

Demographic Profile of Thoti – A Primitive Tribal Population of Andhra Pradesh

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KEY WORDS Thoti, Andhra Pradesh, Fertility, Mortality, Inbreeding.

ABSTRACT The Thoti is a primitive tribal population found in Adilabad district of Andhra Pradesh practising a high degree of consanguineous marriages. In the present paper an attempt has been made to give a demographic profile of the Thoti pertaining to age at menarche, age at marriage, age at first live birth, menopause and outcome of pregnancy. For this, data were collected from a total of 246 ever married Thoti women. Furthermore, average fertility and average offspring mortality per woman and the percentage of different types of offspring mortality alongwith different rates for fertility and offspring mortality as well as coefficient of inbreeding were calculated.

INTRODUCTION

The Thoti of Adilabad district of Andhra Pradesh was recognised as primitive tribal population in the year 1983. This population consisted of 1306 persons as per 1981 census. A majority of them (63.14%) live in Adilabad district only.

According to Guha (1935) the Thotis belong to the proto-Australoid stock. Risley (1916) had described the Thotis as a sub-tribe of Pradhans. But it is difficult to confirm this, though these two tribes are identical in their traditional relationship to Rajgonds as ritual beggars (Furer - Haimendorf, 1978). The name Thoti is based upon the traditional occupation of their women which is tattooing. On the basis of the occupation, they are also known as Pachabatluvandlu or Chukkabotluvandlu. They are also known as 'Birdu Gonds'.

The fertility and mortality are the two important demographic characteristics determining the growth of the population. These two parameters depend upon various physical, biological and socio-cultural practices such as type of marriage, type of family, age at menarche, age at marriage, age at first live birth, age at menopause, place of women in the society, value for

children, health condition and adoption of contraceptive devices etc., which vary from society to society. Presently it has been attempted to understand fertility and mortality of the Thoti.

SUBJECTS AND METHODS

The present study was carried out in Adilabad district of Andhra Pradesh state. The Thoti families belonging to 18 villages were selected on the basis of the preponderance of the Thotis. The data were gathered during November 1996 to January 1997. In all 246 ever married Thoti women belonging to the age group of 15 to 60 years were studied. The demographic data were collected using a Structured Questionnaire. Cross checks were made to verify the information pertaining to present age, occupation, and age at menarche, age at marriage, age at first live birth, outcome of pregnancy and consanguinity of couples. Average fertility and average offspring mortality per woman and the percentage of different types of offspring mortality alongwith different rates for fertility and offspring mortality were calculated.

RESULTS AND DISCUSSION

The mean age at different stages of women's reproductive period i.e. menarche, marriage, age at first live birth and menopause are shown in table 1. The mean age at menarche was found to be 13.06 ± 0.05 years which is

Table 1: Mean age at different stages of reproductive period among Thoti women

Stage	Mean $\pm$ SE
Age at menarche	13.06 $\pm$ 0.05
Age at marriage	12.88 $\pm$ 0.17
Age at first live birth	17.97 $\pm$ 0.372
Age at menopause	47.35 $\pm$ 0.33

very much within the range of age at menarche for the other Indian populations (Gupta and Jaiswal, 1992). The average age at marriage was found to be 12.88 ± 0.17 years. This shows that the Thoti women get married before attaining menarche. The mean age at first live birth was found to be 17.97 ± 0.37 years and the mean age at menopause was found to be 47.35 ± 0.33 years. Average age at marriage lower than that of age at menarche indicates the prevalence of child marriage in this tribal population.

The Thoti population was found to have high degree of inbreeding. The percentage of consanguineous marriage was found to be 77.64%, of which the first cousin marriage was predominant. The coefficient of inbreeding was found to be 0.0384 for this population (see Table 2) which falls within the range of inbreeding for other Andhra Pradesh populations (Dronama-Raju and Meera Khan 1961, 1963; Sanghvi, 1966; Chakravarti, 1968; Veerajju, 1978; Reid, 1973; Pingle, 1975).

Table 2: Incidence of consanguineous and non-consanguineous marriages among the Thoti tribal population

Type of Marriage	No.	Percentage	Coefficient of Inbreeding
<i>Consanguineous</i>			
Maternal uncle	1	0.40	0.0005
First cousin	138	56.10	-
Maternal uncle's son	72	29.27	0.0183
Paternal aunt's son	66	26.83	0.0168
Second cousin	44	17.89	0.0028
Beyond second cousin	8	3.25	0.0001
Total	191	77.64	0.0385
Non-Consanguineous	55	22.36	0.0000
Total	246	100.00	0.0384

