

Eco-Condition and Survivality : Facts From Tribes and Castes of Orissa

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ABSTRACT That eco-conditions shape out the life of human population is a known fact. Populations living under varying eco-conditions try to prove their fitness. Reproductive success of 17 identifiable populations of Orissa are examined. Ten of them are tribal and the rest comprise of Scheduled Caste, marginal communities, and castes. Estimates of reproductive life show a varying degree of performance survivality. Average number of conceptions, average live birth, uterine wastage and surviving offspring are considered in relation to eco-situations.

Each human population (in the sense of homogeneity) is characterised by certain physical and cultural traits, specially adapted to environmental conditions. Biological traits take long to adapt compared to the cultural traits. The main purpose of adaptation is survival. It is interesting to examine the reproductive performance and corresponding survivality of the outcome, of different human populations living under different ecological *niches*. This has been attempted here with respect to some tribal and non-tribal populations of Orissa.

MATERIAL OF THE STUDY

The material of the present study has been derived from data collected by various individuals over a period of nearly two decades from tribal, scheduled caste, marginal community and caste populations of Orissa. All the studies were part of academic projects and carried out through standard anthropological method. Genealogies were collected, interviews were made by the respective scholars during intensive field work. Although the time span is quite large, no drastic improvement in the habitation situation

is noticed. The habitats of the tribals have hardly improved, rather forest degradation has taken place.

The State of Orissa has a fairly long coast line and the interiors are elevated by the extending arm of the Eastern Ghat. There are 62 recognised tribal communities mostly in the hilly forest regions which are still underdeveloped. Many other communities which are economically and technologically backward and still follow traditional customs in day-to-day life, live in the remote areas. One community examined here is semi-nomadic. The people living in the urban areas enjoy some modern facilities.

The ten tribal populations are : Santal, Gadaba, Bhuiyan, Bhumij, Kondh, Koya, Kharia, Kissan, Bhattara and Bathudi. They are attached to their traditional hill-forest habitat and follow a mixed economy of agriculture (both settled and shifting) and forest collection. There are three communities. Pano, Siyalgir and Mahato, who live in the plains and are underdeveloped. The artisan caste, Kansari is bell-metal worker and Kela is a semi-nomadic snake-charmer group living near Bhubaneswar city. Two section of urban city dwellers have been considered; they are the Kalinga Vaishyas a trader community of South Orissa (Berhampur city) and (Hindu) caste population living in the cities of Cuttack and Bhubaneswar.

HABITAT VARIATION

These seventeen communities live in different regions of Orissa - Western, South-Western, Northern and Coastal. Climatic conditions are not very widely different but the soil conditions, elevation, floral, eco-conditions, sub-soil water, irrigation, social sur-

roundings etc. are different. Literacy and awareness levels are very low in all the groups except the city dwellers and the artisan community.

Most of the tribal communities were in the past totally dependent on forest with some agricultural activities. But with the gradual depletion of natural vegetation, they have shifted attention to agriculture supplemented by casual labour. The Kansaris are deprived of their livelihood since the introduction of stainless steel and aluminium utensils. The Siyalgirs depend on various types of economic activities and the Kelas roam about most of the time of the year with their snake-baskets and other tricks to earn their living.

Information on reproductive performances of the women over 45 years belonging to these 17 populations have been analysed to evaluate their (i) differential reproduction and (ii) survivality.

REPRODUCTIVE PERFORMANCE

Among all the populations enlisted in table 1, the highest average number of conception per mother (6.70) is recorded by women (of caste population) living in the two cit-

ies (Cuttack and Bhubaneswar) followed by the Siyalgir, the Kela and the Kalinga Vaishya in decreasing order. Except the K. Vaishya, the other two live in rural area characterized by high illiteracy among the women and unstable economic life.

The average number of conceptions between 5 to 6 is observed in increasing order among the Mahato (5.09), Bhumij (5.12), Bhuiyan (5.44), Santal (5.70) and Kharia (6.00). Except the Mahato, all are recognised as Scheduled Tribe communities. The Kharias are more dependent on natural resources as they live deep inside the Simlipal forest. The average number of conceptions between 4 to 5 are observed among Kissan (4.34), Kansari (4.37), Gadaba (4.47), Pano (4.65), Koya (4.73) and Bathudi (4.75). Of these, Kansari is an artisan caste living near the capital city and the rest are inhabitants of remote areas. Two tribal groups Bhattara (3.62) and Kondh (3.78) show poor performance compared to the others. None of the respondents accepted any type of modern contraceptive methods. This does not, however, rule out the possibility of traditional systems of birth spacing being practised even in the urban areas.

Table 1 : Some vital estimates derived from mothers above 45 years

S. No.	Populations	Per mother averages			Source
		Conception	Live Birth	Uterline loss (Prepartum)	
Tribal					
1.	Bhumij	5.12	4.68	0.34	Mohanty, (1987)
2.	Bhuiyan	5.44	4.79	0.65	Ghosh maulik
3.	Bhattara	3.62	3.45	0.17	Ghosh maulik
4.	Bathudi	4.75	4.69	0.06	Ghosh maulik
5.	Gadaba	4.47	4.15	0.32	Ghosh maulik
6.	Kharia	6.00	5.56	0.44	Mohanty (1987)
7.	Kissan	4.34	4.25	0.09	Ghosh maulik
8.	Koya	4.73	4.50	0.23	Ghosh maulik
9.	Kondh	3.78	3.14	0.64	Ghosh maulik
10.	Santal	5.70	5.31	0.39	Mohanty (1987)
Non-Tribal Community and Castes:					
11.	Pano	4.65	4.16	0.49	Deka (1984)
12.	Siyalgir	6.67	6.07	0.60	Ghosh maulik (1977)
13.	Kela	6.48	5.88	0.60	Upadhyaya (1986)
14.	Mahato	5.09	4.65	0.44	Mohanty (1987)
15.	Kansari	4.37	4.05	0.32	Deka (1984)
16.	Kalinga Vaishya	6.43	5.54	0.89	Patro (1991)
17.	Urban Group	6.70	5.90	0.80	Kanungo (1988)

