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Role of Abortion in the Fertility Transition in Kerala✞

Introduction

EVER since the beginning of mankind, abortion or deliberate termination of pregnancy, has been widely practiced around the world. The total number of abortions in India, in a year was estimated at five millions before the enactment of the Medical Termination of Pregnancy Act, 1971. A recent study has suggested that the annual number of abortions in India could be as high as 11 million and an abortion rate of 452 per thousand live births. The number of institutions approved to perform abortions has risen from less than 1900 at the end of 1976 to nearly 6900 at the end of March 1991 (Chabra and Nuna, 1993; Pravin Visaria and Leela Visaria, 1997).

Objectives, Data Sources

The objective of this paper is to assess the role of abortion in the fertility transition in Kerala using various data sources such as recently conducted National Family Health Survey, 1992-93, Year books of the Ministry of Health and Family Welfare and Sample Registration System. The paper also analyses primary data collected from the Calicut Medical College in Kerala.

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Methodology

An attempt has been made to revise the reported levels of abortions for the state of Kerala based on the extent of abortion reported. Considering the reported cases of abortion could have resulted in live births, a revision was made on the crude birth rate to suggest the role of abortion in the fertility transition of Kerala. Two sets of assumptions are employed for this assessment: firstly, by assuming the number of live births accounting for 90.4 per cent of all pregnancies against 8 percent of abortions; secondly by assuming the above abortion birth-ratio constant.

Abortion Scenario in India

The number of abortions reported in the Ministry of Health and Family Welfare Year Book reveals that the number has doubled between 1976-77 and 1993-94 (Government of India, 1995). Contrary to the norm, there seems to be a negative increase in the incidence of abortions accompanied with the declining fertility levels. An inter-state comparison of the reported levels of abortion for the period 1993-94 is presented in Table 1. It is observed that Uttar Pradesh tops the list followed by Maharashtra with regard to the reported cases of abortions. In fact, these two states share 40 per cent of the reported abortions. The characteristics of abortion acceptors and reasons for abortion highlight its consequences on women's health and its role as a contraceptive. For making an inter-state comparison with regard to the incidence of abortion, abortions per thousand eligible couples is computed and presented in Table 1. This provides a narrow range of variation, ranging between 0.75 in Bihar to 7.57 per thousand eligible couples in Kerala. These figures justify the extent of under reporting of abortions in Government registers.

The age pattern of abortion acceptors has shown some change over time with an increasing proportion of abortions being carried out among younger women. As of now, two-third of the abortions are among women below age of thirty years which are not very different across Indian states. The reasons for abortion can be characterized by four types; health (danger to life, grave injury to physical health, grave injury to mental health, substantial risk), social (pregnancy caused by rape), environmental reasons and contraceptive failures in India. The highest proportion of abortions account for contraceptive failures, followed by health reasons. The contraceptive failure rates in any case is not matching with the figures reported for the abortions. Of course, the proportions vary between the major states. Almost 85 per cent of abortions are done before 12 weeks of pregnancy (Table 1). The yearbooks also provide some information about the choice of contraceptives after an abortion. Almost half of them are sterilized following an abortion (Government of India, 1995).

TABLE 1: NUMBER AND CHARACTERISTICS OF ABORTION ACCEPTORS IN INDIA AND ITS MAJOR STATES. 1993-94

States	*No. of Abortions*	*Abortions per 1000 eligible couples*	*Below Age < 30*	*Duration of Pregnancy < 12 Weeks*
(1)	*(2)*	*(3)*	*(4)*	*(5)*
Andhra Pradesh	13719	1.03	84.2	74.3
Assam	21372	5.85	63.6	67.4
Bihar*	11776	0.75	64.6	67.0
Gujarat	10263	1.35	72.1	87.8
Haryana	22438	7.55	68.5	92.2
Kamataka	9077	1.13	72.6	77.2
Kerala	34433	7.57	74.1	93.2
Madhya Pradesh	33086	2.53	67.8	85.2
Maharashtra	97079	6.51	73.5	80.8
Orissa	21886	3.84	68.9	93.2
Punjab	19436	5.96	63.2	74.5
Rajasthan	29023	3.37	66.4	91.2
Tamil Nadu	42364	4.19	73.8	91.9
Uttar Pradesh*	103482	4.35	58.9	91.9
West Bengal	64273	2.41	75.6	78.8
All India	580744	4.05	69.0	84.1

Note: Columns 2 and 3 refer to the period 1993-94 and Columns 4 and 5 refer to period 1993-94.
* Information for Bihar and Uttar Pradesh refer to the period 1990-91 and 1989-90. Data are taken from the Family Welfare Year Books of the Ministry of Health and Family Welfare. New Delhi.