Table 4: Age specific fertility rate among Thoti women

Age of women	Number of women	Number of children born	Age specific fertility rate per 1000 Thoti	Age specific Fertility rate Andhra Pradesh Rural (1994)	Age-specific Fertility rate India Rural (1994)
15-19	50	07	140.00	109.1	79.5
20-24	68	14	205.88	220.7	260.9
25-29	55	14	254.55	116.6	200.2
30-34	41	01	24.39	52.4	129.8
35-39	24	01	41.67	21.5	65.9
40-44	21	00	00.00	7.2	29.2
45-49	20	00	00.00	2.8	4.4
Total	279	37	666.49	530.3	769.9

Fertility

The distribution of fertility and offspring mortality for the women belonging to different age cohorts is set out in table 3. Among the 246 evermarried women 230 were found to have at least one conception in their life time and 225 were found to have at least one live birth in their life time and calculation per women was done by considering the respective number of women in each respective category. This table reveals that there was a gradual increase in the average number of conceptions and live births with the increase of mother's age. The average number

Table 3: Age cohort wise distribution of fertility among the Thoti women

Age cohort	Number of women	Conceptions		Live Births	
		%	Per Woman	%	Per Woman
15-19	17	1.11	0.65	0.90	0.53
20-24	45	10.35	2.29	9.05	2.00
25-29	52	16.98	3.25	16.08	3.08
30-34	35	14.97	4.56	14.07	4.00
35-39	23	11.76	5.09	10.75	4.65
40-44	18	9.55	5.28	9.15	5.06
45 +	56	35.28	6.27	33.77	6.00
Total	264	995	4.33	993	4.15

of conceptions and live births for the women who reached their end of reproductive age, that is, 45 and above were found to be 6.27 and 6.00, respectively. The overall average conception and live births per woman for this population were 4.33 and 4.15, respectively.

Table 4 reveals that the age specific fertility rate for the Thoti population showed increasing trend upto 29 years of age of the women, thereafter it started decreasing. But it again increased in the age group 45+. When the age specific

fertility rate of Thoti was compared with age specific fertility rate of rural population of Andhra Pradesh and India, respectively (Table 4), it was found that the age specific fertility rate for rural Andhra Pradesh and rural India showed increasing trend upto 24 years of age and thereafter it showed decreasing trend upto 49 years of age. Furthermore the age specific fertility rates of Thoti for the age groups 15-19 and 25-29, respectively were higher compared to that of rural population of Andhra Pradesh and India, respectively while these were found to be lower for the age groups 20-24 and 30-34. In the case of age group 35-39, the age specific fertility rate of Thoti was found to be higher than that of corresponding rural population of Andhra Pradesh but was lower than that of rural population of India.

Mortality

The distribution of offspring mortality at different stages is shown in table 5. This table shows that there was a gradual decrease in the percentage of prenatal deaths as one moves from lower maternal age cohorts to the higher. The highest (18.18%) percent of prenatal death was found in the women below 20 years of age followed by the women of age group 20-29 years which was 8.09%. The women above 29 years of age showed 5.33% of prenatal deaths. Thus this study indicates the occurrence of large number of prenatal deaths among younger mothers below 20 years of age, which is quite in accordance with the expectation (see Matsunaga, 1966). However the lower prenatal mortality in above 29 years old mothers seems to indicate that elder mothers are more protected against prenatal mortality compared to younger ones and the causality of it is presently difficult to assess.

Analysis of infant mortality showed the highest percentage (22.22%) among the women below 20 years of age. The women belonging to the age groups 20-29 and above 29 years showed almost similar percentage of infant mortality. Thus this study indicates the high occurrence of infant mortality among younger women. The average infant mortality for this population was found to be 9.43% (Table 5).

On the other hand, both in case of early childhood mortality as well as late childhood mortality, there was a gradual increase as one moves from lower maternal age group to the higher. The highest percentage (7.86%) of early childhood mortality was found in the women above 29 years of age. The women of age group 20-29 years showed (1.60%) early childhood mortality. While no early childhood mortality was found in the women below 20 years of age. Thus this study also indicates high percentage of early childhood mortality among older women. The average early childhood mortality for this population was found to be 6.11%. The women above 29 years of age showed highest percentage (3.56%) of late childhood mortality. The women of the age group 20-29 showed 0.80% of late childhood mortality, while no late childhood mortality was found in the women below 20 years of age. Thus the study indicates high percentage of late childhood mortality among older women. The average late childhood mortality for this population was found to be 0.11% (Table 5).

