Inability to have children is a possibility for both men and women. Often the ill-effects of childlessness are far more severe for women than they are for men. In some societies childless women are considered inauspicious and subjected to social discrimination like restriction on participating in social events or celebrations. At times the childless women are forced to allow their husband to remarry so as to carry the family lineage. The problem of childlessness has been largely overlooked for various reasons. In some of the regions, infertility is found to be widespread and its prevalence reaching proportions that can well be considered as a public health problem affecting the life of the whole society (WHO, 1991). Thus, there is need to explore this rarely studied phenomenon.

**Objectives**

- To study the levels and changes in childlessness in India, states and districts.
- To explore the differentials in the prevalence of childlessness by selected socio-economic and demographic characteristics, and geographical variations.
- To analyse the factors affecting childlessness in India
- To examine the consequences of childlessness on women

**Data**

The data used for the present study are from Census of India for 1981, 1991 and 2001 and from the National Family Health Survey conducted in 1998-99 (NFHS II).

**Measurement of childlessness**

Demographic studies usually measure infertility by two-ways: Childlessness at the end of the reproductive life or the absence of recent live births or pregnancies. The childlessness rates in the present analysis are computed based on ‘Zero Parity’ ever married women as given in the Census of India. Following two indicators have been used:

1. **General Marital Childlessness Rate (GMCR):**
   
   \[ GMCR = \left( \frac{L}{M} \right) \times K \]  
   
   \[ \text{Where,} \]
   
   \[ L = \text{Number of ever-married women in the age group 15-44 years and } \]
   
   \[ M = \text{Total population of ever-married women in the age group 15-44 years} \]  

2. **Age Specific Marital Childlessness Rate in the } i^{th} \text{ age group (ASMCR):}**
   
   \[ ASMCR_i = \left( \frac{L_i}{M_i} \right) \times K \]  
   
   \[ \text{Where,} \]
   
   \[ L_i = \text{Number of ever-married women in the age group 15-44 years and } \]
   
   \[ M_i = \text{Total population of ever-married women in the age group 15-44 years} \]  

The spatial distribution of the childlessness is studied with the help of GIS.

**I. Levels and changes in childlessness in India, states and districts**

In India, 13 percent of ever-married women aged 15-49 years were childless in 1981 (rural 13.4 % and urban 11.3 %) which increased to 16 percent in 2001 (rural 15.6 % and urban 16.1 %). Over half of married women aged 15-19 years were childless in 1981, which increased to 70 percent in 2001. The Age Specific Childlessness Rate (ASCR) continues to decline through ages 35-39. The pace slows down, reaching to 5 to 9 percent for 30-34...
years and stabilized thereafter at 4 percent in 1981 and 6 percent in 2001. Rural GMCR in southern states ranged from 15 percent in Kerala to 18 percent in Tamil Nadu and in northern states from 15 percent in Madhya Pradesh and between 17 to 20 percent in Bihar, Uttar Pradesh and Rajasthan. In urban areas, Kerala had the lowest GMCR among southern states and GMCR varied between 14-18 % among northern states. The levels of childlessness for women aged 40-49 years increased considerably in many states in the past two decades.

II. Differentials in childlessness

a. Religion

The GMCR was higher by about 2 percent for Muslim women and by one percent for Christian women in comparison to Hindu women. The ratio of Muslim GMCR to Hindu varies from a lowest of 0.86 in Madhya Pradesh and 0.88 in Uttar Pradesh to as high as 1.28 in Kerala in 1981. The relative differentials in GMCR have been wider for Hindu-Christian women in comparison to Hindu-Muslim women (Fig. 1). The childlessness at the national level was higher for Hindu women for all ages in 1981 and 2001 until age 29 years and was higher for Muslim women after age 29 years. Differentials in ASMCR in general are wider between Hindu-Christian than they are for Hindu-Muslim and have further widened in the recent times.

b. Education

The GMCR for Indian women increases with improvement in educational status of women (the gaps being 7 percent points for graduate and higher education than illiterate in 2001) and has shown increasing trend over time (pace being rapid for better educated women) (Fig. 2). GMCR has dramatically changed in Karnataka, Madhya Pradesh, Rajasthan, Uttar Pradesh and Haryana amongst illiterate women whereas has remained somewhat similar in Bihar, Punjab, Himachal Pradesh and Orissa during 1981-2001. The differentials by educational status are substantially wider in southern states in 2001 whereas they are narrower in Bihar, Madhya Pradesh and Rajasthan. Among women with graduation or more, GMCR has dramatically changed in Karnataka, Maharashtra and West Bengal from 20.97 to 20.99 in 2001 compared to 20.53 for women with graduation or more in 1981.

