R-97

FERTILITY OF CHENCHU WOMEN

F E R T I L I T Y   O F   C H E N C H U   W O M E N

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FERTILITY OF CHENCHU WOMEN.

The importance of studying fertility in the context of Social and economic development is universal. Geographical variations, cultural practices, susceptibility to various diseases and nutritional standards play important roles in determining the fertility rates of a community. It is essential to study the fertility rates and differentials among various occupational, economic and caste groups for the evaluation and better planning of the various developmental activities.

The changes in fertility rates have been studied among various communities by Government and Voluntary Organisations in India, but due to their inaccessibility, very few studies were made among the tribal populations. In Andhra Pradesh, no study has yet been made on the fertility rates and the factors influencing them, in the tribal areas.

Due to the following limitations it is not possible to find out the actual fertility rates of the tribal people from the census data.

(a) Large areas with concentration of tribal populations were transferred from one district to the other. eg:- East Godavari to Khammam and reorganisation of Visakhapatnam district into Visakhapatnam and Srikakulam Districts.

(b) Many new tribes have been recognised recently and were added to the scheduled tribes population of those areas.

(c) Migration of people from plains to the agency areas and vice versa.

In the absence of authentic data on the growth rate of tribal populations, it will be difficult to plan the future developmental needs and also it is dangerous to carry out intensive family planning programmes, as it may result in the gradual extinction of a whole tribe, if it is already showing a declining trend in fertility. Hence it is essential to carry out fertility surveys and find out whether the various tribal populations were showing increasing or declining trends in fertility along with migration, trends outward as well as inward, to chalk out developmental activities more effectively and purposively.

There are 33 schedule tribes in Andhra Pradesh and the Chenchu is one of the most primitive among them. As a first step the Chenchus were selected for conducting the fertility study, because they are numerically a smaller group and their growth rate in the past was found to be low. The Chenchus inhabit the dense jungles in

the Nallamallis on either side of the river Krishna
in the districts of Kurnool, Prakasam, Nalgonda,
Mahboob nagar and Guntur. They subsist on food gathe-
ring and hunting. A few families are taking up
agriculture recently. Their families are nuclear
and the community is endogamous.

Objectives of the Study:-

The primary objective of this study is to
determine the fertility rates of the Chenchu women
of Andhra Pradesh. The other objectives are:-

1) To estimate the level of fertility among Chenchu
   Women.

2. To estimate the average age at first and last
   conception.

3. To estimate the reproductive period with reference
   to menarche and menopause.

4. To find out the most fertile age group of the tribe.

5. To know the rate of primary and Secondary sterility
   and

6. To find out the maternal and infant mortality rates.

Methodology:

The present enquiry is based on the data colle-
cted from 11 randomly selected villages. Attention is
mainly confined to fertility, marriage and related
problems. Two schedules are used to collect required
information.

1) Household Schedule giving information about total household members, their relation to the head of the household, sex, age, marital status, occupation and income etc., and

2) Fertility schedule giving particulars such as age, age at menarche, age at first and last conception, No. of children born etc., from all ever married women. The above data is collected by interviewing all female members above 15 years of age in the households.

In all 11 villages; 6 from Mahboobnagar, 4 from Kurnool and one from Prakasam district with 174 households having a total population of 804 persons are covered for the present study as detailed below.

Table No. 1

District	Villages covered	No. of house holds covered.
Mahboobnagar	Mannanur	18
	Venkateswarla Bavi	8
	Watwarlapalli	13
	Sarlapalli	14
	Kudichintala	2
	Farhabad	11
Kurnool	Srisailam	17
	Nagaluty	16
	Bairluty	35
	Ahobilam	13
Prakasam	Peddamantanala	27

CHAPTER II.

THE POPULATION

A total of 174 households are covered in this study. These households had 804 people at the time of the Survey.

Age and Sex Composition:

Out of the total population, 33.83% are children below 10 years of age and another 9.45% are young boys and girls between 10-14 years. Thus out of every 100 persons, 43 are below the age of 15 years. 34.71% are adults between 15-34 years, 19.40% are middle aged persons between 35-54 years and the remaining 2.61% are old aged persons above 55 years of age. Assuming that all children below the age of 15 years and old people above 60 years are dependents, nearly every second person in the population is a dependent. 43.47% of the boys and 43.07% of the girls are below the age of 15, while 52.66% of the males and 50.26% of the females are between 15-49 years of age. Only 3.89% of the males and 6.67% of the females are of the age 50 years and above. Thus the population is very young, typical of primitive communities experiencing high fertility, high child mortality and lower life expectancy. The women in the reproductive age of 15-44 years constitute 48.4% of the total female population.

Table No. 2
POPULATION STRUCTURE

Age-group Years	Total	Males %	Females %
0-4	(128) 15.92	(65) 15.70	(63) 16.15
5-9	(144) 17.91	(74) 17.87	(70) 17.95
10-14	(76) 9.45	(41) 9.90	(35) 8.97
15-19	(70) 8.71	(36) 8.70	(34) 8.72
20-24	(66) 8.21	(36) 8.70	(30) 7.69
25-29	(72) 8.96	(35) 8.45	(37) 9.49
30-34	(71) 8.83	(34) 8.21	(37) 9.49
35-39	(74) 9.20	(38) 9.18	(36) 9.23
40-44	(43) 5.35	(28) 6.76	(15) 3.85
45-49	(18) 2.24	(11) 2.66	(7) 1.79
50-54	(21) 2.61	(7) 1.69	(14) 3.59
55-59	(12) 1.49	(6) 1.45	(6) 1.54
60 +	(9) 1.12	(3) 0.73	(6) 1.54
Total	(804) 100.00	(414) 100.00	(390) 100.00

Numbers in brackets denote absolute numbers.

The population appears to be static between 15-40 years and a sharp fall is observed afterwards. The fall in percentage of population between 0-14 years indicates high child mortality and the fall after 44 years indicates higher death rate after 40th year.

A comparison of the age specific distribution of male and female population, show higher percentage of females in the age group 50-54 years, which may be due to overlapping, otherwise the ratio of females to males is nearly equal. In the age group 10-14 years the number of females are 1.18% less than the males. Comparatively a higher percentage of old aged females than the males are observed in the population.

The sex ratio of this sample is 942 females per 1000 males.

The average age of the population works out to be 19.95 years; that of males being 20.82 and that of females being 19.09 years.

Table No. 3

PERCENTAGE DISTRIBUTION OF MALES AND FEMALES
ACCORDING TO MARITAL STATUS.

Marital Status	Males		Females	
	No.	%	No.	%
Un-married	221	53.38	171	43.85
Married once	166	40.10	152	38.97
Married Twice or more often	13	3.14	14	3.59
Widowed	5	1.21	37	9.49
Divorced or seperated	1	0.24	2	0.51
Men with two or more wives (or) Women as one of the two or more wives.	8	1.93	14	3.59
Husbands (or) family away	--	--	--	--
Total	414	100.00	390	100.00

The age and sex specific distribution of the population according to marital status is given in Table No. 3. In the total population 221 males(53.38%) and 171 females (43.85%) are never married; while 193 males (46.62%) and 219 females (56.15%) are ever married. The higher percentage of married females observed is due to the easy marriagibility without the burden of

paying any dowry; while the male has to invariably pay a bride price. Due to the same reason girls are married people, at a lower age than the boys. Among the ever married 40.10% of the males and 38.97% of the females are married once only. Though polygyny, divorce and remarriage are permitted, only a small percentage of the population is observed to have been married more than once i.e. 3.14% of males and 3.59% of the females.