UTERINE WASTAGE

All the pregnancies do not terminate in live births. The conceptions terminating before birth are taken as 'uterine wastage' or 'uterine loss' (Table 1). This is due either to biological reasons or occupational hazards. The enlisted populations exhibit very high pre-partum reproductive loss among the urban dwelling castes like the K. Vaishyas (0.89) and Urban Group (0.80). Tribal populations like Kissan (0.09), Bathudi (.06), Bhattara (0.17) and Koya (0.23) register very low loss. Among the rest, the loss is upto 0.65. This can not be attributed mainly to differential recall lapse as sufficient care was taken to minimize information loss.

Comparing uterine loss among three categories of populations the lowest frequency is observed among the Scheduled Tribe, higher among the non-tribal communities (Kela, Siyalgir, Mahato, Pano and Kansari) and highest among the urban dwelling castes.

SURVIVING TO MATURITY

Although there is no surity that all those who are born even if survive to maturity (*i.e.* beyond 15 years of age) will take part in reproduction and leave behind viable offsprings, yet this is considered as an indicator of reproductive success. The surviving offsprings of all those mothers (of the enlisted populations) have been averaged to get the number of surviving offsprings per mother. Reproductive wastages per mother have been estimated by weighing the surviving offsprings against the live born. The index of survivality has been estimated as per surviving offsprings against conception and expressed in terms of 100. The estimates are given below (Table 2).

The lowest surviving offspring per mother has been observed in the Gadaba (1.82) a primitive group and the highest among the urban city dwellers (5.10). Pano (S.C), Koya and Buiyan (S.T) also register very low sur-

Table 2 : Reproductive wastage and survivality

S. No.	Population	Average surv. offs.	Average repr. wast. ¹	Index of Survivality ²
1.	Bhumij	3.68	1.44	71.87
2.	Bhuiyan	2.16	3.28	39.70
3.	Bhattara	2.27	1.35	62.70
4.	Bathudi	3.25	1.50	68.42
5.	Gadaba	1.82	2.65	40.71
6.	Kharia	4.38	1.62	73.00
7.	Kissan	3.65	0.69	84.10
8.	Koya	2.04	2.69	43.13
9.	Kondh	2.93	0.85	77.51
10.	Sanatl	4.18	1.52	73.33
11.	Pano	2.00	2.63	43.01
12.	Siyalgir	4.55	2.12	68.21
13.	Kela	4.43	2.05	68.36
14.	Mahato	4.06	1.03	79.76
15.	Kansari	2.23	2.14	51.03
16.	K. Vaishya	4.65	1.78	72.31
17.	Urb. Group	5.10	1.60	76.12

1. Estimated against live birth

2. Estimated of surviving offspring against conception

viving rates, all of them are very under developed. Surprisingly, Kansari, an artisan community, exhibit a small number (2.23) of surviving offspring. On the contrary, a forest dweller tribe, Kharia (4.38) and Santal (4.18) and two marginal communities, Siyalgir (4.55) and Kela (4.43) have highest rate of survivality.

The pre-natal reproductive loss and post-natal loss are entirely due to different reasons. The latter is more due to hygienic process of child rearing, nutrition, prevention and control in diseases etc. The index of survivality (Table 2) will help in overall assessment of reproductive success. A value lower than 50, present a bleak picture. Bhuiyan, Gadaba, Koya and Pano are all in this category. Although the Kharia are more dependent on nature, they have much higher survivality, probably due to retention of the forest cover.

Table 3 : Habitat and main mode of subsistence

Category	Population
A. Hilly forest area or periphery with low quality farming, yielding inadequate food supplemented by forest collection.	Koya, Gadaba, Bhuiyan, Kharia and Pano
B. Hilly or semi-hilly forest- fringe habitat, moderately developed farming, not adequate food produced, supplemented by labour and collection	Bhumij, Kondh, Bathudi and Pano
C. Plain land, good farming technique, deficit supplemented by other works.	Santal, Mahato, Kissan and Bhattara
D. Settled in river basin villages access to towns, agriculture very low, traditional artisan or unspecified economic pursuit.	Kansari, Kela and Siyalgir
E. Urban habitat, modern education earning through service or trade	Kalinga Vaishya (K.V.) Caste population (U.G).

Habitat and Mode of Subsistence

The habitat and the main mode of subsistence of these populations are shown in table 3.

Many of the above mentioned populations can be under other categories also as all the areas are not equally developed or such groups are also found in other areas (e.g. Pano). The tribal populations in spite of the environmental hardship have developed a kind of adaptation (Kharia). Pre-natal loss is lower in many cases than post-natal loss. Artisan community like the Kansaris exhibit maladjustment with very low index of survivality. Thus reproductive fitness is intimately associated with a number of intrinsic and extrinsic factors.

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