

Fertility and Mortality Among Mirdhas : A Tribal Community of Orissa

R.K. Choudhury, Mamatamayee Naik and Manmath Kumar Mohanty

Department of Anthropology, Sambalpur University, Jyoti Vihar, Burla, Sambalpur, Orissa, 768 019, India .

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ABSTRACT In the present investigation an attempt has been made to study the fertility and mortality behaviour among Mirdha tribal women of Sambalpur district, Orissa. Necessary information on different bio-events were collected only from 184 ever married Mirdha women. The reproductive performances of Mirdha women shows average live birth 3.14 per mothers with low foetal loss. Women over 45 years show 4.56 live births on an average. The average surviving children per women is found to be 2.70. Infant death is seen to be 7.79% and that of total pre-reproductive mortality is 14.19%. Women of 35-39 years age-group show highest (4.15%) frequency of pre-reproductive mortality. Birth and death rates are calculated to be 976 and 142, respectively. The rate of infant death is highest, 116 per one thousand live births and that of total pre-reproductive mortality is 142. The mean ages of different bio-events of Mirdha women show a moderate variation in reproductive performance.

Fertility and mortality are in many ways related to the various aspects of human social as well as biological life. The study is required to determine the population growth. The fertility is the actual capacity of reproducing live births (Cox, 1959). Sometimes it is wrongly used as fecundity which denotes the physiological capacity to conceive and bear children (Thompson and Lewis, 1965).

Many pioneering works on the reproductive life of the women and fertility and mortality of different populations have been undertaken by various social scientists and human biologists (Sarkar, 1944; Chandrasekharan, 1948; Davis, 1951; Dandekar and Dandekar, 1953; Sen, 1953; Ray, 1954; Nag, 1954, 1965; Dasgupta et al; 1955; Coale and Hoover, 1963; Samuel, 1963 among others). Still there are many communities whose reproductive performances are yet to be studied. The present paper is an attempt to add some more knowledge and may be useful to have a comparison with other populations relating to the reproductive life of Indian women.

The present study is conducted among Mirdhas of Badsahir and Meghpal villages in

the district of Sambalpur, Orissa. According to the 1981 census the total population of Sambalpur district is 6,20,555 out of which Mirdhas are 19,203. Mirdhas are a small endogamous Dravidian tribe of Western Orissa. They are generally referred to as 'Kuda' meaning an earth digger. They speak in 'Kunboli' dialect and Oriya language. Mirdhas depend upon the agriculture and forest produce for their subsistence and are away from modern world.

MATERIALS AND METHODS

The material consists of 592 pregnancies of 184 Mirdha ever married women. The data on fertility and mortality were collected pregnancy-wise, using a schedule. Entire reproductive history and biological variables such as age at menarche, first marriage, first birth, last birth, menopause and total or effective reproductive span etc. of Mirdha women have been considered. A stratified random sampling method was adopted to collect all the informations through direct enquiry from the

Table 1: Fertility history of Mirdha mothers

Age groups (in years)	Total no. of mothers	Total pregnancies	Live birth				Reproductive wastage					
			M	F	Total	Per-centage	No. of still birth		No. of abortion		Total wastage	Per-centage
							M	F	IA	SPA		
15-19	8	8	3	2	5	62.50	—	—	—	3	3	37.50
20-24	37	72	32	39	71	98.61	—	—	—	1	1	1.38
25-29	36	84	45	39	84	100.00	—	1	—	1	2	2.38
30-34	25	97	39	55	94	96.60	2	—	—	1	3	3.09
35-39	33	124	62	59	121	97.58	—	1	—	2	3	2.41
40-44	15	65	35	31	66	101.53	—	—	—	—	—	—
45-49	18	83	43	39	82	98.79	—	1	—	1	2	2.40
50+	12	59	26	29	55	93.22	2	2	—	—	4	6.77
Total	184	592	285	293	578	97.63	4	5	—	9	18	3.04
%			48.14	49.49	97.63		22.22	27.78		50.00		

female spouses. The age determination was made with the help of some important past events which were well remembered by the subject. Some more informations were drawn after several cross checks.

