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Estimates of Christian Fertility and Mortality in Nineteenth Century Rural India†

Introduction

THE historical demography of developing nations, keeping with their state of development, is in its infancy. India is no exception to this. Our objective here is not to examine the paucity of research in this area. If data are available, even if they be for a small segment of the population, we could develop some estimates of vital rates, etc. from those data. We attempt to present here estimates of fertility and mortality of the Christian population of India from ecclesiastical returns and compare them with what are known from the censuses. The estimates of Indian fertility and mortality are generated from the decennial census data. Davis (1951) has referred to the estimates of birth rates prepared by Hardy, the census Actuary, for the provinces of Bengal, Bombay, Madras, Punjab and the United Provinces of British India. The estimated rates varied between 43.9 and 52.9 per 1000. Davis' (1951) own estimates of Indian birth rate are 49 per 1000 during 1881-1891 and 46 per 1000 during 1891-1901. He estimates death rate as41.3 per 1000 in 1881-1891 and 44.4 per 1000 during 1891-1901.

The vast majority of the people of India are Hindus, but adherents to other religious tenets are sizeable. Christians form such a group. Even though Christianity in India dates back to first century A.D., data from parish records are available only for some selected areas. Srivastava (1972) has presented a picture of the vital situation in Goa during the nineteenth century. His estimates of birth and death rates for Goa are shown in Table 1. The birth rate ranged from 25 to 38 per 1000 during 1845-1900.

Fertility in Madras Presidency

The various Christian missionary groups that worked in India have provided us with information on baptisms (child and adult) and burials of those converted to the new faith. From such data, indirect indicators of fertility are developed and presented in Table 2. These are for Madras Presidency from the Society for the Propagation of the Gospel (SPG). Children form some 40 to 45 percent of the population, whether the baptized or the unbaptized group is considered. We may then infer that the birth rate was over the 40/1000

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Table 1: ESTIMATES OF FERTILITY AND MORTALITY, GOA

	CBR	CDR
1835	34.7	42.4
1845	37.6	53.7
1855	21.2	24.9
1865	26.3	33.5
1875	32.1	52.5
1885	33.6	24.4
1895	34.9	20.0
1900	25.0	39.8

mark. For the years 1865 and 1870, the low values of baptismal rate may be due to fluctuations and instability on account of small base populations. At some points in time, the number converted to the new faith falling under the jurisdiction of a mission was small in those early years of missionary activities.

TABLE 2: INDICATORS OF FERTIIJTY, MADRAS 1850-1900

Year	*Baptismal Rale*	*Percent Children (Baptized Group)*	*Percent Children (not Baptized Group)*
1850	43.5	44.5	44.3
1855	45.0	43.7	43.2
1860	47.4	43.4	41.3
1865	29.5	41.8	39.7
1870	28.3	41.6	40.9
1875	40.1	42.1	44.5
1881	44.3	38.7	40.7
1900	31.5	41.3	46.1
Average	38.7	42.1	42.6

Source: Computed from data obtained from the annual reports of the Society for the Propagation of the Gospel.

Notes: 1. Baptismal rate is computed as number of child baptisms per 1000 adherents.
2. Children are those aged 0-14.

Fertility Estimates from CMS Returns

We shall present now another set of estimates from the returns of the Church Missionary Society (CMS). From the data on child baptisms, without any correction for infant and child mortality, estimates of fertility for the CMS Christian population arc shown in Table 3. The average value of the birth rate during 1870-1900 is seen as 38.5 per 1000. If correction for infant and child mortality is applied, the real fertility level will exceed the 40 per 1000 mark.

TABLE 3: BIRTH RATE FROM BAPTISMS. CMS RETURNS

Year	Birth Rate from Baptisms
1870	32.1
1875	37.8
1880	41.3
1885	38.6
1890	38.4
1895	36.4
1900	44.7
Average	38.5

Note : The birth rate is defined as $\frac{\text{No. of child baptisms}}{\text{No. of adherents}} \times 1000$.