Vital information such as abortions by marital status, residential background, religion and number of children were published in the family planning year books up to 1977 and thereafter it was discontinued. As of 1976-77. 82 per cent of abortions are conducted among Hindus, followed by Muslims with 7 and Christians with 5 per cent. The prevalence of abortions is high in urban areas compared to rural areas. As of 1976-77, 13 per cent of abortions is reported among single women compared to the same being 8 per cent during 1972-75. As of 1976-77, 21 percent of abortions are conducted among women with no children, 17 with one, 25 with two, 18 with three and 20 with four and above children. On the other hand, the proportion among women with no male children was 33 percent (Government of India, 1978).

As the data in the family welfare years book are grossly under-reported, we have resorted to alternative source of information to make a proper assessment of the current incidence of abortions in India. The 1992-93 National Family Health Survey provides information on the pregnancy outcomes across the states for the survey period which categorically describe the pregnancies as abortions, still births and live births. Based on this information, an indirect assessment of the number of abortions corresponding to the period 1992-93 is made in relation to prevailing Crude Birth Rates (CBRs) across

TABLE 2: PREGNANCY OUTCOME PATTERN. CRUDE BIRTH RATES AND ESTIMATED ABORTIONS IN INDIA AND ITS MAJOR STATES. 1992-93

States *(1)*	*Abortions* *(2)*	*Still births* *(3)*	*Live births* *(4)*	*CBR* *(5)*	*Estimated Abortions* *(6)*	*Abortion per 101)0 births* *(7)*
Andhra Pradesh	4.8	2.9	92.3	24.2	60473	36.4
Assam	7.6	2.8	89.6	30.4	59712	84.8
Bihar	4.2	2.4	93.4	32.1	128695	45.0
Gujarat	5.8	1.2	93.1	27.2	72049	62.3
Haryana	8.0	2.6	89,5	32,9	50209	89.4
Kamataka	6.0	2.0	92.0	25.9	78196	65.2
Kerala	8.0	1.6	90.4	19.6	51497	88.5
Madhya Pradesh	3.7	1.7	94.5	31.6	84864	39.2
Maharashtra	5.1	2.0	92.9	26.3	118088	55.0
Orissa	4.5	2.7	92.8	26.5	41818	48.5
Punjab	4.8	3.2	92.0	25.0	27217	52.2
Tamil Nadu	11.3	2.7	86.0	23.5	176226	131.4
Uttar Pradesh	5.9	2.1	92.0	35.9	331389	64.1
West Bengal	5.2	2.3	92.5	25.5	100886	56.2
All India	5.8	2.2	92.0	28.7	1581298	63.0

Notes: Columns 2 to 5 are compiled from various state reports of the National Family Health Survey and 6 and 7 are estimated by the authors.

states. By using the proportion of live births to all pregnancies as given by NFHS, we have estimated the number of pregnancies corresponding to a given level of CBR and later the number of abortions are derived by using the stated proportion of pregnancies resulting in abortions. The abortions figures thus estimated are relatively higher than the reported figures by the Ministry of Health and Family Welfare (Table 2). The difference is almost 10 lakhs for India. The assessment based on the National Family Health Survey place Tamil Nadu as the highest abortion performing state in the country, followed by Haryana, Kerala and Assam in terms of number of abortions per 1000 live births (more details on this aspect, see Mishra. Pandey and Irudaya Rajan. 1997).

The Kerala Case

With the above background of differential estimates of abortions between government figures and independent estimates, let us discuss the Kerala case. Kerala has done remarkably well in the fertility transition in the short run. A faster decline in fertility level in the state is accompanied with a greater acceptance of family planning measures. But. besides wider acceptance of family planning among Kerala couples, abortion has been the choice for many (Skandhan, 1992). Hence, it is expected that abortion to some extent has contributed towards the faster decline in fertility levels. Such a supposition

is viewed for Kerala for its commonality of demographic experience with that of the developed world. The role of abortion in reducing the fertility levels in Indian context has been very meager and therefore abortion is not considered as a mean of contraceptive. General observation on the prevalence of induced abortion in India is stated to be very low (Das, 1989: Talwar. 1989) . However, the trend in the number of induced abortion in India is on a rise and is expected to increase at an accelerated rate (Talwar, 1989). The lower prevalence rate of induced abortion in India may be due to the gross underreporting of data on Medical Termination of Pregnancy by the Ministry of Health and Family Welfare.

