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Reproductive Performance of the Bhumija Women: An Empirical Study of a Tribal Village, Baleswar, Orissa

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ABSTRACT This paper reflects the reproductive per-formance of the Bhumija women of a tribal village of Baleswar. Efforts have been made to find out the factors affecting fertility, such as the age at marriage, family planning practices, etc. Average number of conception, average life birth, uterine wastage and surviving offsprings are considered as reproductive measures. The study reveals that the mean age at marriage is 16 years; the mean age at first child-birth is 18.14 years. There is less number of uterine wastage and post-natal death. The average number of conception per woman is 3.87 and the average number of live births per woman is 3.28. The Bhumija population exhibits very low pre-partum reproductive loss (0.13) and post-natal loss (0.10).

INTRODUCTION

Reproductive health is defined as the condition in which the reproductive process is accomplished in a state of complete physical, mental and social well-being and is not merely the absence of disease or disorders associated with the reproductive process. It further implies that reproduction is carried to a successful outcome in the form of infant and child survival, through growth and healthy child development. It finally implies that women can pass safely through pregnancy and child birth, that fertility regulation can be achieved without health hazards and that people are safe in having sex. The United Nations resolution reflects that the right of men and women to be informed and to have access to safe, effective, affordable and acceptable methods of family planning of their choice for the regulation of fertility which are not against the law, and the right of access to appropriate health-care services that will enable women to go safely through pregnancy and child-birth and provide couples with the best chance of having a healthy infant (UN 1995). A World Health Organization report defines women's reproductive health as empowering women to have control over their own fertility and sexuality with maximum choice and minimum health problems (WHO 1991).

Reproductive health includes the age at marriage, fertility regulation, breast feeding and infant care practices. Fertility refers to the actual reproductive performance whether applied to an individual or a group. As defined by Henry (1953) the French Demographer, Natural Fertility is "Fertility of a Human Population that makes no deliberate effect to limit births."

One of the reasons for growing interest in the study of fertility is that the age structure of any population is primarily determined by fertility and that the bulges and gaps in this age structure can have serious repercussions, with social, economic and political overtones. The other reason is that because of methodical development such as the sample survey method and the introduction of new techniques of fertility measurements, like cohort fertility, the study of fertility could be undertaken from various angles.

Though the birth of a child is basically a biological phenomenon, child rearing in any society occurs in a social setup and is therefore, affected by social structure as well as social customs. In the study of fertility it is necessary to understand the biological aspects of fertility as well as the effects of various societal norms and customs related to the process involved in child bearing and child rearing.

The biological limits imposed on child bearing by such factors as age and sex can be easily recognized. Only women can conceive and give birth to children and that too, within certain age limits. A woman becomes biologically fecund, capable of bearing a child, with onset of menstruation. Her capacity to bear children comes to an end with menopause that is when menstruation ceases.

Hendriks (1995) identifies the 1980s as the turning point when policy makers, scientists and

women activists started to acknowledge reproductive rights and reproductive health. Lane (1994) considers reproductive health as a neglected area and calls for research in the field of reproductive health policies. Fathalla (1992) and Cook (1993) describe that reproduction is the condition in which the reproductive process is accomplished in a state of complete physical, mental and social well-being and is not merely the absence of reproductive disease or disorders.

Sex and age are the basic characteristics or the biological attributes, of any group which not only affect its demographic but also its social, economic and political structure, as they influence birth and death rates, marital composition, internal and international migration, planning regarding educational and medical services and housing etc. Population data are invariably classified by sex and age and then made available to data users. Sex and age are also very important because they are the visible, indisputable and convenient indicators of socio-demographic status. The present paper highlights the state of reproductive health of a Bhumija village of Orissa.

THE TRIBE AND THE VILLAGE

The Bhumija is one of the Scheduled Tribes of Orissa and are concentrated thickly in the districts of Baleswar, Mayurbhanj, Sundargarh and Keonjhar. According to 1991 census, the total population of the Bhumija was 1,78,214 and as per 2001 census it is 2,48,144. This tribe has shown a very high decadal growth rate of 39% against the total tribal growth rate of 16% during the decade.