Note that some infants might have died even before baptism.

Estimates of Mortality in Madras and Calcutta Mission Areas

From the burial statistics compiled by the SPG missions, estimates of mortality without correction for infant deaths, are obtained. For the Madras mission, the burial rates were 10.6 per 1000 in 1848,11.4 in 1849 and 17.4 in 1850. For Calcutta, the rates were higher - 19.6 per 1000 in 1855, 27.9 in 1863 and 44.5 in 1864. These values do not seem to be realistic in light of Davis' (1951) estimates.

Estimates from a CMS Census of Villages in Bengal

The CMS had conducted a census of 815 prolestant families in Nuddca district of Bengal. These families had been drawn from 37 villages. The data are as of December 28,1868.

The average size is computed as 5.2 persons per family. Thus we see 3.2 children on an average per family (assuming two adults — father and mother). The age distribution of the population is shown in Table 4. We may employ the Bogue-Palmore (1964) and the Rele (1967) techniques to generate fertility estimates for the CMS Christian population of rural Bengal. The Bogue-Palmore estimates are as follows:

Ratios Used	CBR Estimate
Children (5-9)/Women (20-54)	51.8
Children (0-4)/Women (15-49)	26.4
Percent Children (0-4)	27.6
Percent Children (5-9)	49.6
Percent Children (0-1 4)	35.5

The estimate of total fertility ranges from 3733 to 7441 per 1000 women.

TABLE 4: AGE DISTRIBUTION OF FEMALES AND MALES FROM 815 NATIVE PROTESTANT FAMILIES, NUDDEA DISTRICT, INDIA 1968

Age	*Females*	%	*Males*	%
Under 1	61	2.92	*66*	3.03
1-10	581	27.82	584	26.81
10-20	441	21.12	558	25.62
20-30	413	19.78	347	15.93
30-40	256	12.26	275	12.63
40-50	183	8.76	210	9.64
50-60	88	4.21	79	3.62
60-70	41	1.96	42	1.93
70 +	24	1.15	17	0.78
Total	2,088	99.98	2,178	99.99

Source: Computed from CMS census.

The Rele estimates are robust with respect to mortality. Taking life expectancy of women at birth as 30 years—close to the census actuary's estimate, the Rele estimates of birth rate are 35.2 per 1000 [using the child-woman ratio, children (0-4) to women (15-49) and 58.9 [with the ratio of children (5-9) to women (20-54)].

The intensity of infant and child mortality can be gauged by looking at the difference in estimates provided by the two child-woman ratios. Under enumeration of children is not likely to be serious here as the ecclesiastical census was in the hands of dedicated missionaries. The ratio of the two fertility estimates from the child-woman ratios is 1.67. This is interpretable as some 33 percent of children die before entering the age group (5-9) years. Thus a crude estimate of infant and early child mortality combined may be placed at 330 per 1000.

Discussion

The estimates generated for the rural population of Madras and Bengal, though based on missionary statistics, show that fertility was indeed high among the converts to Christianity. These converts had been mostly from the lower end of the social spectrum. The rates for Goa are comparatively low, even though the Goans are Catholic. We may hypothesize several reasons for this huge differential in fertility between the Goan and the non-Goan Christians. We may conjecture that (1) the Goan Christians are more 'westernized' with respect to fertility behaviour as compared to the Christians of Madras, or Nuddea. (2) The non- agricultural occupational pursuits of the Goans might have been conducive to fertility control and (3) the intermarriage of the Portuguese with the natives of Goa might have contributed to an 'urban life style' among them. It may be noted that the Goan Christians

married rather late as compared to Christians elsewhere in India (Krishnan 1977). We may also hypothesize that the Hindu value system had shaped the values and norms of the new converts and that they had not yet acquired a value system that the missionaries had brought with them. In view of paucity of suitable data, we are unable to test these hypotheses.

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