ORIGINAL RESEARCH PAPER

Sociology

UNDERSTANDING PATTERNS OF FERTILITY IN INDIA

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ABSTRACT

Fertility is a necessary demographic process which has a significant role in the transition of a population of any country from second to the third stage as envisaged by demographic transition theory. India is in the third stage of demographic transition. The objective of this study is to understand the patterns of fertility in India. For this data have been taken from various sources like Census of India, 2011, National Family Health Survey-4, 2015-16, and Sample Registration System Report, 2017. The relevant data related to fertility have been extracted from these sources and presented in tabular and graphical form. The result indicates that bio, socio-economic and cultural variables shape fertility pattern in India.

INTRODUCTION

Fertility is a necessary demographic process, along with mortality and migration. Crude birth rate (CBR) is the crude way of measuring fertility in a country. Similarly, the crude death rate (CDR) is a crude way of measuring mortality. The difference between CBR and CDR is called a natural change in population in any country. If CBR is more than CDR, there is an increase in population and vice versa. Apart from that age-specific fertility rate (ASFR) and total fertility rate (TFR) also give essential information regarding the pattern of fertility in any country. If women follow the current ASFR, then TFR refers to an average number of children a woman would have during her reproductive life span. More the TFR more the fertility of a country and vice versa. There are many variables which condition fertility in a country. The objective of this paper is to understand the patterns of fertility in India.

DATA AND METHODS

This paper is based on secondary sources of data drawn primarily from the Census of India, 2011; National Family Health Survey (NFHS-4) 2015-16: India report; and Sample Registration System 2017 report. Essential variables that have been extracted from these sources are CBR, ASFR, TFR, residence (rural-urban), age group, birth order, level of education, wealth, religion and caste. Tables and graphs have been constructed to understand the pattern of fertility in India.

FINDINGS AND DISCUSSION

Every society passes through different stages of fertility and mortality. However, fertility presumes an important place among demographic processes. It is the fertility that is very difficult to control. Mortality responds first in the demographic transition of any country. However, fertility responds slowly and gradually to socio-economic development in society. This is true in the case of India as well. The demographic transition theory (Notestein, 1945) tells us how improvements in the health care system have resulted in a rapid decline in mortality, thereby fueled population growth rate of population in India since 1921. This trend continued until 1961. From 1971 fertility rate start declining consistently along with the decline in population growth rate. This is evident in Table 1. The data have been extracted from Srinivasan (2017) and the website of World Bank Group (2019).

Table1: CBR and TFR of India since 1901.

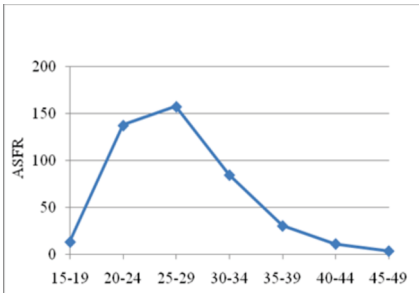
Year	CBR	TFR
1901	45.8	5.73
911	49.2	5.72
1921	48.1	5.7
1931	46.4	5.81
1941	45.2	5.93
1951	39.9	5.91
1961	41.7	6.06
1971	38.8	5.52
1981	35.9	4.77
1991	30.9	3.96
2001	26.0	3.24
2011	20.9	2.53

Source: Adapted from Srinivasan (2017) and World Bank Group

It is clear that since 1971, India has entered a different phase of demographic transition whereby it is witnessing a continuous decline in fertility rate. Further, the NFHS-4 2015-16 reports that TFR has reached as low as 2.18. So shortly, India will reach the replacement rate of fertility. However, by the time it stabilizes its population, it will overtake the population of China and will become the first most populous nation in the world.

However, there are regional variations in TFR. According to NFHS-4 data, it varies from as low as 1.17 for Sikkim to as high as 3.41 for Bihar. High fertility states where TFR is more than 2.5 include Bihar, Uttar Pradesh, Jharkhand, Manipur, Meghalaya and Nagaland. Medium fertility states and union territories where TFR is more than 2.1 but less than or equal to 2.5 include Rajasthan, Chhattisgarh, Madhya Pradesh, Assam, Mizoram and Dadar and Nagar Haveli. Rest of the states and union territories in India has reached the replacement rate of fertility or below replacement rate.