The Bhumija society is mainly divided into four endogamous groups such as the Tamudia Bhumija, Haldipokharia Bhumija, Teli Bhumija and Dehuri Bhumija. Of these, the Tamudias occupy the highest place in social precedence because of their traditional occupation of shaving. Next to them are the Haldipokharia Bhumijas. The females of this section used to serve as midwives among other Bhumija categories. Teli Bhumija occupies the third position. Their traditional occupation is oil extraction, particularly from till and mustard. But now a days the traditional occupation is almost lost. The Dehuri Bhumija officiates as the village priest in any of their religious functions. Each section forms an endogamous group of its own. Normally marriage outside the group is not allowed.

Rice is their staple food and is eaten throughout the year. Like Hindus, they eat dal and vegetable curry if they can afford to. They abstain from taking beef and pork. Rice beer is their favorite drink.

Most of the families among the Bhumijas are of nuclear type, consisting of husband, wife and unmarried children. The children set up their own family soon after their marriage. They are patrilineal i.e. Descent and inheritance is traced through father's side.

The village under study named Chaturkhunta has seventy two households belonging to the Tamudia Bhumija. Other tribes like the Santal, Kondha and a few other general caste households are also living in this village. The village is situated on the mountain slope of Nilagiri. Although a multiethnic village, it is dominated by the Bhumija tribe.

The houses are not arranged in any order. Most of the houses have two rooms. The rooms are utilized as kitchen, bedroom, storeroom and cattle shed is normally attached to most of the houses. Their houses comprise a varanda in the front which they use for entertaining guests. All the rooms have permanent doors but no windows. Houses are constructed out of bamboo and sal saplings tied with grass ropes and thatched with straw, (Daspatnaik, 2004).

MATERIAL AND METHODS

The data for the present paper are collected from Chaturkhunta village of Nilagiri block, Baleswar. The survey was designed to collect data on different household information, reproductive history and family welfare, Reproductive health and post natal care. Three different schedules (Household schedule and reproductive schedules) were prepared and pre-tested before the final interview. The head of the household was interviewed for the household data (Schedule-1). However, for the reproductive data the ever married women were interviewed (Schedule-2 and 3). Data were collected from 58 households (out of the total 72) as the remaining households were not available during data collection. Mostly interview method was adopted for data collection. Case-study and non-participant observation methods were also adhered to. The Ever married women of the community were the Respondents.

RESULTS AND DISCUSSION

The age, sex composition and marital status of the population of the Bhumija households are presented in table 1.

The table-1 shows that the total population of the 58 Bhumija households is 260, (133 male and 127 female). Sex ratio of the population is 1050 males per 1000 females which indicate a high sex ratio. Median age of male is 25.17 years and that of the female is 23.76 years. The child-woman ratio (P_{0-4} / W_{15-44}) and (P_{5-9} / W_{20-49}) are 611 and 788 respectively per 1000 women. This shows demographically it is a young population and the birth during the last decade was very high.

The total dependency ratio of the Bhumija population is 0.8. Further, the child dependency is 0.7 and the aged dependency is 0.1. It shows that the child dependency is very high among the Bhumija community of this village which also speaks of their relatively high birth rates during past decades.

The age at marriage is considered to be a determinant of fertility. Table 2 shows the age at

Table 1: Distribution of population by age, sex and marital status.

Age group in years	*Number of individuals*	*Male*		*Female*		*Marital Status*							
						Male				*Female*			
		No.	*%*	*No.*	*%*	*UM*	*CM*	*W*	*D/S*	*UM*	*CM*	*W*	*D/S*
0-4	33	19	57.58	14	42.42	19	-	-	-	14	-	-	-
5-9	41	17	41.46	24	58.54	17	-	-	-	24	-	-	-
10-14	26	11	42.30	15	57.7	11	-	-	-	15	-	-	-
15-19	18	10	55.55	8	44.44	10	-	-	-	7	1	-	-
20-24	23	11	42.83	12	52.17	11	-	-	-	-	12	-	-
25-29	29	16	55.17	13	44.83	2	14	-	-	-	13	-	-
30-34	26	14	53.85	12	46.15	-	14	-	-	-	12	-	-
35-39	18	14	77.78	4	22.22	-	14	-	-	-	4	-	-
40-44	09	4	44.44	5	55.56	-	4	-	-	-	5	-	-
45-49	10	4	40.00	6	60.00	-	4	-	-	-	4	1	1
50-54	11	5	45.45	6	54.55	-	5	-	-	-	2	4	0
55-59	3	2	66.67	1	33.33	-	2	-	-	-	0	1	-
60+	13	6	46.15	7	53.85	-	5	1	-	-	1	6	-
Total	260	133	51.15	127	48.85	70	62	1	0	60	54	12	1