1.21% of the males and 9.49% of the females are widowed and 0.24% of the males and 0.51% of the females are presently divorced or seperated. The higher percentage of the widowed or seperated females is due to the avoidance of remarriage by old women and women having aged children. Polygyny is observed in all age groups of the Chenchus. 1.93% of the males have more than one wife living while 3.59% of the females are presently wives of persons having more than one wife.

Type of marriages:

The Chenchus of this study are found to marry mostly in related circles. The most common and preferred type of marriage is cross-cousin(40.30%) uncle-niece marriages are also prevalent as among the plains population of the neighbouring villages and constitute 14.43% of the total marriages. The remaining 45.27% of the marriages are affinal.

Table No. 4

DISTRIBUTION OF MARRIAGES ACCORDING TO TYPE OF MARRIAGE.

Marriage Type	No. of marriages	Percentage
Cross-Cousin	81	40.30
Uncle-niece	29	14.43
Affinal	91	45.27

Marital status by age:

The marital status of the individuals, sexes separate, are presented in table No. 5. It is observed that marriages do not take place below 10 years of age in both the sexes. No male above the age of 24 years and no female above the age of 19 years remained never married. 4 girls in the age group 10-14 years are married, indicating the prevalence of child marriages. 15.16% of the boys and 79.41% of the girls of the age group 15-19 years are married, while the percentage of married males increased to 78.70% in the age group 20-24 years. Hence the most common marriage age for girls is between 15-19 years and for boys it is between 20-24 years. This indicate that Chenchu girls are married at a relatively younger age than the males.

Table No. 5

Marital status by age of individuals.

Age-groups years	Males				Females					
	Un-married	Married	Widowed	Divorced or seperated	Un-married	Married Widowed whose fertility is not covered.	Married Widowed whose fertility separa-ted is covered.	Widowed Divorced or seperated women whose fertility is not covered.	Divorced women whose fertility histroy is covered.	Divorced women whose fertility histroy is not covered.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
0-4	(65) 29.41	--	--	--	(63) 36.84	--	--	--	--	--
5-9	(74) 33.48	(5) 2.67	--	--	(70) 40.94	--	--	--	--	--
10-14	(41) 18.55	--	--	--	(31) 18.13	(4) 2.22	--	--	--	--
15-19	(31) 14.03	--	--	--	(7) 20.59	(27) 15.00	--	--	--	--
20-24	(10) 4.53	(25) 13.37	--	(1) 100.00	--	(29) 16.11	--	(1) 100.00	--	--
25-29	--	(34) 18.18	(1) 20.00	--	--	(37) 20.55	--	--	(1) 100.00	--
30-34	--	(34) 18.18	--	--	--	(31) 17.22	(5) 21.74	--	--	--
35-39	--	(37) 19.79	(1) 20.00	--	--	(33) 18.33	(3) 13.04	--	--	--
40-44	--	(28) 14.97	--	--	--	(12) 6.67	(2) 8.70	(1) 7.14	--	--

Table No. 5 contd.......

Age groups years	Males				Females				Whose fertility history is not covered
	Un-married	Married	Widowed	Divorced or seperated	Un-married	Married	Widowed	Divorced or seperated	
	1.	2.	3.	4.	5.	6.	7.	8.	9.
45-49		(10) 6.35	(1) 20.00	—	—	(1) 0.56	(5) 21.74	(1) 7.14	—
50-54	—	(6) 3.21	(1) 20.00	—	—	(5) 2.78	(4) 17.39	(5) 35.72	—
55-59	—	(5) 2.67	(1) 20.00	—	—	—	(1) 17.39	(6) 42.86	—
60 +	—	(3) 1.61	—	—	—	—	—	—	—
Total	(221) 100.00	(187) 100.00	(5) 100.00	(1) 100.00	(171) 100.00	(180) 100.00	(23) 100.00	(14) 100.00	(1) 100.00

and 27.01% are represented by couple + more than 3.
The remaining 8.62% of the households are represented
by widow or widower with children and others.

Table No. 7
SIZE OF THE HOUSEHOLD.

Category	No. of households	
	No.	%
Couple	24	(13.79)
Couple + 1	30	(17.24)
Couple + 2	27	(15.52)
Couple + 3	31	(17.82)
Couple + More than 3	47	(27.01)
Widow or widower with children and others	15	(8.62)
	174	(100.00)
Average size of household =		4.62

Occupation and Income:

All the households subsist on food gathering,
collection of minor forest produce and hunting as the
principal occupation. In addition 56.32% of the house-
holds practice agriculture or agricultural labour,
32.90% manual labour in the forest works etc and 9.78%
are employed in Government as /chowkidars or peons. The
average monthly income per household is Rs. 53.74.

Table No. 8

Occupation and Income Particulars.

Occupation	No. of households	% of households	Average monthly income per household (in Rs.)	Per capita income per month. (in Rs.)
Agriculture + Agricultural labour	98	56.32	53.70	12.12
Manual labour	59	33.90	42.90	9.69
Government employment	17	9.78	91.17	20.66

The maximum household income of Rs. 91.17 is observed among those employed by the Government. The families taking up agricultural labour have an income of Rs. 53=70 per month, while those households depending on the manual labour have the least family income of Rs. 42=90 per month. The per capita income for Government employed households is Rs.20.66 for agriculture and agricultural labourers is Rs. 12.12, and for manual labourers it urers it is Rs. 9.69. The average per capita income works out to Rs. 12=13 per month.

The incidence of widowhood among females (9.49%) is more, when compared to widowerhood among the males (1.32%). The maxiumu number of widows are in the age group 50-54 years.

Type of family:

The families are predominantly nuclear (67.48%) and in addition 13.68% of the families are represented by the couple only. The remaining 18.84% of the families are extended, of which 14.24% are vertically extended, while 4.60% are horizontally extended.

Table No. 6

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO TYPE OF FAMILY

Type of family	No. of households	Percentage
Couple	14	13.68
Nuclear	126	67.48
Vertically extended	26	14.24
Horizontally Extended	8	4.60

Size of the households:

The average size of the household works out to 4.62. The distribution of the households reveal that 13.79% are represented by couple, 17.24% are represented by couple + 1, 15.52% are represented by couple + 2, 17.82% are represented by couple + 3

INFANT AND CHILD MORTALITY:

Infant mortality is the mortality among children of less than one year of age. The first year of life is the most vulnerable period and in most under developed countries one out of every four infants, dies before completing its first year of life. The death of infants depend to a large extent on the poor economic conditions and insanitary environment, which is something a society can improve considerably. The infant mortality rate may be taken as a reliable and sensitive index of the total health conditions of a community. The infant mortality rate is the number of infant deaths that occur per thousand live births in any population in one calender year. It does not take into account any foetal deaths or still births. As it is difficult to find the mortality rate in a particular year in a primitive society, where the deaths are not recorded, the conventional infant mortality rate which is the number of infant deaths that occur during a given period of time per 1000 live births during the same period in a given population is adopted. In the present study infant mortality is calculated out of all live births of women from their dates of marriages till the time of investigation and the number of children who died within one year of their birth.

