

Introduction: International Conference on Population and Development, Cairo 1994 has reiterated the need to follow a life cycle approach on women's health. As woman's effective reproductive span is not only important with regard to her health status but it is also a deciding factor for the number of children she would bear during her lifetime. The effective reproductive span being focused here is the interval between the marriage and sterility. In India due to the prevailing societal and cultural setup decision to enter into the wedlock and ending the reproductive span was not in women's own hand. Being closely related to a woman's life course a woman's reproductive span is not only important in understanding only the fertility levels of a society but also a woman's or couple's reproductive planning, allocation of time for child bearing and decision to end reproduction. Female sterilization is one of the most popular and considered as safest and most effective methods of contraception in India, and often it is the only method used that many couples use to limit their family size. Prior to sterilisation about 54% women had not used any of the spacing methods (NFHS, 2006). It seems as if the couples do not consider spacing methods to space their children and the only thing they intend is to become sterilized. The gradually increasing age at marriage among women in India and decreasing age at sterilisation indicate that females' effective reproductive spans are contracting.

Objectives: This article aims to analyze the effective reproductive spans of Indian women by successive marriage cohorts along with factors that accelerate its completion in India.

Methods: This study has utilised data from the third round of National Family Health Survey (NFHS) 2005-06, in order to analyze reproductive spans of Indian women. A total of 83921 women were included in this study. Reproductive spans have been computed as the differences between age at sterilization and age at marriage. Survival analysis such as life table and cox –proportional hazard model has been used keeping reproductive duration as a dependent variable. Several independent variables namely demographic, social, and economic and fertility preference variables have been considered for analysis. To account for right censoring, life tables were used to estimate the probability of infecundity at various times after marriage and hence expected reproductive spans. With a view to study trends in effective reproductive spans women were divided on the basis of their duration of marriage. Cox proportional hazards regression analysis was used to examine the association between marital duration and the risk of menopause or sterilization after first marriage. Effects of women's demographic, socio-economic characteristics, women's and reproductive attitudes were also analyzed.

Results: From 1992-93 to 2005-06 the TFR of India has declined from 3.90 to 2.68 while the median age at which women married increased from 16.1 to 16.8 during 1992-93 to 2005-06 and the age at which they got sterilized declined from 26.6 to 25.5 years. The reproductive span of women of successive marriage cohorts decreased from 12.47 years among those who married in 1970s to 10.46 years among those who married in 1980s, 7.2 years among those who got married in 1990s and 3.2 years among those who got married in 2000-04. Results from Cox proportional regression analysis suggest that age at marriage influences decision to adopt sterilisation. Women who married in their 20s have a higher pace of accepting sterilisation. Religion still seems influential in adoption of sterilisation. Hindus outpace people from other religious groups in terms speed of sterilization, while abortion and any child death slow down the pace of sterilization.

Table 1. Cumulative percentage of ever-married women aged 15-49 completing effective reproductive spans, according to durations since marriage, by marriage cohort, India, 2005-06.

Marriage cohort	Duration of marriage						Total
	<4	<9	<14	<19	<24	25+	
1970-1979	5.30	40.10	73.80	92.20	98.50	100.00	6174
1980-1989	12.70	56.90	86.80	98.30	99.80	100.00	14213
1990-1999	27.90	84.50	99.40	100.00	NA	NA	11976
2000-2004	83.60	100.00	NA	NA	NA	NA	1087
Total	19.10	65.10	89.40	97.80	99.60	100.00	33450

Table 2. Hazard ratio from Cox regression analysis assessing the relationship between pace of squeeze of effective reproductive span, according to different background characteristics.

Background characteristics	Exp(β)
Age at marriage	
Below 20 [®]	
Above 20	1.258***
Religion	
Hindu [®]	
Muslim	.629***
Christian	.872***
Others	.889***
Child death	
No [®]	
Yes	.695***
Marriage cohort	
1970-79 [®]	
1980-89	1.163***
1990-99	1.646***
2000-04	3.999***
Ever had terminated	
No [®]	
Yes	.589***
Women's education	
No Education [®]	
Primary	1.207***
Secondary	1.143***
Higher	.768***

Background characteristics	Exp (β)
Husband's education	
No education [®]	
Primary	1.030*
Secondary	.913***
Higher	.726***
Caste	
SC [®]	
ST	.915***
OBC	1.095***
None of them	.926***
Working status	
No [®]	
Yes	1.164***
Wealth index	
Poorest [®]	
Poorer	1.116***
Middle	1.197***
Richer	1.290***
Richest	1.249***
Age group	
Below 30 [®]	
Above 30	.741***
Son preference	
0 [®]	
1	.916***
2	.694***
3+	.658***
Exposure to media	
No [®]	
Yes	1.078***

[®]represents reference category; *** Significance at 1%; ** Significance at 5%; * Significance at 10% level

Conclusion: Findings from the life table analysis suggest there is a squeeze of women's reproductive span with increasing marital duration through successive marriage cohorts which indicates that younger women are terminating their reproductive span by opting sterilisation faster than the older generation did. Analysis of demographic and socio-economic characteristics and reproductive attitudes indicates quicker pace of ending childbearing among younger marriage cohort as compared to older cohort. Majority of sterilized women never used any modern contraception for spacing. Indian family planning program is voluntary and it holds that people are able to choose a contraceptive method from a full range of methods with complete information

about these methods. But people receive very meagre information pertaining to choice of contraceptive method from providers. Female sterilization is most popular method of contraception and needs to be focused upon in order to reduce risk and exposure to reproductive morbidities in older ages. Squeeze of reproductive span is a matter of concerns and therefore Indian policy makers and program planners should look out for ways to encourage women and couples to postpone childbearing and spacing of births with reversible modern contraceptives.

References

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