UM-unmarried, CM-currently married, W-widowed, D/S- divorced/separated, EM- ever married EM = (CM + W +D/S)

Table 2: Age at marriage of the ever married women.

Present age group	*Number of respondents*	*Age at 1st marriage*				*Mean age of marriage in years*
		Below 13 years	*13-15 years*	*16-18 years*	*19-21 years*	
15-19	1	-	-	1	-	18
20-24	12	-	2	6	4	17.5
25-29	13	-	2	9	2	17.0
30-34	12	-	5	4	3	16.5
35-39	4	-	2	2	-	15.5
40-44	5	-	3	2	-	15.2
45+	20	1	16	3		14.4
Total	67	1	30	27	9	16.0

Table 3: Age at first child birth of the ever married women.

Age at marriage	*No. of respondents*	*No. Live births*	*Age at first child birth*			*Mean age at first child birth*
			15-17 years	*18-20 years*	*21-23 years*	
-13	01	-	01	-	-	16.0
13-15	30	1	22	7	-	16.7
16-18	27	1	3	21	2	18.9
19-21	9	2	-	1	6	21.6
Total	67	4	26	29	8	18.14

*****Respondents not having births were excluded from the calculation of mean age at 1st child birth.

marriage of the ever married women. The lowest mean age at marriage (14.4 Years) has been observed in the age group of 45 years and above. The mean age at marriage decreases as the age group increases. Thus, it can be told that the younger generation Bhumija girls prefer to marry slightly late.

The mean age at marriage is 16.0 years for females of this tribal society which is similar to the mean age at marriage in India (WHO 1991). The female age at marriage is low compared to the legally permitted female age at marriage (in India) i.e. 18 years. Table 3 reveals the mean age at first child birth which is 18.1 years. The gap between the age at first marriage and the age at first child birth is 2.1 years. It is evident that although girls marry at an early age they become mothers around 19 years of age which exposes them to health risks. The data of table 4 highlights that maximum number of women maintains two years of gap between two consecutive births (39.68%).

Table 5 presents the fertility performance of the ever married women. The total number of conceptions, uterine wastage, live births and children survived are some of the major findings of this table. The average rate of conception per woman is 3.87 and average number of live births per woman is 3.28. (Number of live births/Total

Table 4: Duration between two successive live births.

Present age group	*No of mothers*	*1 yr*		*2 yr*		*3 yr*		*4 yr*		*5 yr*		*Open end*	
		No.	*(%)*	*No.*	*(%)*	*No.*	*(%)*	*No.*	*(%)*	*No.*	*(%)*	*No.*	*(%)*
15-19	1	-	-	-	-	1	(100)	-	-	-	-	-	-
20-24	10	1	(10)	2	(20)	2	(20)	-	-	-	-	5	(50)
25-29	13	1	(7.69)	6	(46.15)	2	(15.38)	-	-	1	(7.69)	3	(23.08)
30-34	11	1	(9.09)	5	(45.45)	2	(18.18)	1	(9.09)	2	(18.8)		
35-39	4	-	-	3	(75)	-	-	1	(25)	-	-		
40-44	5	1	(20)	2	(40)	1	(20)	1	(20)	-	-		
45+	19	3	(15.79)	7	(36.84)	4	(21.05)	2	(10.53)	3	(15.79)	-	-
Total	63	7	(11.11)	25	(39.68)	12	(19.05)	5	(7.94)	6	(9.52)	8	(12.69)

Table 5: Conception and child survival (fertility history).