In the present sample, out of the 845 live births reported by mothers from their dates of marriages till the date of investigation, 140 (16.16%) died within one year of their birth. The rate of infant mortality thus works out to be 165.68 per 1000 births. It is 176.62 for boys and 156.52 for girls. These rates does not refer to any one calender year, but it is an average rate for a number of years, begining from the year of marriage of the woman till the date of investigation.

Time Trend in Infant Mortality:

To analyse the time trend in infant mortality, births and infant deaths are devided into Pre 1960, Post 1960 and Post 1970 birth cohorts. It is observed that infant mortality has been declining over the course of time. The infant mortality rate which was 179.31 among the pre-1960 birth cohort, declined to 171.87 in the Post 1960 birth cohort, and it further declined to 140.42 in the Post 1970 birth cohort. The decline after 1970 was rapid, which indicates awareness of childcare and improvement in general health conditions.

TABLE No. 9

INFANT MORTALITY BY BIRTH COHORT.

Birth Cohort	No. of Live births.	No. of infant deaths.	Infant mortality rate.
Pre 1960	290	52	179.31
Post 1960	320	55	171.87
Post 1970	235	33	140.32
All Cohorts	845	140	165.68

The most probable reason for the rapid decline may be control of malaria, Small pox and Cholera in the Chenchu areas.

The infant mortality among Chenchus is very high compared to 81.13 for Kurnool district (1960) and 44.72 for Mahbubnagar district. However the rate is close to the All India rate of 139 (1951-61 Demographic year Book U.N.O. 1967)

Differential infant mortality:

Of the deaths which occured in the first year 40% were in the first week, 7.14% were between 1 week to one month, 28.57% were between 1-3 months, 12.14% were between 4 to 6 months, 6.42% were between 7to 9 months, and 5.71% were between 10 to 12 months. This clearly indicates that the incidence of mortality is

very high in the first week after child birth and it reduces considerably from the 4th month onwards. This is due to the weeding out of the unfit and weak children soon after birth and the causes of Pre-maturity, congenital diseases, which are more virulent in the first week after child birth.

It was observed that the percentage of deaths among the male children are less than that of the female children upto the month, but later on the female deaths are considerably lower than that of the males except in the age group 10-12 months.

Table No. 10

PERCENTAGE OF INFANT DEATHS IN VARIOUS AGE GROUPS.

Age-group	Male(154) %	Female(185) %	Total(339) %
0-1W	15.58 (24)	17.30 (32)	16.52 (56)
1W-1M	1.95 (8)	3.78 (7)	2.90 (10)
1M-3M	14.98 (23)	9.19 (17)	11.80 (40)
4M-6M	5.84 (9)	4.32 (8)	5.01 (17)
7M-9M	3.90 (6)	1.62 (3)	2.65 (9)
10M-12M	1.95 (3)	2.70 (5)	2.36 (8)

Child Mortality:

Child mortality is the mortality of children below the age of 15 years. In the present study the rate of child mortality is calculated out of all live births reported by the women from their marriage till the date of investigation and the number of deaths which took place between 1 year and 15 years of age.

The occurence of child deaths in various age groups are as follows:-

66.33% of deaths occur between 1-3 years (69.77% among males 63.72% females); 20.60% of deaths occur between 3-6 years (20.93% among males 20.35% among females) and 13.07% of deaths occur above 6 years and below 15 years of age (9.30% among males and 15.93% among females). The percentage of female deaths in the age group 6-15 years is relatively higher than the males.

The percentage distribution of total deaths among infants and children are shown in table No. 11.

Out of the 845 live born children 199(23.55%) died between 1 year and 15 years of age. The percentage for males is 22.33 and for the female it is 24.55, there by indicating that a slightly higher percentage of female children than male children die in their child hood which may be attributed to the preferential

treatment given to male children in home feeding.

Table No. 11

PERCENTAGE OF DEATHS AMONG INFANTS & CHILDREN.

Age-group	Males %	Females %	Total
0-1	44.16 (68)	38.92 (72)	41.30 (140)
1-3	38.96 (60)	38.92 (72)	38.94 (132)
4-6	11.69 (18)	12.43 (23)	12.09 (41)
Above 6 years	5.19 (8)	9.73 (18)	7.67 (26)

Numbers in brackets denote absolute numbers.

Nearly 1/5th (19.17%) of the live born children died within month after birth, of which 16.52% are Neonatal (less than one week), 24.78% of the deaths are infant (below 1 year) 38.94% of the deaths are among children 1-3 years of age, 12.09% of the deaths are among children of age 4-6 years and the rest among children above 7 years of age.

Mothers Age, Parity and Child Mortality:

The relationship between the mothers age, maternity and the order of birth, on child mortality is given in Table No. 12.

Table No. 12.

Percentage of dead children of various ages of mothers and at various orders of birth among total children ever born.

Mothers Age group years		No. of children ever born.												% dead among total ever born.
		1	2	3	4	5	6	7	8	9	10	11	12	
15-19	N.B.	164	83	13	—	—	—	—	—	—	—	—	—	260
	N.D.	97	53	9	—	—	—	—	—	—	—	—	—	159
	% D	59.15	63.85	69.23	—	—	—	—	—	—	—	—	—	(61.15)
20-24	N.B.	13	75	83	63	29	11	—	—	—	—	—	—	274
	N.D.	3	23	36	35	14	5	—	—	—	—	—	—	116
	% D	23.08	30.67	43.37	55.55	48.28	45.45	—	—	—	—	—	—	(42.33)
25-29	N.B.	1	8	25	37	42	32	21	12	4	—	—	—	182
	N.D.	—	—	2	8	9	5	5	3	—	—	—	—	32
	% D	—	—	8.00	21.62	21.43	15.62	23.81	25.00	—	—	—	—	(17.58)
30-34	N.B.	3	17	25	23	17	19	6	—	—	2	1	2	110
	N.D.	1	5	4	5	3	1	1	—	—	1	1	1	23
	% D	33.33	29.41	16.00	21.74	17.65	5.26	16.67	—	—	50.00	100.00	50.00	(20.91)

Table No. 12 contd......

Mothers age group years.	No. of children ever born												% dead among total ever born.
	1	2	3	4	5	6	7	8	9	10	11	12	
35-39 N.B.					1	6	4	4	9	4	3		32
N.D.						1	1	2	3				7
D						16.67	25.00	50.00	33.33				(21.87)
40-44 N.B.									1		2		3
N.D.									1		1		2
% D									100.00		50.00		(66.67)
Percentage dead at various orders of birth.	56.18	45.78	37.60	42.45	31.11	20.27	22.92	24.24	18.18	10.00	33.33	66.67	—

N.B. No. of births, N.D. No. of deaths, % D. Percentage of deaths to births.

It is evident from the table that the child mortality is very high when the mothers age at maternity is below 20 or above 40. The lowest mortality rate is observed among mothers in the age group 25-29 years. This indicates that infant mortality is high for children born to very young and old mothers.

The percentage of dead children increased with order of birth in the same age group, excepting the age group 30-35 years. 61.15% of the children born to mothers of 15-19 years of age with at least 3 pregnancies are dead. 42.33% of deaths are observed for the mothers of 20-24 years of age with at least 6 pregnancies. It is evident that children born to mothers in younger age groups are dying more with the increase in the order of birth. A large percentage of children of the 11th and 12th orders of birth are dead. A large number of pregnancies, reduce the period of spacing, strain the health of the mother, and weaken the foetus and also yield poor quality milk, and result in higher percentage of Neo-natal deaths. Over work of mothers, over crowding and insanitary conditions which result in the wastage of children due to neglect, malnutrition and diseases. The general picture of mortality by mothers age at maternity shows that the mortality rate decreases as the age at maternity increases upto

35 years and gradually increases afterwards. The increase after 40 years is very sharp.