*Fig. 2: Women’s Education and Childlessness, India, 1981-2001*

The GMCR remained lower for main workers for all ages in 1981 and 2001 in Bihar, Madhya Pradesh, Rajasthan and Bihar, Haryana, Himachal Pradesh and West Bengal. However, the reverse was true for Christian women. In 2001, the GMCR for Christian women was lower for main workers in Bihar, Madhya Pradesh, Rajasthan and Bihar, Haryana, Himachal Pradesh and West Bengal. In 1991, Karnataka, Kerala, Madhya Pradesh and Maharashtra had lower GMCR for main workers whereas in other states it was higher for the non-workers.

*Fig. 1: GMCR by Religion, India, 1981-2001*

In 1981, GMCR was higher by about 13 percent among main workers and by about 11 percent among marginal workers as compared to non-workers at the national level. However, this scenario has changed by 2001 as the GMCR was less by nearly 4 percent and 10 percent points respectively for main and marginal workers respectively (Fig. 3). At the state level in 1981, the GMCR was lower for main workers in Kerala, Bihar and Madhya Pradesh while the reverse was true for the remaining states. The GMCR in 1981 was higher for marginal workers in Karnataka, Uttar Pradesh, Haryana and Himachal Pradesh, Maharashtra, Orissa and West Bengal while for the remaining states it was higher for the non-workers. In 1991, Karnataka, Kerala, Madhya Pradesh and Maharashtra had lower GMCR for main workers whereas in other states it was higher for the non-workers.

c. Women’s Economic Activity

In 1981, GMCR was higher by about 13 percent among main workers and by about 11 percent among marginal workers as compared to non-workers at the national level. However, this scenario has changed by 2001 as the GMCR was less by nearly 4 percent and 10 percent points respectively for main and marginal workers respectively (Fig. 3). At the state level in 1981, the GMCR was lower for main workers in Kerala, Bihar and Madhya Pradesh while the reverse was true for the remaining states. The GMCR in 1981 was higher for marginal workers in Karnataka, Uttar Pradesh, Haryana and Himachal Pradesh, Maharashtra, Orissa and West Bengal while for the remaining states it was higher for the non-workers. In 1991, Karnataka, Kerala, Madhya Pradesh and Maharashtra had lower GMCR for main workers whereas in other states it was higher for the non-workers.

d. Women’s Caste

The GMCR has increased more rapidly for other castes women followed by Scheduled Caste (SC) whereas for Scheduled Tribe (ST) women it increased marginally (to 16 % in 2001 from 14.47 % for ST women, 13.22 % for SC women and 12.74 % for the Non-SC/ST women) (Fig. 4). In 2001, the GMCR for SC women was high in Bihar, Tamil Nadu, Andhra Pradesh and Uttar Pradesh (18-19 %) followed by Karnataka, Kerala, Madhya
Pradesh, Rajasthan and Gujarat (14 to 16%). For the ST women, GMCR was lowest at 12 percent in Himachal Pradesh and 13-14 percent in Gujarat, Maharashtra and Madhya Pradesh and it was as high as 23 percent in Tamil Nadu. The GMCR for non-SC/ST women was highest for Tamil Nadu, Bihar and Uttar Pradesh (over 18-19 %) and was lowest in Himachal Pradesh (11 %). In Andhra Pradesh, Rajasthan and Gujarat it was around 16-17 percent. In 2001, GMCR for SC women was high in seven states. The GMCRs were lower for ST women in Bihar, Madhya Pradesh, Rajasthan, Gujarat and Maharashtra. In most states, the differentials are wider between ST and Non-SC/ST women. The ASMCRs for India were relatively higher for SC women aged 25 years and above in 1981 and at all ages in 2001. In 2001 the differences between the two groups of women widened with increase in age until age 40. For ST women, the ASMCR was higher at all ages during 1981 than Non-SC/ST women and the differences were substantial.

