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Fertility and Mortality Differential among the Dibongiya Deori of Lakhimpur District, Assam

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Abstract: An attempt is made in this paper to look into the fertility and mortality differentials among the Dibongiya Deori of Assam. Apart from these, distribution of women according to age group, age at marriage, age at first conception, age at first child birth are also taken into consideration for the present study. The analysis demonstrates that the Dibongiya Deori women married at relatively younger age exhibits moderately higher conception and higher reproductive wastages.

Introduction

For the survival and to maintain balancing condition of human society fertility and mortality are two crucial determinants. Fertility is the actual number of children born to a woman or group of women. On the other hand mortality refers to the mortal condition or disappears of one's existence in this earth. Over all, fertility is responsible for growth of population and through mortality it is reduced. Because of unique socio-cultural characteristics pertaining to each society fertility and mortality rate varies. Therefore examining these rates separately among each population group is of utmost importance which helps in taking away the existing problem to some extent either directly or by some indirect measures.

Objectives

This paper is an attempt to examine the fertility and mortality differentials among the Dibongiya Deori of Lakhimpur District, Assam.

Materials and Method

The subjects selected for the present study are 147 ever-married women from Dibongiya, a *khel* (territorial group) of a numerically dominant plain schedule tribe - Deoris of Assam. The study was carried out in the year 2012-2013 in two villages (Majorchapori and Pichola Deori *gaon*) of Lakhimpur district of upper Assam. The investigation is confined to those Dibongiya women who have experienced at least one live born child and also whose husbands are alive. To obtain information, a specially designed pretested schedule was administered and relevant statistical techniques are applied for analyzing the data. In the present study, only spontaneous abortion cases are taken into consideration. Since retrospective method depending on recall was followed for collecting the data, it was crossed checked whenever it felt necessary.

The Deori are an indigenous tribe of Assam (Deori 2011) and Dibongiya is one of the major *khel* (sub tribe or territorial group) of Deori community, others being Tengapania, Borgonya and Patorgonya. It has been reported (Saikia 1976) that the Patorgonya has become extinct and at present their existence cannot be traced in any part of Assam. Out of all the sub-tribe, only the Dibongiya are the preserver of their traditional Deori dialect. Ethnically they belong to Tibeto-

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Mongoloid tribal group. According to 2011 Census, in Assam, the total populations of the Deori are 41,161 individuals and they are concentrated mostly in the districts of upper Assam and also in Lohit district of Arunachal Pradesh. Their average literacy rate is 76.2 per cent. The male literacy rate (84.8 per cent) is comparatively higher than the female literacy rate (67.5 per cent).

Results and Discussions

Distribution of Dibongiya Deori women in various age categories is shown in the Table 1. It is observed that maximum numbers of women are concentrated in the age group of 25- 29 years (20.41 per cent) which is closely followed by the age group of 30-34 years (17.01 per cent). Hence, preponderance of female is recorded in productive age which has potential to contribute for the next generation.

Table 2 shows the distribution of women according to age at marriage, which is one of the vital events in one's life. The mean age at marriage of the studied population is relatively earlier and quite a good number of Dibongiya mother also get married at a very tender age (below 18 years) much earlier than the age determined by the Indian government. It is now an established fact that if a girl enters into married life in a relatively earlier age, her educational status will be to a great extent influenced and which in turn may affect the reproductive performance, care of both her own health and also child health, infant mortality, etc.

Table 3 demonstrates the distribution of women according to age at first conception. It is observed from the table that the gap between mean age at marriage and mean age at first conception is relatively short. It may be for the reason that most of the married women are unaware about various family planning measures. This is clearly reflected on the presence of more number of non adopter of family planning than the adopter. As a result, in the present sample considerable numbers of mother conceive her baby at a relatively earlier age.

Distribution of female according to age at first child birth is shown in the **Table 4**. It is now an established fact that when a woman gives her first child birth within the age group 19-29 years is biologically safe for the mother as it reduces infant mortality rate (Bhende and Kanitkar 2010). However, first child birth below 19 years (17.01 per cent) is also recorded in the present study.