Causes of Child deaths:

The causes of death of children at various ages is shown in Table No. 13. A majority (45.13) of the deaths are attributed to fevers; diarrhea is the next important cause of death (19.76%) followed by causes which could not be specified including malnutrition, tetanus, spasm, infantile beri beri, accidents etc., Vomitting and loose motions account for 14.75% of the deaths, while 2.95% of the deaths are due to other causes which include small pox, accidents, snake bite, wild animals etc. This reveals that insanitary conditions and malnutrition take a large toll of the Chenchu children.

The causes of deaths age wise, indicate that death due to non-specific reasons are more prevalent upto 1 month, and deaths due to diarrhea take a heavy toll between 1 month to 1 year. Fevers are the most usual causes of death after the first year.

TABLE No. 13

CAUSES OF DEATHS OF CHILDREN AT VARIOUS AGES.

Age-group		Cause of death					
---	---	Diarrhoea	Fever	Vomiting & Loose Motions	Reasons not given.	Acciden-ts etc.,	No. of total deaths.
0-1M	%	3.57	8.93	1.79	85.71	--	56
	No.	(2)	(5)	(1)	(48)		
1M-1M	%	20.00	--	10.00	60.00	10.00	10
	No.	(2)		(1)	(6)	(1)	
1M-3M	%	52.50	12.50	25.00	10.00	--	40
	No.	(21)	(5)	(10)	(4)		
4M-6M	%	47.06	17.65	29.41	5.88	--	17
	No.	(8)	(3)	(5)	(1)		
7-9M	%	44.44	55.56	--	--	--	9
	No.	(4)	(5)				
10-12M	%	75.00	12.50	12.50	--	--	8
	No.	(6)	(1)	(1)			
1-3Y	%	17.42	60.61	16.67	--	5.30	132
	No.	(23)	(80)	(22)		(7)	
4-6Y	%	-	82.93	17.07	--	--	41
	No.		(34)	(7)			
Above 6 Yea-rs.	%	3.85	76.92	11.54	--	7.69	26
	No.	(1)	(20)	(3)		(2)	
Percentage		19.76	45.13	14.75	17.40	2.95	339
Total		(67)	(153)	(50)	(59)	(10)	

<u>Maternal Mortality Rate:</u>   It is the number of deaths
in females ascribed to pregnancy, child bearing and
puerperium state per thousand live births.   In the
present sample two women died of child birth and the
total number of births reported are 45. The maternal
mortality rate works out to 44.44 per thousand live
births. This rate is very high compared to 4 per
1000 for whole of India (1952-54), 5.39 per 1000 for
Kurnool district and 4.70 per 1000 for Mahaboobnagar
district 1960). Poverty, unhygenic surroundings, early
marriages, poor diet of mothers during pregnancy, lack
of facilities for institutional midwifery are respon-
sible for this high rate of mortality.

CHAPTER IV

SOME PARAMETERS OF REPRODUCTIVE LIFE.

The fertility performance of females is directly influenced by their age at entry and exit from reproductive life. Effective married life begins after consumption and not at the age at marriage. Normally the effective married life begins when the girl is mature. The age at menarche, age at effective married life, age at menopause, incidence of divorce, seperation, and remarriage, establish the span of reproductive life; while factors like proportion of males and females remaining single, age at first maternity, interbirth spacing, extent of foetal wastage and the cultural norms associated with sex and family life determine the level of natural fertility. Artificial methods of fertility control, if adopted may alter the natural level of fertility.

Age at marriage:

The ages prefered for marriage of boys and girls differ from society to society and within a society according to socio economic and cultural factors. The age at first effective marriage establishes the length of fertile period, as the onset of menopause is invariable among the females.

The age at which girls are married in this community is low.(Table No. 14). The average age at first marriage for girls works out to 14.04 ± 0.12 years. As no previous studies on the fertility of Chenchus is available, the change in female/marriage age over decades if any could not be calculated. A majority of the girls (55.23%) are married between 15-17 years, while only a small percentage (1.49%) are married after 17 years. The percentage of married girls below 11 years is 12-93, those married between 11-13 yrs is 14.9% and those married between 13-15 years is 15.42). The marriages of very young girls below 11 is due to family obligations of the boy and girl and these indicate the existence of child marriages. -

Table No. 14

Age at marriage

Age at marriage (in years)	No. of women	Percentage
Less than 11 years	26	12.93
11-13	30	14.92
13-15	31	15.42
15-17	111	55.23
17-19	3	1.49
Total	201 Mean = 14.04 ± 0.12	

The average age at which the females of the various age groups were married (Table No. 14a) reveals that it ranges between 13.69 to 15.08 years. The mean marriage age of the age cohorts 35 years and above is generally lower than that of the women in the age cohorts less than 35 years. This indicates a slight increase in the mean marriage age over the last 3 decades.

Table No. 14(a)

Mean Marriage age

Present age group	Mean marriage age
15-19	14.96
20-24	14.14
25-29	15.08
30-34	14.03
35-39	13.40
40-44	13.57
45-49	13.70
50-54	13.69
55-59	--
60 +	

The mean age at first effective marriage for females of different age-cohorts is presented in Table No. (15). It ranges from 14.76 to 15.85. The maximum is observed in the age cohort 15-19 years (15.85) and the minimum in the age cohort 50 years and above. It did not differ significantly indicating that no real change has occured in the female age at effective married age over 3 to 4 decades.

Table No. 15
MEAN AGE AT FIRST EFFECTIVE MARRIAGE FOR DIFFERENT AGE COHORTS OF THE FEMALES

Age cohorts (Present age in years)	Mean age	S.D.	't' value with mean effective married age
15-19	15.85 ± 0.14	0.72	3.6002
20-24	14.98 ± 0.23	1.28	1.1900
25-29	15.51 ± 0.14	0.82	1.4906
30-34	15.14 ± 0.72	1.09	0.1794
35-39	15.02 ± 0.14	0.83	1.5518
40-44	15.57 ± 0.26	0.97	1.1029
45-49	15.57 ± 0.20	0.54	1.3927
50 +	14.76 ± 0.24	0.88	2.0158

Average at effective married age = 15.27

15.27 ± 0.08	1.08

The percentage distribution of females by age at first effective marriage is presented in Table No. (16). More than 1/3rd (77.11%) of the females have their effective marriage between the ages 15-17 years, 18.41% had it between 13-15 years and another 4.48% had it between 17-19 years. So the most common effective marriage age is betwee n 15-17 years. Thus the Chenchu women had their first effective marriage without any exception before 19 years of age.

Table No. 16

PERCENTAGE DISTRIBUTION OF FEMALES BY AGE AT FIRST EFFECTIVE MARRIAGE.

Age at marriage (in years)	Percentage
Less than 13	
13-15	18.41
15-17	77.11
17-19	4.48
19 +	--
Total	100.00

The percentage distribution of females by total period of effective married life excluding long periods of seperation is presented in Table No. (17). A majority of the females had 4-8 years of effective married life and 15.08% had 8-12 years, 15.64% had 12-16 years, another 15.64% had 16-20 years, 11.17% had 20-25 years, 6.70% have above 25 years, and 9.50% 2-4 years of effective

married life. A small percentage of females (4.47%) had 1-2 years of married life and only 5.03% had less than one year of effective married life.