RESULT AND DISCUSSIONS

Table 1 shows fertility history of the Mirdha mothers in different age groups ranging from 15 to 50+. The highest percentage of live births (101.53%) is seen in the age group of 40-44 years which is slightly higher than the age group 25-29 years (100%). 97.63% live births out of total pregnancies is found among 184 mothers. The highest reproductive wastage (abortion and still births) is observed to be 37.50% in the age group of 15-19 years. The total pregnancy wastage is found to be 3.04% with the rate of 30 per thousand pregnancies.

The general fertility rate is calculated by dividing total number of live births by total number of women in respective age groups. Table 2 shows the average live births per mother in different age groups. The average live births per woman in lower age group is less (0.62) as compared to that of the women in higher age groups. The average number of

live birth per woman is maximum in the ages 50+ (4.58). The mothers of age group 35-39 years show maximum number of live births, but lesser rate of live births (3.67) than mothers of 30-34 years age group. The rate of live births per thousand pregnancies is calculated to be 976. The average live birth per woman is 3.14. One and two twin live births were recorded in the age groups 40-44 and 25-29 years of Mirdha mothers, respectively.

Table 2: General Fertility Rate: Live births per woman by age groups in years

Age groups	No. of mothers	No. of live births	Average live births per woman
15-19	8	5	0.62
20-24	37	71	1.92
25-29	36	84	2.33
30-34	25	94	3.76
35-39	33	121	3.67
40-44	15	66	4.40
45-49	18	82	4.56
50+	12	55	4.58
Total	184	578	3.14

Table 3 is showing average number of surviving children per woman by age groups in Mirdhas. It is seen that the average number

Table 3: Number of surviving children per woman by age groups

Age groups (in years)	No. of mothers	No. of surviving children	Average surviving children per woman
15-19	8	4	0.50
20-24	37	67	1.80
25-29	36	80	2.22
30-34	25	89	3.59
35-39	33	100	3.03
40-44	15	50	3.33
45-49	18	61	3.39
50+	12	45	3.75
Total	184	496	2.70

of surviving children is less in lower age groups. The average is highest (3.75) in the 50+. The average number of surviving children per woman is found to be 2.70. The rate of surviving children per thousand live births is 858.13.

Table 4 shows number and percentages of pre-reproductive mortality in different age groups. It is found that the pre-reproductive mortality is highest in the age group 35-39 (4.15%) followed by 3.28% in 45-49 years. The total pre-reproductive mortality is found to be 14.19%. In the present study the total neonatal death is 3.81%. Infant deaths 7.79% are more than any other pre-reproductive death. Child death is found to be 1.21%. Juvenile deaths are little higher (1.38%) than child

death. The pre-reproductive death includes neonatal, infant, child, juvenile deaths.

Table 5 represents the number of pre-reproductive mortality per thousand live births among Mirdhas. The different pre-reproductive mortality like infant deaths, child deaths, juvenile deaths and total pre-reproductive mortality are found to be 116, 12, 14 and 142 per thousand live births, respectively. It can be concluded from the table that infant mortality rate is higher (116 deaths per 1000 live births) in comparison to child and juvenile deaths.

Table 5: Pre-reproductive mortality per thousand live births.