In the present study a total of 34 women above 45 years of age have been considered to understand complete fertility rate. This segment of population exhibits moderately high mean number of live birth (4.38) and surviving children (4.06) per mother (**Table 5).** Though their average completed fertility per woman is 4.38, yet a few Dibongiya women have given birth to a maximum of 10 live births. Again, the net reproductive index of the present sample is 2.29.

Table 6 illustrates the age specific fertility rate (ASFR) of 147 ever married women. The ASFR is more or less similar in the age group below 19 years and 20-24 years and thereafter it declines considerably. The total fertility rate is 4.72 which are comparatively lower in contrast to other Mongoloid population groups of North East India.

Table 7 provides an idea about the prenatal wastages and peri natal mortality rate of the Dibongiya women. Among the 147 ever-married women, the total number of conception is 443 (mean = 3.01) and live birth is 420 (mean = 2.86), the percentage of live birth being 94.81. Both pre natal wastages and peri natal mortality rate varies considerably. The pre natal wastages rate (6.09 per cent) is slightly higher than the peri natal mortality rate (5.71 per cent). Here, the rate of miscarriage is 3.39 per cent and still birth is 2.71 per cent. Again the infant mortality rate is 4.29 per cent which are markedly higher than the child mortality (1.19 per cent) and juvenile mortality (0.24 per cent) rate.

An attempt has also been made to analyze the reproductive wastage according to maternal age **(Table 8**). It is found that out of total miscarriage, 10.61 per cent cases occur in mothers belong-

ing in the age group of 25-29 years. No case of miscarriage is recorded in mothers at the age group of 50 years and above. Maximum numbers of still birth cases are recorded in the age group of 40-44 years. The table clearly demonstrates that the incidence of miscarriage increases in the last four decades while just the reverse trend is noticed in case of still birth incidence.
Similarly, mortality rate according to maternal age is shown in **Table 9**. It is seen that infant mortality rate is considerably higher in the age group of 40-44 years (10.53 per cent). Neo natal and post neo natal mortality rates also comparatively high in this age group. Child and juvenile mortality is not recorded in young aged mothers except in the age group of 25-29 years which experience only 1 (1.69 per cent) incidence of child mortality. Some of the reported reasons for the infant's death among the present sample include high fever, small pox, trouble in breadth etc.

Summary

The Dibongiya women of contemporary generation are exposed to various measures and opportunities that are make available by the government. As such the fertility rate of the younger generation is reasonably lower than the aged women which in turn help in lowering the fertility rate of the tribe as a whole. The incidence of high reproductive wastage and infant mortality rate reflects the influence of both biological as well as socio-economic factors on the backdrop. The spread of education towards the people particularly the women is expected to exert influence in delaying age at marriage and consequently in reducing the fertility rate among them.

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Table 1: Distribution of Dibongiya Deori women in various age categories

Present age group of women (in years)	No. of women	Per centage
20 – 24	13	8.84
25 – 29	30	20.41
30 – 34	25	17.01
35 – 39	24	16.33
40 – 44	21	14.29
45 – 49	12	8.16
50 – 54	19	12.93
55 – 59	3	2.04
Total	147	100.00

Table 2: Distribution of ever married Dibongiya Deori women by their age at marriage

Age at marriage (in years)	No. of women	Per centage	Mean	SD	SE for Mean
15	11	7.48	21.08	4.25	0.35
16	6	4.08			
17	13	8.84			
18	21	14.29			
19	15	10.20			
20	12	8.16			
21	7	4.76			
22	10	6.80			
23	13	8.84			
24	8	5.44			
25	5	3.40			
26	5	3.40			
27	6	4.08			
28	7	4.76			
29	3	2.04			
30	2	1.36			
31	1	0.68			
32	1	0.68			
33	1	0.68			
Total	147	100.00			

Table 3: Distribution of ever married Dibongiya Deori women by their age at first conception

Age group (in years)	No. of women	Per centage	Mean	SD	SE for Mean
15	5	3.40	21.49	4.21	0.35
16	11	7.48			
17	9	6.12			
18	14	9.52			
19	21	14.29			
20	12	8.16			
21	11	7.48			
22	8	5.44			
23	11	7.48			
24	11	7.48			
25	6	4.08			
26	6	4.08			
27	5	3.40			
28	6	4.08			
29	5	3.40			
30	3	2.04			
31	1	0.68			