Different sources report the prevalence of abortion in India to be pretty higher than what is depicted in terms of abortions by the Government of India. Undoubtedly, the number of abortions need a revision for proper assessment of its role in fertility decline. The recent NFHS reports that in Kerala, out of 100 pregnancies, 90.4 per cent end up in live births. 8 per cent in abortions and the rest in still births. Though a greater proportion of abortions are reported to be spontaneous, it is believed that respondents hesitate to report abortions to be induced rather than categorising them to be spontaneous. Even abortions (irrespective of induced or spontaneous) accounting for 8 per cent of all pregnancies seem to be very large in case of Kerala where the level of fertility has reached the perfect replacement level (for more details about the fertility transition in Kerala, see Man Bhat and Irudaya Rajan. 1990. 1992: Zachariah *et a!.,* 1994: Zachariah and Irudaya Rajan, 1997).

We have made an attempt to revise the abortion figures using different assumptions (see the section on methodology for details) and the results are presented in Table 3. With the revisions, we do arrive at a substantial increment in the number of abortions over the years and two to three units difference in CBR has been contributed by abortions. Therefore, it will not be exaggerated to state that abortion has made some contribution towards reductions in fertility levels in Kerala. We firmly believe that though the estimated abortions using the NFHS information has improved the numbers but it is still an underestimate (for more details, see Mishra. Ramanathan and Irudaya Rajan. 1997).

Characteristics of Abortion Acceptors in Kerala

Given the late age at marriage for females and early termination of child bearing among Kerala women (for more details, see Zachariah *et al.,* 1994; Irudaya Rajan. Mishra and Ramanathan, 1993. 1994), the characteristics of abortion acceptors such as age, duration of pregnancy and reasons may possibly throw some light on ever increasing abortion acceptance in Kerala over the years. This section is based on the data published by the Ministry of Health and Family Welfare. New Delhi. Data are not provided in this paper.

TABLE 3: IMPACT OF ABORTION ON CRUDE BIRTH RATE IN KERALA. 1972-94

Year	*Reported CBR*	*Reported Abortions*	*Revised CBR*		
			I	*11*	*III*
(1)	(2)	*(3)*	*(4)*	*(5)*	*(6)*
1972-73	31.2	1084	31.25	33.96	31.34
1973-74	29.2	4244	29.39	31.78	29.65
1974-75	26.8	9564	27.22	29.17	27.74
1975-76	28.0	19969	28.86	30.48	29.91
1976-77	27.8	25389	28.88	30.26	30.19
1977-78	25.8	28752	27.00	28.08	28.47
1978-79	25.2	27830	26.34	27.43	27.69
1979-80	26.1	32597	27.42	28,41	28.97
1980-81	26.8	36215	28.24	29.17	29.98
1981-82	25.6	35033	26.97	27.87	28.64
1982-83	26.2	38936	27.70	28.52	29.49
1983-84	24.9	40047	26.42	27.10	28.24
1984-85	22.9	43957	24.55	24.93	26.53
1985-86	23.3	32222	24.49	25.36	25.91
1986-87	22.5	29264	23.57	24.49	24.88
1987-88	21.7	29794	22.77	23.62	23.61
1988-89	20.3	22666	21,11	22.10	22.09
1989-90	19.8	24353	20.65	21.55	21.55
1990-91	19.0	22197	19.77	22.70	20.68
1991-92	18.0	36727	19.26	21.50	19.59
1992-93	17.0	35372	18.20	20.31	18.50
1993-94	16.7	34433	17.86	19.95	18.18

Notes: Columns 2 and 3 are from the Sample Registration System and the Family Welfare Year Books. Revised CBR I is based on assuming the reported abortions to be live births; Revised CBR II is based on assuming the abortion proportion as 8 and live births as 90.4 of all pregnancies; Revised CBR III is based on keeping the birth-pregnancy ratio constant as reported by NFHS. 1992-93.