The average period of effective married life or the mean number of years to the risk of Pregnancy, excluding long periods of seperation worked out to 11.24 years for the sample females. Thus, with 2 years of average spacing there could be average of 5 to 6 full term pregnancies to a female at the end of her reproductive period.

Table No. 17

DISTRIBUTION OF FEMALES BY TOTAL PERIOD OF EFFECTIVE MARRIED L-IFE.

Marriage duration (in years)	No. of women	Percentage
Less than 1 year	9	5.03
1-2	8	4.47
2-4	17	9.50
4-8	30	16.76
8-12	27	15.08
12-16	28	15.64
16-20	28	15.64
20-25	20	11.17
Above 25	12	6.70

(Widowed and divorced women are not included in this table.)

Mean total period of married life: 11.24 years.

<u>Age at Menarche:</u>

As pregnancy can occur from the menarche to menopause these two phenomenon are very important in population dynamics. The onset of menarche in the female is an indication that she is able to produce ova, which if they have an opportunity to meet sperm can result in pregnancy. Menarcheal age varies from population to population and this variability is due to genetic causes, nutrition and environment.

The distribution of Chenchu women with reference to menarcheal age is presented in Table No. (18). It is observed that a large majority of the Chenchu women (119/201) attain their menarche between 14 and 15 years of age, the range lying between 12 to 17 years. Those attaining their menarche around 12th, 16th and 17th year are very negligible. The mean menarcheal age of this sample is 14.30 ± 0.04; which is almost the same as that of their mean marriage age 14.04 ± 0.12. Thus the Chenchu girls are generally married at the age of their menarche.

Table No. 18.

AGE AT MENARCHE.

Menarcheal age (in years)	No. of women.	Percentage.
12	2	0.99
13	21	10.45
14	119	59.20
15	55	27.36
16	3	1.49
17	1	0.50
Total:	201	Mean: 14.30 ± 0.04.

Menopause:

Menopause is characterised by the cessation of menses and the loss of reproductive capacity. Hence pregnancy is no longer possible. Warmer climate, poor diet, excessive child bearing, and poor hygenic conditions result in early menopause reducing the reproductive life.

In the present sample 23 women have already attained menopause. The mean menopause age for this sample is 41.13 ± 0.74.(Table No. 19). The distribution of women by menopause age shows that most of the

women (13/23 or 56.52%) attain their menopause between 40-44 years. About 13.08% of the women attain it before 49th year. A few women (8.70%) attained their menopause as early as 30-34 years and another 21.70% attain it between 35-39 years. Thus the normal span of fertility i.e. the period between menarche (14.30) and menopause (41.13) is 26.83 years. Due to poor nutrition, and non-existence of health care, uncontrolled child bearing these women are attaining their menopause earlier.

Table No. 19

Age at Menopause

Age group	No. of women	Percentage
30-34	2	8.70
35-39	5	21.70
40-44	13	56.52
45-49	3	13.08
Total	23	Mean: 41.13 ± 0.74

Incidence of Seperation, Divorce, and Widowhood.

The incidence of seperation or divorce in this community is very low. Only 0.24% of the males and 0.51% of the females are currently seperated or divorced. As remarriage is very common and easy for a divorced or sepe-rated person the incidence is low. There was one separa-ted male, and he is in the age group 20-24 years, while the seperated or divorced females are in the group 15-19 years and 25-29 years, which indicate that seperation or divorce takes place among coupleswho have fewer children, and among the newly married couples due to incompatibility etc.

The incidence of widowerhood among the males is 1.20%, while widowhood among the females is 9.49%. The age specific distribution of the widowers, reveal that 20% of the widowers are in the age group 25-29 years, another 20.00% are in the age group 35-39 years and the rest of the 60.00% are in the age group 45 years and above. Among the females no woman below 30 remained as a widow. Of the currently widowed women 77.05% or nearly 3/4ths of the widows are aged 45 years and above.

The remaining widows are 8.11% each in the age groups 30-34 years and 40-44 years and 16.22% in the age group 35-39 years. The age specific

distribution reveals that the majority of the women as well as men above 45 years of the age remain unmarried if they are widowed. Generally women without children or very young children remarry if they are divorced or seperated. Hence there are no widows below 30 years of age. The percentage of widows among the females are relatively more than the widowers among the males, the reason being that women who have crossed their meno-pause or child bearing age seldom get a chance of re-marrying, while this hindrance is not so much for men. Hence a considerable excess of widows are observed among women aged 45 years and above.

Incidence of Remarriage:

There is no prohibition or any social stigma against remarriage of the seperated or widowed males or females. Further there are no customary or traditional laws prescribing the widowed people to remain unmarried. Hence as long as a woman can bear children or as long as a man has the vigour to maintain family, they inva-riably enter into a remarriage, in the event of sepe-ration or divorce. Further the rate of bride price and other marriage expenses are less when a man married a widow. Hence it is not uncommon that men marrying for the first time may prefer the divorced or seperated women as their partners.

In the present sample, out of the 46.61% of the total males who are ever married, as many as 3.14% and out of the 55.13% of the females who are ever married, as many as 3.59% are married twice or more often.

The incidence among the females appears to be slightly higher than the males, as some of them might have been married to men who are already having one or more wives.

Age at First conception and Maternity:

The age at first maternity is dependent on age at first effective marriage and is an important determiner of the fertility performance of a set of women. None of the women surveyed in this study are adopting any family planning devices, there are no artificial factors affecting the age at first maternity.

Table No. 20.
Age at first conception.

Age-group Years	No. of women	Percentage
13-15	9	4.86
15-17	95	51.35
17-19	65	35.13
19-21	15	8.12
21-23	-	-
23 & above	1	0.54
Total	185	100.00

Mean = 16.61 ± 0.06 years

age
The average/at first conception worked out to
be 16.61 ± 0.06 years. Nearly 1/2 of the women(51.35%)
had their first conception between 15-17 years and
nearly another 1/3 (35.13%) had it between 17-19 years.
A small percentage of 8.12 had it between 19-21 years
and 4.86 between 13-15 years. The percentage of women
who had first conception after 23 years of age is negil-
gible (0.54%). Hence the most common age at first conce-
ption of the Chenchu women lies between 15-19 years and
usually within a year of their effective married life.

The average age at first maternity worked out
to be 17.35 ± 0.09 with a standard deviation of 1.26.
The average age at last maternity worked out to be at
32.67 ± 0.99 years and the mean effective reproductive
period i.e. the difference between the mean age at first
and last maternity works out to 15.32 years. The females
of this sample displayed an average spacing of 2.56 years.

Table No. 21

Age at first Maternity

Age-group (in years)	Mean + SEM	S.D.
13-15	--	--
15-17	15.95 ± 0.08	0.53
17-19	17.40 ± 0.04	0.41
19-21	19.42 ± 0.12	0.60
21-23	--	--
Above 23	24	--
Average	17.35 + 0.09	1.26

Table No. 22

Age at last maternity

Age-group years	Mean age at last maternity	S.D.
20-24	--	--
25-29	26.86	1.40
30-34	32.50	1.32
35-39	37.50	1.16
40-44	41.00	--
Total	32.67 ± 0.99	4.70

Termination Status of Pregnancies:

Fecundity is the absolute capacity of women to conceive and it differs from one woman to another. It is also influenced by general health, climate, race, culture, and diet and has a tendency to decline with aging of the females. It is very difficult to measure the level of fecundity. The termination status of pregnancies provide an insight into the level of pregnancy wastage which in turn affects the level of fertility.