Present age group	*No of ever married women*	*Total No. of conception*		*No. of abortion per conception*		*No. of still birth per conception*		*No. of live birth per conception*		*No. of child dead per conception*		*No. of survivors per conception*		*Post Natal Loss (11)/(9)*
		No.	*Av*	*No.*	*Av*	*No.*	*Av*	*No.*	*Av*	*No.*	*Av*	*No.*	*Av*	
(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*	*(9)*	*(10)*	*(11)*	*(12)*	*(13)*	*(14)*	*(15)*
15-19	1	2	2	0	-	0	-	2	1.0	0	-	2	1	0.00
20-24	12	19	1.58	2	0.11	0	-	17	0.89	1	0.05	16	0.84	0.06
25-29	13	37	2.85	2	0.05	3	0.08	32	0.86	0	-	32	0.86	0.00
30-34	12	43	3.58	4	0.09	0	-	39	0.91	3	0.07	36	0.84	0.08
35-39	4	17	4.25	1	0.06	0	-	16	0.94	2	0.15	14	0.82	0.25
40-44	5	27	5.4	3	0.11	2	0.07	22	0.81	5	0.19	17	0.63	0.23
45+	20	114	5.7	9	0.08	8	0.07	92	0.81	12	0.11	80	0.70	0.13
Total	67	259	3.87	21	0.08	13	0.05	220	0.85	23	0.09	197	0.76	0.10

Table 6: Age specific fertility rates and total fertility rate (current fertility).

Present age group (1)	*No. of women (2)*	*No. of live births during last year*			*ASFR 5/2 X 1000 (6)*
		Boys (3)	*Girls (4)*	*Total (5)*	
15-19	8	-	1	1	125
20-24	12	2	1	3	250
25-29	13	1	2	3	230.77
30-34	12	-	-	-	-
35-39	4	-	-	-	-
40-44	5	-	-	-	-
Total	54	3	4	7	Σ=605.77

ΣASFR=605.77
TFR=605.77 X 5/1000 = 3.03

number of ever married women) The conceptions terminating before birth are taken as "uterine wastage" or uterine loss. This is either due to biological reasons or occupational hazards. This population registers very low pre-partum reproductive loss (0.13) in comparison to other tribes (Ghoshmaulik 1996). It is only 13.13% of the total number of conceptions of the Bhumija respondents.

Postnatal Loss per woman has been estimated by weighing the non surviving offspring against the live born (col-11/col-9) is 0.10. The index of survivality has been established as surviving offspring against conception (col-13/col-3) and expressed in terms of 100. The index of survivality calculated in this tribal population is 76 %. The study reveals that both the uterine and the postnatal loss are very low among the Bhumija respondents. Due to this the index of survivality becomes high i.e. 76 %.

The crude birth rate is an important measure of fertility as it directly points to the contribution of fertility to the growth rate of the population. The CBR of the present population is 26.9 per 1000 population. Table 6 shows the age specific fertility rate of this population. The age specific fertility rate of the age group 15-19 is reduced due to the increase in the age at marriage and very less proportion of married females in this age group. The general fertility rate (GFR) computed is 129.6 which indicates that there are 129.6 births per 1000 women in the child bearing age group during last one year. From table-6 the TFR calculated is 3.03 which indicate the total number of children that would be born to a Bhumija woman through her reproductive span at the current level of fertility.

The Sex-Age Adjusted Birth Rate (SAABR) eliminates the effect of demographic composition. It is the number of births per 1000 women (a weighted aggregate of number) in various five year age groups from 15 to 44.

SAABR = Number of live births in the year/ $(1 \times W1) + (7 \times W2) + (7 \times W3) + (6 \times W4) + (4 \times W5) + (1 \times W6)$

Where W1,W2,W3,W4,W5,W6 are the number of women in the age groups 15-19, 20-24, 25-29, 30-34, 35-39 and 40-44 respectively.

The SAABR calculated in the present study is 25.36 per thousand populations. From table 7, the CPR (Couple Protection Rate) calculated is 36. Thus all these findings suggest that the present Bhumija fertility is comparatively low. This is due to the higher rate of Family Planning acceptance, as is evident from table 8, compared to other tribes.