III. Geographical Pattern of Childlessness in India, States and Districts

Majority of districts in India (about 64 % and 75 % districts in 1981 and 2001 respectively) fell in Medium Prevalence Districts group (MPD). Nearly 28 percent of districts in 1981 fell in Low levels Prevalence Districts group (LPD), which declined to 3 percent in 2001. About 4 percent districts in 1981 fell in high prevalence districts group (HPD) which increased to 22 percent in 2001 indicating a dramatic shift in the position of the districts from low to high prevalence. Of the 115 LPDs in 1981, 27 were from undivided Uttar Pradesh followed by Karnataka (19), Maharashtra (11), West Bengal (10) and Arunachal Pradesh (9), constituting two-thirds from these five states alone. Of 18 LPD districts in 2001, 11 were from Haryana, six from Rajasthan, two from Manipur and one from Himachal Pradesh. All districts in Karnataka, Arunachal Pradesh, Meghalaya and Mizoram belonged to LPD group in 1981. Of the 262 MPD in 1981, 39 were from undivided Madhya Pradesh, 28 from undivided Uttar Pradesh and 26 each from Rajasthan and undivided Bihar. All districts of Gujarat, Rajasthan and Tamil Nadu belonged to MPD in 1981. Of the 18 HPD districts in 1981, 7 were from Andhra Pradesh, 4 from undivided Madhya Pradesh, 3 from Orissa, 2 from Manipur and one from undivided Uttar Pradesh.

IV. Factors affecting childlessness

Likelihood of childlessness is closely associated with place of residence, religion, standard of living index, educational and economic activity status, age at marriage, body mass index (BMI), substance use, reproductive morbidity status and caste (at significance level of 5 %) among young women (aged 15-34 Years). Among older women (aged 35-49 years), likelihood of childlessness were greater for those with schooling, economically active, married after age 18, have medium BMI, substance users and experienced any reproductive morbidity in the past. The gaps were particularly wide with respect to age at marriage and economic activity. The likelihood of childlessness was lower for the older women residing in the rural areas, belonging to non-Hindu religions, SC/ST women and those from medium and higher SLI groups as compared to their counterparts.

V. Consequences of Childlessness

Marital Disruption: Over 4 percent of younger childless women aged 15-34 were divorced/separated/deserted as against just 1.5 percent among those with children. Over 17 percent childless women aged 35-49 years experienced marital disruption compared to less than 2 percent among those with children, indicating greater marital disruption for childless women. Over 23 percent of the childless women aged 35-49 years and 5 percent of them aged 15-34 years living in southern states experienced marital disruption in comparison to just 3and less than 2 percent respectively for women with any children. Eleven percent of older childless women experienced marital disruption in north and north-eastern region as compared to less than 3 percent among women with children.
Gender Based Violence: The proportion of women who experienced violence from husband/in-laws was over 19 percent points for older childless women than women with children. Relatively higher proportion of older childless women from the central and north-eastern regions has experienced violence. In western and eastern regions too relatively higher proportions of older childless women experienced violence (16 and 22 %) than those with children (13 and 21 %).

Conclusions
The study suggests that the level of childlessness in India is moderate in comparison to other countries. In 2001 nearly 16 percent of Indian women in the reproductive ages were childless. It was higher in the southern states as compared to the northern states. The analysis further reveals that there prevail differentials in childlessness by religion, caste, education and economic activity status. The district level analysis reveals that the levels of fertility are higher in the districts with lower levels of childlessness rates and fertility levels were lower in districts where the prevalence of childlessness was higher. The analysis of childlessness by districts reveals that there are groups of districts in a geographical proximity where the rates are higher (Fig. 5). The likelihood of childlessness among young women is closely associated with place of residence, religion, standard of living index, educational and economic activity status, age at marriage, body mass index (BMI), substance use and reproductive morbidity. Among older women, those with schooling, economically active, married after completing 18 years, with medium BMI, substance users, and experienced any reproductive morbidity have higher chances of being childless as compared to others. The analysis further shows that women who remain childless face many adverse consequences in the form of divorce/desertion and discrimination.

Reference

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