For the present sample females, 95.26% of the pregnancies terminated as live births, 1.81% as still births and 2.93% as abortions and miscarriages. All the abortions reported are spontaneous as none of the women reported any induced abortions. The India-Harvard-Ludhiana population study known as khanna study on pregnancies experienced by 1795 women, revealed 87% live births 10% abortions and 3% still births. Compared to this study the percentage of live births in the present sample is high and the percentage of pregnancy wastage is low. The overall pregnancy wastage in the present sample is 4.74 which is rather low.

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Table No. 23

Termination status of pregnancies before the year of enquiry.

Age-group Years.	Pregnancies	No. of live births		No. of still births		No. of Abortions		No. of Twin births.
		No.	%	No.	%	No.	%	No.
15-19	267	255	(95.51)	7	(2.62)	5	(11.87)	---
20-24	289	273	(94.46)	5	(1.73)	11	(3.81)	---
25-29	183	173	(94.53)	4	(2.19)	6	(3.28)	---
30-34	110	107	(96.40)	---		4	(3.64)	1
35-39	32	33	(100.00)	---		---		1
40-44	3	4	(100.00)	---		---		1
45-49	---	---		---		---		---
Total	884	845.	(95.26)	16	(1.81)	26	(2.93)	3 (0.34)

The termination status of pregnancies according to the age of the mother reveals that the maximum number of still births are among very young mothers in the age group 15-19 years and all still births are observed only among mothers below 29 years of age. The maximum number of abortions are observed among mothers in the age group 20-24 years; the next higher frequencies are observed in 30-34 and 25-29 years age groups. It appears 20-34 age group mothers are more prone to abortions in this community.

The wastage in terms of abortions is more among the 4th and 5th order pregnancies and among mothers in the age group 20-24 years. Similarly the percentage of still births are more among young mothers in the age group 15-29 years. The maximum number of still births occured in the 2nd order of pregnancy.

The proportion of live births based on age at conception of the mother(Table No.23) reveals that the proportion of live births are cent percent for the females aged 35 to 44 years. The lowest proportion of live births are observed among mothers aged 20-24 years (94.46%) and 25-29 years (94.53%). The mothers in the

Table No. 24

No. of abortions at various ages of mothers at various orders of pregnancy.

Age group years	1	2	3	4	5	6	7	8	9	10	11	12	Total No. of pregnancy	% to total pregnancy.
15-19	3	1	1	--	--	--	--	--	--	--	--	--	5	1.87
20-24	--	2	3	4	2	--	--	--	--	--	--	--	11	3.81
25-29	--	--	--	2	3	1	--	--	--	--	--	--	6	3.28
30-34	--	--	--	--	1	1	1	1	--	--	--	--	4	3.64
35-39	--	--	--	--	--	--	--	--	--	--	--	--	--	--
40-44	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	3	3	4	6	6	2	1	1	--	--	--	--	26	2.93

Table No. 25.

Still births at various ages of mothers at various orders of pregnancies.

Age group years	Order of pregnancies												Total
	1	2	3	4	5	6	7	8	9	10	11	12	
15-19	4	4											8
20-24		2	3		1								5
25-29						2							3
30-34													3
35-39													
40-44				1	2								
Total	4	6	3		1	2							16

Table No. 26.

Percentage distribution of females according to age and order of pregnancy.

Age group	Order of pregnancy											
	1	2	3	4	5	6	7	8	9	10	11	12
15-19	93.50	49.70	8.82	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00
20-24	6.56	46.16	75.00	60.53	22.47	10.96	00.00	00.00	00.00	00.00	00.00	00.00
25-29	00.00	4.14	13.24	34.21	56.18	46.57	46.15	29.03	16.53	00.00	00.00	00.00
30-34	00.00	00.00	2.94	5.26	20.23	35.62	44.23	54.84	52.63	45.55	20.00	00.00
35-39	00.00	00.00	00.00	00.00	1.12	6.85	9.62	16.13	36.84	54.55	40.00	50.00
40-44	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	40.00	50.00
Total 176	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Percentage of sample females	92.04	84.04	67.66	56.71	44.28	36.32	25.87	15.43	9.45	5.47	2.49	0.99
Average age	17.39	19.81	22.51	24.57	26.85	28.78	30.56	32.13	33.34	34.45	38.40	39.50

age group 15-19 years had 95.51% live births, while mothers between 30-34 years had 96.40% live births. The incidence of still births and abortions are more among young mothers.

Age and order of Pregnancy Terminations:

The age of the female and the order of pregnancy are highly correlated. The pattern of family building habits, the extent of childlessness and fecundity impairments can be understood, by the distribution of females according to their age and number of terminated pregnancies.

Female age at Termination of each order of Pregnancy:

This analysis indicates that about 8% of the ever-married sample females did not report any pregnancy. More than half of the sample evermarried females had atleast four pregnancies. Among the rest 84% of the women had experienced atleast two pregnancies and about 68% had atleast three pregnancies, a little more than 2/5 (44.28%) of them had at least 5 pregnancies, and a little more than 1/3rd (36.32%) atleast six pregnancies, about 1/4th of the women (25.87%) had atleast seven pregnancies, roughly 1/7th (15.43%) had eight pregnancies about 1/10th of the females had nine pregnancies (3.48%)

Higher order births upto six pregnancies are observed among females of the age group 20-24 indicating uninhibited family size and full utilization of their fecundity. None of the sample woman had her first pregnancy after 24th year of age and even the percentage of women having 2nd order pregnancies after this age are very low. This also indicates that there are very few fecundity impairements among these women.

The age specific order of pregnancy termination indicates that all the first order pregnancies, 96% of the second order pregnancies, 84% of the 3rd order pregnancies and 61% of the 4th order pregnancies occured for females between ages 15-24, indicating early motherhood and unimpaired conception. More than 3/4th of the pregnancies i.e.(8 to 12) experienced them between 30-44 years. By the time the 11th pregnancy is experienced the women are atleast aged between 30-34 and for the 12th pregnancy they are aged atleast 35-39 years. However the majority of the last order pregnancies occured between ages 35-44.

The mean ages of the females varied directly with their order of pregnancies. At the time of their first pregnancy termination they are about 18 years of age (mean age 17.39), the 3rd, 6th, 9th, and 12th pregnancy occured at the mean ages of 22.5, 28.8, 33.3 and 39.5 years respectively. So, the third pregnancy occured about 4 to 5 years, sixth pregnancy occured about 9 to 10 years, 9th pregnancy occured about 15 years, and the 12th pregnancy occured about 22 years later as compared to the termination of first pregnancy (17.39 years). This shows that the women are experiencing one pregnancy on the average for every 2 to 2½ years during their reproduction period. This is charactertistic of high fertility and absence of family limitation.

Mean number of ever born children and pregnancies:

The average number of children ever born works out to 4.65 per mother, while the average number of live born children is 4.57. The average number of pregnancies per woman who have experienced pregnancies is 4.78. The rate of live births and pregnancies per women are high compared to 3.8 and 4.1 reported for Lucknow city.