Over the years, there seems to be a continuous decline in the average age at abortion acceptance. Having a choice for termination for child bearing at an early age on attaining the desired family size (Mishra and Irudaya Rajan. 1997). it may be expected that Kerala women might be resorting to abortion for achieving a desired sex composition or due to contraceptive failure or the failure of the family planning programme to promote spacing methods. Moreover, abortion may be preferred in Kerala to avoid unwanted pregnancies to be followed by acceptance of a permanent method of contraception. For instance, during 1987-88, around 30 per cent of women in Kerala were accepted a family planning method after an abortion. Surprisingly, half of them accepted sterilisation! It is also encouraging to note that more than 80 per cent of the Kerala women terminated their pregnancy before completing 12 weeks. Like any other state in India, one third of abortion acceptors in Kerala stated the contraceptive failure as the sole reason for abortion (Government of India. 1995).

Information on abortion acceptors such as number of living children, religion, place of residence, level of education and marital status are published by the Ministry of Health and Family Welfare, Delhi, only up to 1977 and later discontinued. For instance, during 1976-77, 20 per cent of women terminated their pregnancies without any children; 12 per cent of terminated women were not married and 27 per cent of women have completed the higher secondary and above level of education (Government of India, 1978). We have no way to assess the situation for Kerala in the recent period. To unearth more information on aspects such as the abortion acceptors by age, level of education and the number of children, we have undertaken a case study from a medical college hospital at Calicut in Kerala.

A Case Study of Calicut Medical College Hospital

The data are specially collected for this paper from the Calicut Medical College for the period 1976-95. The purpose is to understand the dynamics of abortion users over a period of last 20 years. Though we have collected information on abortion acceptors by religion, duration of pregnancy, reasons for abortion, number of living children, age and level of education, the analysis in this paper is confined to age, level of education and the number of living children (Tables 4 to 6).

TABLE 4: ABORTIONS BY AGE IN CALICUT MEDICAL COLLEGE. KERALA

Age	*15-19*	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*NA*	*Total*
1976-77	1.4	22.4	31.6	24.2	10.7	8.3	1.4	3059
1977-78	2.3	23.0	30.0	20.9	15.4	7.7	0.7	3142
1978-79	2.8	22.5	30.9	20.5	14.0	7.5	1.8	3151
1979-80	4.0	20.7	30.4	20.3	15.4	8.0	1.2	2811
1980-81	5.3	21.2	26.7	24.0	14.9	7.1	0.8	2591
1981-82	5.1	23.3	24.3	22.1	16.2	7.9	1.1	1868
1982-83	5.3	27.3	24.2	18.5	14.6	8.0	2.1	1982
1983-84	6.0	27.0	26.3	20.2	14.4	4.8	1.3	1537
1984-85	6.4	25.5	28.2	20.3	14.6	4.9	0.1	1518
1985-86	5.2	22.1	27.3	22.2	15.8	5.9	1.5	902
1986-87	4.5	21.4	26.9	21.5	15.2	4.6	5.9	706
1987-88	5.7	23.5	27.9	19.6	12.5	5.2	5.6	761
1988-89	5.3	27.1	29.4	17.6	11.2	4.6	4.8	966
1989-90	5.5	26.2	32.0	16.8	12.7	5.0	1.8	970
1990-91	6.5	33.7	31.3	14.2	9.5	3.2	1.6	692
1991-92	3.4	29.4	41.6	15.5	7.3	2.6	0.2	729
1992-93	3.0	26.6	34.7	22.0	10.5	3.2	0.0	668
1993-94	3.3	33.3	33.7	17.4	9.3	3.0	0.0	927
1994-95	4.1	32.,8	35.1	16.9	8.4	2.7	0.0	838

Note: Primary data collected by the authors.