The values of various fertility and mortality rates for the Thoti are given in the table 6. The crude birth rate for the Thoti was found to be 32.83, which is higher when compared with that of the rural population of Andhra Pradesh and India, respectively. The general fertility rate for the Thoti was found to be 132.62 which is

Table 5: Age group wise distribution of offspring mortality among the Thoti women

Age group	No. of women	Prenatal mortality		Infant mortality (0-1 year)		Early childhood mortality(1-4 yrs)		Late childhood mortality(5-9yrs)	
		n	Per woman	n	Per woman	n	Per Woman	n	Per Woman
20<	17	2	0.12	2	0.12	0	0.00	0	00.00
20-29	97	21	0.22	23	0.24	4	0.04	2	0.02
>29	132	39	0.29	63	0.48	53	0.40	24	0.18
Total	246	62	0.25	88	0.36	57	0.23	26	0.11

Table 6: Various fertility and mortality rates among the Thoti population

Fertility & mortality Rate	Thoti	Andhra Pradesh Rural (1994)	India Rural (1994)
<i>Fertility</i>			
Crude birth rate	32.830	24.1	30.5
General fertility rate	132.620	95.9	128.6
Total fertility rate	3.406	2.7	3.8
Gross reproduction rate	1.840	1.3	1.8
<i>Mortality</i>			
Crude death rate	5.32	9.0	10.1
Neo-natal mortality rate	108.10	50.4	52.0
Infant mortality rate	162.16	69.0	00.0

also higher compared to that of rural population of Andhra Pradesh and India, respectively. The total fertility rate was found to be 3.406 which is higher compared to that of rural population of Andhra Pradesh but lower compared to that of the rural population of India. The gross reproduction rate was found to be 1.840, which is quite similar to that of the rural population of India but was higher than that of rural population of Andhra Pradesh.

The crude death rate was found to be 5.32, which is lower than that of the rural population of Andhra Pradesh and India, respectively. The neonatal mortality was found to be 108.10, which was higher than that of rural population of Andhra Pradesh and India, respectively. The infant mortality rate was found to be 162.16, which is also higher than that of the rural population of Andhra Pradesh and India, respectively (Table 6).

Thus this study showed high prevalence of prenatal and perinatal mortality among the Thoti which may be partly due to high degree of inbreeding which leads to the homozygous condition of the harmful recessive genes for the genetic disorders like sickle cell anaemia and thalassaemia prevalent in this population. But in view of the fact that the crude death rate of the Thoti is much lower than the respective crude death rate of rural Andhra population and rural Indian population, it is likely that the infant child health care in this population needs relatively better attention than what is presently

available, in order to bring down the neonatal and infant mortality rates.

The comparative study of the 1971 and 1981 Census indicates that the Thoti population showed a decadal decline. However the present observation that the Thoti now show higher crude birth rate and lower crude death rate, when compared with those of rural population of Andhra Pradesh as well as India seems to indicate that the population is now poised to grow. Only the final 1991 census report, not available as yet, shall be able to bear out whether or not the present prediction is tenable.

REFERENCES

- Census of India 1971*, Registrar General and Census Commissioner, Govt. of India, New Delhi.
- Census of India* General population and population of Scheduled Castes and population of Scheduled Tribes - 1, Paper-2, Govt. of India, New Delhi (1981).
- Chakravarti, M.R.: Consanguinity in India. *Z. Morph. Anthropol.*, **60**: 170 (1968).
- Dronama - Raju, K.R. and Meera Khan, P.: The frequency and effects of consanguineous marriages in Andhra Pradesh. *J. Genetics*, **13**: 387 (1961).
- Dronama - Raju, K.R. and Meera Khan, P.: A study of Andhra marriages: Consanguinity, caste, illiteracy and bridal age. *Acta Genet.*, **13**: 21 (1963).
- Furer - Haimendorf, C. Von.: *The Gonds of Andhra Pradesh*, Vikas Publishing, Bombay (1978).
- Guha, B.S.: The Racial Affinities of the Peoples of India, in *Census of India 1931* (Simla, India), Vol. I, Part III-A, Table I-V, pp.2-22 (1935).
- Gupta, N. and Jaiswal, I.J.S.: Age at menarche among three caste groups of Jammu city. *Man in India*, **72**: 463 (1992).
- Matsunaga, E.: Possible genetic consequences of family planning. *J. Am. Med. Assoc.*, **198**: 533 (1966).
- Pingle, U.: A comparative analysis of mating systems and marriage distance patterns between five tribal groups of Utnur taluq, Adilabad district of Andhra Pradesh. *Proc. 2nd Conf. Indian Soc. Hum. Genet.*, Calcutta (1975).
- Reid, R.M.: Inbreeding in Human Populations. In M.H. Crawford and P.L. Workman (ed.) *Methods and Theories of Anthropological Genetics*. A School of American Research Book, University of New Mexico Press, Albuquerque (1973).
- Risley, H.H.: *The People of India*, Oriental Book Reprint Corporation, Delhi (1916).
- Sanghvi, L.D.: Inbreeding in the rural districts of Andhra Pradesh. *Eugn. Quart.*, **13**: 291 (1966).
- Veerraju, P.: Consanguinity in tribal communities of Andhra Pradesh. In I.C. Verma (ed.) *Medical Genetics in India*. Auroma Enterprises, Pondicherry (1978).