Table No. 27

MEAN NUMBER OF PREGNANCIES, EVER BORN CHILDREN AND LIVE
BIRTHS PER MARRIED WOMEN BY AGE AT THE TIME OF ENQUIRY.

Age-group	Mean No. of pregnancies	Mean No. of ever born children.	Mean No. of live births.
15-19	0.89	0.67	0.67
20-24	2.07	1.83	1.73
25-29	3.76	3.49	3.43
30-34	4.86	4.59	4.48
35-39	6.66	6.30	6.10
40-44	7.57	7.48	7.36
45-49	8.17	8.17	8.00
50-54	8.33	8.00	7.30
55 +	7.40	7.40	7.40

The average number of pregnancies, ever born
children and live births per ever married woman by present
age at the time of enquiry are presented in table No. 27.
The three parameters are found to increase generally
according to age. However the average number of pregna-
ncies per woman in the age group 55 years and above,

need not be considered as sterile, as about 28.12% of them are married recently - i.e. their duration of effective married life is less than 2 years and did not actually have sufficient time to bear a child. The distribution of childless women according to duration of effective married life is as follows.

Table No. 28

Duration of effective married life.	Percentage of childless women.
Less than 5 years	56.25
5-9 "	18.75
10-14 "	6.25
15-19 "	12.50
20-24 "	6.25
25-- "	NIL
Total no. of cases studied	201

If the childless period of 15 years after marriage is taken as the measure of sterility, a sterility rate of 1.44% was obtained. If the married women who have atleast 22 years of effective married life are taken as sterile (National Sample Survey)

0.5% of the women can be considered as sterile. This reveals that the sterility rate among the Chenchus is very low. This may be due to the good fecundity of the Chenchu women.

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THE CURRENT LEVEL OF FERTILITY.

The current level of fertility or child bearing
may be expressed with reference to indices such as, crude
birth rate, general fertility rate, total fertility rate,
age, parity and living children specific fertility rate,
and reproduction rate. These parameters are closely
related to each other. Most of the data presented in
this chapter relates to women in the child bearing age
of 15-45 years.

The women of the present sample reported
45 births during the year of enquiry. The percentage
distribution of births by order of birth reveal that
3rd order births (22.22%) are relatively more than the
other order births. First order births constitute 11.11%
of the total births. Births of children of the order 5
and above are relatively less. This indicates that all
women generally bear about 4 children and the percentage
of women bearing 5 or more children is relatively less.

Table No. 29

PERCENTAGE DISTRIBUTION OF BIRTHS DURING THE YEAR OF
ENQUIRY. BY ORDER OF BIRTH AMONG CHILDREN EVER BORN.

Order of birth	Total No. of births	%
1	5	11.11
2	8	17.73
3	10	22.22

Table 29 contd...

Order of birth	Total No. of births	%
4	7	15.56
5	4	8.89
6	3	6.67
7	4	8.89
8	2	4.44
9	--	--
10	2	4.44
11	--	--
12	--	--
Total:	45	100.00

Table No.30

Average age of mother and average interval between the last two deliveries for women who had a child during the year of enquiry, by order of birth.

Order of last delivery	Average age of the mother in years	Average interval in months.
1.	17.26	--
2.	19.06	34.17
3.	23.95	39.45
4.	26.54	42.57
5.	29.03	48.66
6.	30.90	51.00
7.	34.72	32.40
8.	33.22	44.50
9 and above	37.10	33.00
Average		3.39 years

The average age of the mother at the various orders of birth to them are shown in Table No. 19. Those include only mothers who had a child during the year of enquiry. The average age of the mother at first delivery was 17.26, years at the second delivery 19.06 years, third delivery 23.95 years, fourth delivery 26.54 years, 5th delivery 29.03 years, 6th delivery 30.90 years and so.on. The average interval after 2nd delivery is generally increased by more than 3 years, where as it is less than 2 years between the first and second deliveries, there by indicating that the first and 2nd deliveries take place within an average of $1\frac{1}{2}$ to 2 years period, while the subsequent deliveries are taking place at an interval of three years or more.

The average intervals between births of various orders during the year of enquiry were found to increase upto the 6th delivery and to decrease again agter the 6th delivery.

Table No. 31

Percentage distribution of woman by interval between
delivery and the following on set of menstruation.
(infecund period after delivery).

Infecund period in months.	% of women.
3	0.83
6	2.48
9	4.96
12	19.83
18	33.06
24	10.74
30	14.88
36	5.78
37 & above	7.44
	n = 201

The interval between conception and the onset of
menstruation, is a period of natural infecund interval
and determines the fertility performance of women in
the absence of family planning practices. Although
there is possibility of conception, without the onset
of menstruation such cases will be very few and none
in the sample reported such cases. The least infecund
period is 8 months and the maximum infecund period is

37 months, which shows a range as high as 34 months. The median woman had this interval as long as about 1½ years.

Crude Birth Rate:

This represents the number of births per 1,000 total population in a year. It is useful in expressing current fertility and its effect on population growth. The current rate of annual growth can be estimated by substracting crude death rate from it. However the utility of this rate is limited as it includes a large mass of children and adults past child bearing age, who are not exposed to child bearing. Moreover it is the supply of females rather than the supply of males which actually decides the fertility and growth of a population. Hence the crude birth rate is useful only as an indicator of general magnitude of the fertility level and to study current growth.

The crude birth rate for the year of enquiry worked out to 55.97 as against C.B.R. of 37 for the whole of India (1975), 21.54 for Kurnool District(1960) and 7.12 for Mahbubnagar district(1960). This reveals that the birth rate among the Chenchus is very high compared to the other populations in the plains areas.

Crude Death Rate:

It is the number of deaths per 1,000 population during a year. The C.D.R. for the present sample worked out to 29.85 and the death rates seperately for Kurnool district Chenchus is 28.11, as against 32.67 for the Mahbubnagar sample. Thus at present rate of births and deaths the Chenchu population will increase at the rate 2.61% per annum. The rate of increase in Kurnool district sample is 2.40% as against 2.94% for Mahbubnagar sample per annum.

Table No. 32

Distribution of births during the year by number of living children to married women aged 15-44.

No. of living children.	No. of births	% to total births.
0	11	24.44
1	8	17.79
2	9	20.00
3	9	20.00
4	4	8.89
5	2	4.44
6	1	2.22
7	--	--
8	--	--
9	--	--
10	1	2.22
11	--	--
12	--	--
Total:	45	100.00

The distribution of births during the year of
enquiry according to number of living children are
presented to know if there is any decrease in the per-
centage of higher order births on the basis of living
children. It can be seen that practically there is
no difference in the percentage of births among women
having atleast 1 to 3 living children and a gradual
decrease in the percentage of births among women having
atleast 4 or more living children is observed. It is
interesting to note that births are taking place even
among women already having 10 living children.

General Fertility Rate:

This rate is calculated on the basis of births
during the preceding twelve months from the date of
enquiry. This rate is calculated for all women aged
15-45 years, irrespective of marital status. It is
taken as the numbers of births per 1,000 women aged
15-45 during the year. The rate works out to 238.09.
It is higher than the average fertility rate of India
as a whole i.e. 172.5, but very close to the average
rate of the women of the Shadnagar rural survey
(243.5) for 66-67.

