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Research Paper

Fertility and Mortality Differentials among the Tai Phakae Population of Dibrugarh District, Assam

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***ABSTRACT** : Physical anthropology, demography and population genetics are three major discipline that are closely interrelated Fertility and mortality are important demography variables that are of considerable importance to the students of Anthropological genetics, as these are important measures of micro-evolutionary dynamics. In this paper at attempt has been made to find out the fertility and the mortality differentials among the Tai Phakae population of Dibrugarh district of Assam. It has also been attempt to see the mean monarchial age of the female in the population.*

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I. INTRODUCTION:

The two demographic parameters that are of considerable importance to the students of anthropological genetics are Fertility and mortality.

Dobzhensky and Allen (1956) quoted that "Selective Success. So continuity of life depends partly on fertility, on the differential of which depends the trends of selection and evolutions. Selection is one of the major evolutionary factors that disturb genetic equilibrium. It operates among other thing through differential mortality Sarkar and Choudhury (1967) have found wide variation in human menstrual cycle which is basically responsible for differential fertility in woman. Menarcheal age which has a strong genetical basis as suggested by Bolk (1923), Pepenoe (1928) and Petri (1935) is of considerable importance, if not directly but indirectly to the students of population genetics. Menarche is one of the major factor for differential fertility, (ghosh and Kumari (1973) and it gives the opportunity for selection.

Menopause is also another important reproductive variables. After the onset of menopause of female can no longer produce the reproductive span of a female is the period of life during which she is capable of producing offspring. It starts just two or three years after the onset of menstruation (i.e. just after adolescent sterility period) to the onset of menopause.

In the present work an attempt has been made to study the demographic variables of genetical importance (fertility and mortality) and reproductive variables such as the menarche and menopause among the Tai Phakaes of Assam.

The Phakaes are one of the branches of the Tai people who entered Assam in the later half of the 18th century. They come through the Patkai range and lived in Mogoung till 1700 A.D.

The Tai Phakae, a small population found in the riverine areas of Dibrugarh and Tinsukia district of Upper Assam, were originally a hill tribe within the famous Tai family. The Tais are found from Assam extending upto the Chinese province of Kwauss & from Bangkok to the interior of Yunan. According to Griersen (C.F. Thakur 1982) the Tai people was spread in the vast region of North western China in the Yang-Tse Valley and Hwang Ho and according to scott the original home of the Tai was South Western China. They are Buddhist in origin as a described by Ney Slion in his History of Shans (Chatterji, 1951) and linguistically belong to Siamese the Chinese groups of the Mongloid race.

II. MATERIALS AND METHOD :

In the present study, the data had been collected from the Tai-Phakaes of Namphakial and Tipamphakial villages of Naharkatia in the Dibrugarh district of Assam.

Informations on fertility and mortality had been collected altogether from 135 married women by personally interviewing the mothers while interviewing the mothers the detailed repreoductive histories that is, number of offspring, living and dead, including age of each if known, number of abortion / miscaniage and still

birth including sex of the offspring dead or living, were also collected from the mothers. The menarcheal age had been obtained from all the mothers, and the age at menopause were also obtained from the older mothers.

III. RESULTS AND DISCUSSION :

Table 1 : Percentile Record of conception, Pregnancy wastage and Fertility.

Group	No. of Females Studied	Total Conception	Live birth	Mean no of pregnancies per mother	Mean no of live births per mother
Tai Phakae	135	523	511	3.87	3.77
Khamiyang	40	238	218	5.95	5.45
Turung	32	207	190	6.90	6.33
Ahom	61	283	271	4.64	4.44
Mishing	75	423	401	5.64	5.34
Moran	65	373	359	5.74	5.52
Deuri	78	438	433	5.62	5.54

The mean number of pregnancy and mean number live births per mother of all age group of Tai-Phakae is 3.87 and 3.77 respectively. (Table-1). Mean number of pregnancies per mother of all age groups ofTai-Phakae is lower than that of other mongoloid population as shown in table- 1.

Frequency distribution of menarcheal age is shown in table II. It is seen from the table that the highest frequency lies in the age group of 12 years.