TABLE 5: ABORTIONS BY EDUCATIONAL LEVELS IN CALICUT MEDICAL COLLEGE. KERALA

	Illit.	*LP*	*UP*	*HS*	*SSLC/PDC*	*Graduate*
1976-77	2.7	31.8	38.0	10.4	16.0	1.1
1977-78	3.7	22.8	32.6	17.6	21.9	1.4
1978-79	3.9	21.7	29.5	19.6	23.6	1.6
1979-80	5.5	26.0	22.1	15.6	29.1	1.7
1980-81	4.9	27.7	24.0	14.4	26.8	2.2
1981-82	4.2	16.7	26.0	16.9	33.7	2.5
1982-83	4.2	25.5	16.6	17.1	34.0	2.5
1983-84	4.5	20.2	15.2	16.8	40.2	3.1
1984-85	4.3	22.4	16.5	14.4	39.3	3.1
1985-86	3.2	25.8	22.0	12.6	33.7	2.7
1986-87	4.7	21.5	12.7	17.0	40.4	3.7
1987-88	5.3	19.4	15.8	16.8	39.4	3.3
1988-89	5.3	21.4	12.8	15.9	41.3	3.3
1989-90	4.4	16.5	15.3	17.4	42.5	3.9
1990-91	2.9	12.7	16.8	10.5	52.9	4.2
1991-92	6.6	16.0	13.2	18.1	40.3	5.8
1992-93	5.6	14.6	19.2	15.4	40.9	4.3
1993-94	4.9	17.8	15.8	22.7	34.4	4.4
1994-95	5.8	18.8	15.0	22.6	33.2	4.6

Note: Primary data collected by the authors.

TABLE 6: ABORTIONS BY NUMBER OF LIVING CHILDREN IN CALICUT MEDICAL COLLEGE. KERALA

	Number of living Children					
Year	0	*1*	*2*	*3*	*4*	5-
1976-77	2.1	25.7	27.3	23.2	14.1	7.6
1977-78	5.8	23.7	27.5	21.6	14.4	7.0
1978-79	6.8	23.0	27.7	22.2	14.6	5.7
1979-80	8.6	20.1	31.3	20.9	12.6	6.5
1980-81	12.8	23.1	23.8	18.7	11.1	10.5
1981-82	13.8	20.3	28.1	17.4	12.5	7.9
1982-83	13.9	20.5	27.3	19.8	10.9	7.6
1983-84	14.1	19.2	32.6	15.6	8.6	9.9
1984-85	9.4	20.8	32.0	17.5	8.8	11.5
1985-86	11.4	13.3	40.4	15.7	8.6	10.6
1986-87	9.9	10.7	38.6	21.4	9.0	10.4
1987-88	11.4	17.8	42.8	14.8	6.6	6.6
1988-89	9.3	22.4	44.3	12.9	5.7	5.4
1989-90	9.5	22.7	46.5	12.0	6.0	3.3
1990-91	10.2	23.7	48.1	11.0	4.0	3.0
1991-92	11.1	19.2	49.6	13.3	3.7	3.1
1992-93	8.5	29.1	48.1	8.6	3.5	2.2
1993-94	10.4	33.4	44.2	7.0	3.6	1.4

Nole: Primary data collected by the authors.

The analysis indicates a clear emerging trend of abortion acceptors shifting towards younger ages. In other words, abortion is popular among younger women than older women. For instance, 24 per cent of women terminated their pregnancies before they completed 24 years of age in 1976-77 and the same proportion increased to 37 per cent in 1994-95 (Table 4). This observation may be due to the peculiar family building strategy adopted by Kerala couples in recent times. The mean age of abortion acceptors has declined from 29.8 years to 27.54 years over a span of two decades. The age distribution of abortion acceptors around 25-29 years implies that most of these abortion acceptors are sure victim of an ill-timed or unwanted pregnancy.

Interestingly, abortion is emerging as a popular choice among the highly educated women compared to the illiterates and women with low levels of education. For instance, only 16 per cent of the women belong to secondary level and above terminated their pregnancies during 1976-77 and the proportion increased sharply to 33.2 per cent in 1994-95 (Table 5).

The pattern of abortion acceptors by number of living children reveals an interesting phenomenon among the couples in Kerala. As of 1993-94, 10 per cent of women terminated their pregnancies without any children and the proportion increase to 44 per cent for women with two children. This peculiar feature of a larger proportion of abortion acceptors with two living children has shown improvement over years indicating that Kerala couples have consciously abided by the two child family norm through resorting to abortion in case of a third pregnancy. As stated earlier, another puzzling feature is the 10 per cent of abortion acceptors without any children. This raises a suspicion of abortion among unmarried women or widows or sometimes minor girls in Kerala. Kerala is still a fertile soil for demographers for further research on abortion to answer the following questions. With the highest literacy rate among women coupled with the highest couple protection rate, why Kerala women still prefer abortion than a contraceptive to avoid pregnancy? or Kerala women use abortion as a best contraceptive?

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