Figure 1: Line graph showing ASFR in India



Note: Constructed from the data of SRS report, 2017

ASFR also unfolds the pattern of fertility in India. SRS report, 2017 indicates that there is considerable variation in fertility according to age group. Figure 1 shows the ASFR of India, as reported in SRS, 2017. Fertility pattern changes according to the age group. It is maximum in the age group 25-29 and then declines gradually. This raises an essential issue regarding age at marriage. It may be noted that the median age at first marriage in India is 19 years; about 40 per cent of women age 20-49 marry before the legal minimum age of 18 years (NFHS-4, 2017). Early marriage means the longer reproductive life span of women and hence, significant fertility. Low level of

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fertility for the age group 15-29 is explained by biologically. This is an adolescent period whereby reproductive organs are in the process of maturity. The women are not yet fecund enough to give birth to a child. Similarly, fecundity decreases from the 30-34 age group, and at about the age of 49, a woman reaches menopause. Biological reasons account for decreasing fertility for younger and older age groups.

Further Table 2 below gives a general pattern of fertility in India according to some critical socio-economic variables. TFR is more in rural (2.41) than in urban (1.75) India. Education is also an essential factor that determines fertility. There is an inverse relationship between years of schooling completed and TFR; more the schooling less is the TFR. So education could be an essential tool to decrease fertility in India.

Further religion-wise variation is also witnessed in TFR, which is as low as 1.20 for Jain. On the other hand, Muslims have the highest TFR (2.62) in India. There are also considerable variations in TFR, according to caste. Only General (Other) caste have reached replacement level of fertility while other caste groups have yet to reach replace rate of fertility. Finally, economic status (measured in terms of wealth index) also determine the fertility levels in India. There is an inverse relationship between the level of wealth index and that of TFR; as the level of wealth index increases, there is a decline in TFR. For the lowest wealth index, it is 3.17, and for the highest wealth index, it is lowest (1.54). Overall, the TFR of India is 2.18.

Social norms and cultural values also pattern fertility in India. Compulsory and universal marriage of girls at a lower age; marriage as a sacrament, women's sterility as tremendous social stigma; a significant social and religious significance of having a son, non-use of the artificial method of contraception are some of the critical cultural determinants of fertility in India. Patrilineal descent, patriarchal authority, and patrilocal residence enforce these cultural values.

Table 2: Variations in TFR according to socio-economic variables

Socio-Economic Variables	TFR
Residence	
Rural	2.41
Urban	1.75
Schooling	
No schooling	3.07
< 5 years complete	2.43
5-7 years complete	2.38
8-9 years complete	2.19
10-11 years complete	1.99
12 or more years complete	1.71
Religion	
Hindu	2.13
Muslim	2.62
Christian	1.99
Sikh	1.58
Buddhist/ Neo-Buddhist	1.74
Jain	1.20
Other	2.57
Caste	
Scheduled Caste	2.26
Scheduled Tribe	2.48
Other Backward Class	2.22
Other	1.93
Don't know	2.81
Wealth Index	
Lowest	3.17
Second	2.45
Middle	2.07
Fourth	1.84
Highest	1.54
Total	**2.18**

Source: NFHS-4, 2015-16, India Report

Birth order also gives essential information regarding fertility in India. Birth order refers to an order a child is born in a family. The first child born in a family is called first-order birth. Similarly, the second child born to a family is called second-order birth, and so on. Birth order has a profound effect on child health as well as maternal health. The percent distribution of live births according to birth order reveals a pattern of fertility in India.

NFHS-4 data expose that of all the women who have given birth in the last three years of the survey, about 31.5 percent of women in a rural area are having third and higher-order birth. However, this figure is only 20.8 for urban women. Similarly, religious differences are also observed in birth order. Among major religions in India, the highest percent (38.2 percent) of Muslim women have birth order three and more. However, this figure for Hindu is 26.8 percent. Caste and economic status also pattern birth order in India. About 23.8 percent women in General/ other caste have birth order three and more. But this figure is about 9.6 percent point higher (33.2 percent) for STs. For the lowest wealth index, third and higher birth order is 46.3 percent while this is as low as 12.1 percent for the highest wealth index. This also confirms that poverty contributes significantly to higher-order births. However, education is the most important determinant of fertility. Data on birth order also confirm the inverse relationship between level of education and fertility. It is evident that if women have no education, then about 52.5 percent have birth order three and more. However, if they have studied up to 12 years or more than this figure dips to 7.9 percent. This data supports the argument that education is a significant tool to curb fertility in India.

CONCLUSION

Bio, socio-economic and cultural factors together determine fertility in India. Bio reasons are responsible for developing and declining fecundity among women. We have seen above that socio-economic factors like residence, religion, caste, education and wealth pattern fertility in a different way. The inverse relation between education seems to be the most potent determinants of fertility in India.

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