Deaths	Total live births	Total deaths	Rate of death per 1000 live births
Infant deaths	578	67	116
Child deaths	578	7	12
Juvenile deaths	578	8	14
Total pre-reproductive mortality	578	82	142

Table 6 shows the dispersion and means of various bio-events such as age at menarche, marriage, first birth, last birth, menopause, total or effective reproductive span. The mean age at menarche is 13.30 years with a range from 12 to 15 years. The age at menarche is recalled one. The mean age at marriage in case of

Table 4: Frequency distribution of pre-reproductive mortality according to mother's age

Age groups of mothers	Total live births	Neonatal deaths	Infant deaths	Child deaths	Juvenile deaths	Total pre-reproductive mortality
15-19	578	—	1 (0.17)	—	—	1 (0.17)
20-24	578	1 (0.17)	3 (0.52)	—	—	4 (0.69)
25-29	578	—	4 (0.69)	1 (0.17)	—	5 (0.86)
30-34	578	2 (0.35)	2 (0.35)	—	1 (0.17)	5 (0.86)
35-39	578	6 (1.04)	16 (2.77)	—	2 (0.35)	24 (4.15)
40-44	578	5 (0.86)	8 (1.38)	1 (0.17)	—	14 (2.42)
45-49	578	7 (1.21)	7 (1.21)	4 (0.69)	1 (0.17)	19 (3.28)
50+	578	1 (0.17)	4 (0.69)	1 (0.17)	4 (0.69)	10 (1.73)
Total	578	22 (3.81)	45 (7.79)	7 (1.21)	8 (1.38)	82 (14.19)

Mirdha women is 17.13 years. The range varies from 12 to 23 years. The inactive period is about 3.83 years, after which they got married in an average. 2.83 years after, they started reproducing child birth as the mean age at 1st birth is seen to be 19.96 years which ranges from 15-30 years of age. The child bearing period continues up to 31.15 years in an average. As the age at last birth is seen to be 31.15 years in an average. In a Mirdha woman the last birth is recorded up to the age of 41 years. The effective reproductive span is 11.00 years. The mean age at menopause is 44.96 years.

Table 6: Bio-events among Mirdha females

Range (in years)	No. of mothers	Age at	Mean $\pm$ S.E. (in years)	S.D. $\pm$ S.E.
12-15	184	Menarche	13.30 $\pm$ 0.03	0.5 $\pm$ 0.02
12-23	184	Marriage	17.13 $\pm$ 0.14	1.95 $\pm$ 0.10
15-30	170	First birth	19.96 $\pm$ 0.41	1.95 $\pm$ 0.29
21-41	26 ¹	Last birth	31.15 $\pm$ 0.91	4.68 $\pm$ 0.65
41-48	26 ¹	Menopause	44.96 $\pm$ 0.15	0.81 $\pm$ 0.11
2-19	26 ¹	Effective reproduc- tive span	11.00 $\pm$ 0.39	1.99 $\pm$ 0.27

1. Based on completed families

Finally, it is seen from the study that, the reproductive wastage is observed to be 3.04% which includes abortion and still births. Spontaneous abortion is more (50%), may be due to exposure to the natural life for their day-to-day hard work. Induced abortion is not at all recorded, as they have orthodox beliefs in practicing induced abortion. No illegal or unwanted abortions have been recorded. Still birth is found to be 50% of the total pregnancy wastage. Total pre-reproductive mortality is also high (14.19). The high mortality rate is due to insufficient modern health care facilities and their worst environmental condition,

which may also be responsible for high fertility rate. Social norms in this tribe favours high fertility. The different norms about intermediate variables are determined by their social and economic condition. Moreover, the awareness of family planning and knowledge of small family size and health and hygiene is almost nil in this tribe which should made available to check the high fertility and mortality.

The main findings of the present paper are—out of total 578 live births, the percentage of female live birth is high (49.49) among Mirdha tribals of Sambalpur district, Orissa. Total live births and total reproductive wastage are 97.63% and 3.04%, respectively. The average live birth is 3.14 and average number of surviving children per women is 2.70. Women of 35-39 years age-group show highest (4.15%) frequency of pre-reproductive mortality. The birth as well as death rates are high, 976 and 142, respectively. The rate of infant death is also high, 116 per thousand live births. This may be due to poor health and medical facilities, worst environment condition, poverty, illiteracy and unawareness of family planning knowledge among Mirdhas.

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