From table 8 it is evident that the average number of children ever born to non-sterilized women is higher than the average number of children born to the sterilized women. The impact of family planning practices is clearly observed in the fertility of the woman.

Table 7: Family welfare data

	No. of individuals
1. Sterilization	
a) Vasectomy	3
b) Tubectomy	16
2. I.U.D.	1
3. Oral Contraceptive	10
4. Conventional Contraceptive	14

Couple Protection Rate (CPR) =(19X1) + (1X0.95) + (10 X0.95) + (14X0.5) = 36.45

Table 8: Children ever born to sterilized women and Non-sterilized women (45+)

No of Stz spouses	*Children ever born to Stz spouses*	*Average*	*No of Non Stz (W45+)*	*Children ever born to Non Stz (W45+)*	*Average*
19(M3 + F16)	59	3.1	11	48	4.4

Table 9: Distribution of E.M.W. by age group and number of children ever born.

Age group	*No of children ever born*								*Total*		*Av*
	0	*1*	*2*	*3*	*4*	*5*	*6*	*7+*	*W*	*Ch*	
15-19	-	-	1	-	-	-	-	-	1	2	2
20-24	2	4	5	1	-	-	-	-	12	17	1.4
25-29	-	3	4	4	1	1	-	-	13	32	2.46
30-34	1	-	3	2	3	3	-	-	12	39	3.25
35-39	-	-	-	1	2	1	-	-	4	16	4.0
40-44	-	-	1	-	2	-	2	-	5	22	4.4
45+	1	-	1	2	4	6	4	2	20	92	4.6
Total	4	7	15	10	12	11	6	2	67	220	3.28

W: Women, Ch: Children, Av: Average

Fertility - the actual reproductive performance, (Bhande and Kanitkar 2001); the actual occurrence of births, especially live-births (Cox 1959) is a time dependent genetic concept. Here, table 9 highlights the actual reproductive performance of a group of ever married women and provides information on the average number of children ever born per married women for different age groups. It is found that the average number of children ever born per woman increases as the age group increases. This is in accordance with the findings of Singh (2006) who has also reported that there is a tendency of increasing number of live-births with the increasing chronological age of mother due to longer exposure of married life. However, the women of the later three age groups show almost a stable average. This is possible due to the acceptance of terminal methods in the later age groups. This is also evident from the comparative data of Table 8 which indicates that the acceptance of family planning programme has some impact on the average number of children ever born.

CONCLUSION AND RECOMMENDATIONS

Reproductive performance of women includes the age at marriage, age at first child birth, duration between two pregnancies, family planning practices, reproductive loss, index of survivality, etc. The present empirical study shows that the age at marriage does not have any impact on the fertility rate. Another important finding of this study is that though the mean age at marriage is 16.0 years and the mean age at first child-birth is 18.1 years still the pre natal reproductive loss and post-natal loss are less compared to other tribal populations. The index of survivality helps in overall assessment of reproductive success. The Bhumija population exhibits a high index of survivality i.e. 76, which indicates a high acceptance of reproductive health care by this community. This is possible due to the easy accessibility of the health care services because of the close proximity of the District Headquarters. The high rate of survivality has a decisive impact on the Crude Birth Rate (CBR) which is 26.9 and on the Total fertility Rate (TFR) which is 3.03. The crude birth rate (26.9) and the total fertility rate (3.03) of the present study is in agreement with the data from rural India (CBR-26.4, TFR-3.2), (Census of India 2003). The Sex-Age Adjusted Birth Rate (SAABR) is found to be 25.36 per thousand women and the couple protection rate (CPR) is 36. The couple protection rate of the present study is 36 whereas the CPR of Orissa is 39 (Mukerjee 2000).

All these measures show that the recent Bhumija fertility is comparatively low. This shows that the family planning programme and the reproductive health care have played a vital role in reducing the fertility level. From the present study it can be concluded that the next decadal (2001-2011) growth rate of the Bhumija tribe would be much less compared to the last decadal (1991-2001) growth. This is definitely due to the awareness towards small family norms among the Bhumija Population. However, trends in fertility needs to be monitored regularly and appropriate measures should to be taken to raise the status of women by introducing and promoting effective family planning programmes.

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