Table II : Frequency distribution of menorcheal age.

Age at Menarche	Tai Phakae (N=135) %
10	7.9
11	24.7
12	40.6
13	11.3
14	15.5

Table III reveals that the mean menarcheal age of Tai Phakae is (12 46 ± 0.07) within the range .

Table III: Menarcheal age of certain other population of Assam.

Group	No. studied	Mean ± S.E.		Author
Tai Phakae	239	12.46±	0.07	Present study
Khamiyang	40	12.80±	0.13	Bandana Das 1985
Turung	32	13.06±	0.20	Do
Ahom	264	12.96±	0.60	Gogoi, 1972
Ahom	66	12.29±		Das et al, 1980
Mishing	82	12.58±		Do
Moran	67	13.51±		Do
Deuri	77	13.03±		Do

Of other mongoloid population in Assam but lower than the Turung, Moran and Deuri.The frequency distribution of the age at menopause of the Tai Phakae is given in table IV. It seen that the age at menopause is within the range of other population of Assam (Table V).

Table IV : Frequency distribution of women by age at Menopause.

Age at Menopause	Tai Phakae N=135 (%)
38-39	--
40-41	--
42-43	10.00
44-45	70..
46-47	10.00
48-49	--
50-51	10.00
52-53	--

Table V: Age at Menopause in certain other population of Assam.

Population	No Studied	Mean + S.E.	Author.
Tai Phakae	10	44.30+0.66	Present study
Khamiyang	8	46.25+1.58	Bandana Das, 1985
Turung.	10	44.30+0.66	Do
Ahom	36	48.44+0.50	Gogoi, 1973
Sinpho	30	43.63+0.45	Kar & Mahanta 1975

Mortalty is another demographic variables of genetical variables of genetical importance as this indicates the loss of certain genotype in a population Mortality records of the offspring of the Tai Phakae is given in table VI.

Table IV : Mortality records of the offspring.

	Tai Phakae N-135	Turung N-32	Khmiyang N-40	Ahom N-61	Mishing N-75	Moran N-65	Deuri N-78
Total conception	523	207	238	283	423	373	438
Offspring died within 5 year	26 (5.05%)	19 (9.17%)	22 (9.32%)	10 (3.54%)	17 (402%)	45 (12.06%)	14 (320%)
Still birth	7 (134%)	11 (5.31%)	5 (2.11%)	10 (3.54%)	20 (4.72%)	11 2.95%	4 0.9
Abortion/ Miscaniarge	5 (0.95%)	6 (2.31%)	15 (6.36%)	2 (0.70%)	2 (0.48%)	3 (0.80%)	2 0.4
Average no. of dead offspring per mother	0.192	0.594	0.550	0.163	0.226	0.592	0.19
Average no. of still birth per mother	0.518	0.344	0.125	0.163	0.226	0.169	0.05
Average no. of abortion and miscaniage per mother	0.373	0.188	0.375	0.032	0.026	0.046	0.025

The proportion of dead offspring per mother of Tai Phakae (0.192) is compost within the range with Ahom, Deuri, Mishing (0.163) (0.192), (0.226). It is comparatively higher in Khamiyang (0.550) and Turung (0.594) and Moran (0.592).

In case of still birth per mother is comparatively higher in Tai-Phakae (0.518) than the other group taken under consideration. With regard to abortion and miscaniage per mother the Tai Phakae (0.373) one comparable with the Khamiyang (0.375). They are comparatively higher than other groups.

It had been suggested by many authors that sex ratio of the male still birth is relatively high (Stevenson and Babraw 1967) and this higher rate of male still birth is perhaps due to the fact that male babies are subjected to greater trauma possibly due to larger size (Stern 1960). There has also been some suggestion that male mortality rate of the children is much higher than that of the female (Stern 1960), Teitalbroum, (1972). But however, the present study suggests that, the sex ratio of male still birth to that of dead children in the Tai-Phakae is not higher as suggested by the previous authors, (Table-VII)

Table : VII : Differential sex mortality of the offspring.

Category	Male Phakae %	Female Phakae %
Still birth	3	4
Offspring died within 5 years	13	13

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