32	1	0.68			
33	1	0.68			
Total	147	100.00			

Table 4: Distribution of ever married Dibongiya Deori women by their age at first child birth

Age group (in years)	No. of women	Per centage	Mean	SD	SE for Mean
16	6	4.08	22.41	4.20	0.35
17	10	6.80			
18	9	6.12			
19	15	10.20			
20	21	14.29			
21	13	8.84			
22	10	6.80			
23	8	5.44			
24	12	8.16			
25	10	6.80			
26	6	4.08			
27	6	6.08			
28	5	3.40			
29	5	3.40			
30	5	3.40			
31	2	1.36			
32	2	1.36			
33	1	0.68			
34	1	0.68			
Total	147	100.00			

Table 5: Completed family size and net reproductive index among Dibongiya Deori women

Population	Number of mothers aged 45+ years	Number of live born children			Surviving children	Mean live births per mother	Mean surviving children per mother	Net Reproductive Index
		Male	Female	M+F				
Dibongiya Deori	34	71 (47.65)	78 (52.35)	149	138 (92.62)	4.38	4.06	2.29

Figures within parentheses indicate per centages

Table 6: Age specific fertility rate among the Dibongiya Deori women

Age groups (in years)	Dibongiya Deori		
	No. of mothers	No. of live births	A.S.F.R
< 19	40	51	1.28
20-24	103	131	1.27
25-29	126	131	1.04
30-34	104	77	0.74
35-39	79	27	0.34
40-44	56	3	0.05
45+	36	0	0
Total Fertility Rate	4.72		

Table 7: Pre-natal wastages and peri natal mortality among Dibongiya Deori women

Parameters	DIBONGIYA DEORI
Total Number of Mother	147
Total Number of Conception	443
Total Number of Live birth	420*
Total Number of abortion/Miscarriage	15
Rate	3.39
Average	0.10
Total Number of Stillbirth	12
Rate	2.71
Average	0.08
Total Number of Infant Mortality	18
Rate	4.29
Average	0.12
Total Number of Child Mortality	5
Rate	1.19
Average	0.03
Total Number of Juvenile Mortality	1
Rate	0.24
Average	0.01
Total Number of Embryonic wastages	27
Rate	6.09
Average	0.18
Total Number of Peri Natal Death	24
Rate	5.71
Average	0.16

Table 8: Reproductive wastage according to different age group of mother

Present age of women (in years)	Women	Conception	Live Birth	Reproductive Wastage	
				Miscarriage	Still Birth
20 - 24	13	14	13	1 (7.14)	0
*25 – 29	30	66	59	7 (10.61)	1 (1.52)
**30 – 34	25	56	55	1 (1.79)	2 (3.57)
35 – 39	24	71	68	3 (4.23)	0
*40 – 44	21	80	76	1 (1.25)	4 (5.00)
45 – 49	12	56	53	2 (3.57)	1 (1.79)
50 – 54	19	78	74	0	4 (5.13)
55 - 59	3	22	22	0	0

Note: * indices 1 twin, ** indicates 2 twins
Figures within parentheses indicate per centages

Table 9: Mortality rate according to different age group of mother

Present age of women (in years)	Women	Live Birth	Surviving	Mortality				
				Neo Natal	Post Neo natal	Total Infant	Child	Juvenile
20 - 24	13	13	13	0	0	0	0	0
25 – 29	30	59	56	2 (3.39)	0	2 (3.39)	1 (1.69)	0
30 – 34	25	55	53	2 (3.64)	0	2 (3.64)	0	0
35 – 39	24	68	68	0	0	0	0	0
40 – 44	21	76	68	3 (3.95)	5 (6.58)	8 (10.53)	0	0
45 – 49	12	53	50	2 (3.77)	0	2 (3.77)	1 (1.89)	0
50 – 54	19	74	68	2 (2.70)	2 (2.70)	4 (5.41)	1 (1.35)	1 (1.35)
55 – 59	3	22	20	0	0	0	2 (9.09)	0

Figures within parentheses indicate per centages