remains in such high demand women will continue seeing it as their best option. The historical and political events continue to have very real implications over the family planning programme in India, therefore, is almost completely dependent on the women of the country.

### References:

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