Age Specific Fertility Rate

This is the number of births per thousand women in particular age, during a year, irrespective of their marital status . The age specific fertility of the Chenchu women ranges between 66.67 - 351.35, the peak being in the age group 25-29 years and the minimum being in the age group 40-44 years. The rate shows an increase upto 29th year and then decreases gradually upto 40 years. Women aged above 40 have also reported births during the year.

Table No. 33

Age Specific Fertility Rate.

Age-group	No. of births	No. of women	A.S.F.R.
15-19	9	34	264.71
20-24	10	30	333.33
25-29	13	37	351.35
30-34	6	37	162.16
35-39	6	36	166.67
40-41	1	15	66.67

Age Specific Marital Fertility Rate:

This is the number of births per 1,000 married women per year in a particular age group. It is higher

than the A.S.F.R. as widows and seperated women who are
not actually reproduc-ing are not included. This rate
ranges between 83.33 (40-44 years) and 351.35 (25.29
years). The increasing and decreasing trends are the
same as that of the A.S.F.R.

Table No. 34
Age Specific Marital Fertility Rate.

Age-group	No. of births	No. of married women including widows & Divorced.	A.S.M.F.R.
15-19	9	27	333.33
20-24	10	29	344.83
25-29	13	37	351.35
30-34	6	31	193.55
35-39	6	33	181.82
40-44	1	12	83.33

Parity Specific Fertility Rate:

Parity is the order of pregnancy resulting in atleast one live birth. It is the number of births per 1,000 married women aged 40-44 according to parity during an year. The maximum P.S.F.R. was observed for women of the 4th parity and 3rd parity. The high parity specific fertility rates observed for women of 8th parity and 11th parity is due to the non observance of any family limitation measures.

Table No. 35

Parity Specific Fertility rates of Married Women Aged 15-45.

Parity	No.of births	No. of married women.	P.S.F.R.
0	4	22	181.82
1	1	20	50.00
2	6	33	181.82
3	11	20	550.00
4	7	12	583.33
5	3	18	166.67
6	5	19	263.16
7	3	14	214.28
8	3	6	500.00
9	-	4	-
10	1	5	200.00
11	1	2	500.00
12	-	1	-
Total:	45	176	255.68

Living children specific fertility rates

This is the number of births per 1,000 married women aged 15-45 during an year, according to number of living children at the start of the year. The rate will

be very useful if there is any relationship between the number of children living and the number of children desired. If the community is realising any need for limiting family the women having more number of living children should have lesser number of births. In the present sample no appreciable difference in L.S.F.R. is observed between women who have no living children and women having 5 living children. It was observed that women having 6 living children and also 10 living children have the highest rates. This indicates that there is no relationship between the number of living children and number of births. As the community has no idea of family limitation, the results are in agreement with the observed phenomenon.

Table No. 36

Living children - Specific Fertility rates of married women aged 15-45.

No.of living children	No. of married women	No. of births	L.S.F.R.
0	42	11	261.90
1	32	8	250.00
2	36	9	250.00
3	31	9	290.32
4	18	4	222.22
5	8	2	250.00
6	3	1	333.33

Table No. 36 ,contd.....

No. of living children	No. of married women.	No. of births	L.S.F.R.
7	1	--	--
8	4	--	--
9	--	--	--
10	1	1	1000.00
11	--	--	--
12	--	--	--

Total Fertility Rate:

This is an estimate of the number of births that a 1000 women would bear if they all went through their reproductive years, assuming that the observed age specific fertility schedule will be applicable to them during their reproductive period. It is calculated by summing up all the age specific fertility rates and multiplying by the age interval into which the ages are grouped(5). The total marital fertility rate of the present sample works out to 6724, against 5494 for the whole of India(1955-60) 5470 for Lucknow city, 7130 for six urbanising villages near Delhi and 6610 for Shadnagar(67-68)

Thus the total fertility of the Chenchu women is nearly 7 children per women. This level was about the same as the reported number of children ever born to females aged 40-44 years, i.e. 7.21 children. Number of children ever born increased as the age of the mother increased.

Gross Reproduction Rate:

This is the total fertility rate restricted to female births, which will give the number of daughters that 1,000 women will have during their reproductive span, assuming that (i) all the present mothers will survive to the end of the reproductive period.

(ii) All the newly born daughters would attain motherhood without dying and (iii) The present age specific fertility rate will continue to operate throughout their reproductive span. It is obtained by multiplying the total fertility rate with the proportion of female births. This rate worked out to 2824. Thus it may be assumed that each of the present mothers will give birth to nearly 3 daughters.

If it is concluded that there are about 7 births per women during per reproductive life, 3 of them will be daughters.

General Marital Fertility Rate:

This is the number of births per thousand married women in the reproductive age during a year and works out to 266.67.

Total Marital Fertility Rate:

It is the total fertility rate of the married women and is calculated by summing up all age specific fertility rates and multiplying with the interval into which the ages are devided(5). This is estimated at 7441 for the current year and is almost the same as that of the Shadnagar women(67-68).

CHAPTER VI

COMPARISON OF POPULATION TREND IN KURNOOL AND MAHBUBNAGAR DISTRICTS.

The population variation of Chenchus in the composite Kurnool district which forms the present Kurnool & Prakasham districts, which were formerly in the Madras presidency and the Mahbubnagar district which was formerly in the Nizam state shows some notable differences. The percentage variation of the Chenchu population according to census in the past decades is as follows:

Table No. 37

Year	Population	Variation	District
1901	7164	--	Kurnool
1911	6954	-2.94%	
1921	6281	-9.68%	
1931	8078	+28.61%	
1921	6121	-36.99 %	Mahbubnagar
1931	2264		

The population figures upto 1931 show that there was a decrease in the Chenchu population from 1901 to 1921 in the Kurnool district and also there was a marked decrease in the Nizam's territories between

1921-31 due to non-availability of labour work, failure
of mansoons, epidemic diseases and the consequent mig-
ration of the Chenchus in to other regions. However
the population registered an increasing trend in the
Kurnool district in the decade 1921-31 which may be due
to the migration of Chenchus from Mahabubnagar side as
evidenced by the sharp fall in the Chenchu population
of Mahbubnagar district in that decade. The total
population of the Chenchus during 1931 was 10,342 and
it increased to 24,138 as per 1971 census, resulting
in an increase of 1,33,078 over four decades. But
the rate of growth in the former Nizam's territory was
found to be far higher than the other regions. The
increase is as follows:

Nizam's Territory			Andhra Region		
Year	Population	Variation	Year	Population	Variation
1931	2264	+181.40	1931	8078	+39.12
1961	6371		1961	11238	
1971	10,077	+ 58.48	1971	14081	+25.31

Table No. 38

Population Structure

Age group	Kurnool District			Mahabubnagar District		
	Total	Males	Females	Total	Males	Females
1.	2.	3.	4.	5.	6.	7.
0-4	(73) 14.66	(38) 14.67	(35) 14.65	(55) 17.97	(27) 17.42	(28) 18.54
5-9	(86) 17.27	(45) 17.38	(41) 17.16	(58) 18.96	(29) 18.71	(29) 19.21
10-14	(43) 8.63	(25) 9.65	(18) 7.53	(33) 10.79	(16) 10.31	(17) 11.26
15-19	(42) 8.43	(23) 8.88	(19) 7.95	(28) 9.15	(13) 8.39	(15) 9.93
20-24	(38) 7.63	(23) 8.88	(15) 6.28	(28) 9.15	(13) 8.39	(15) 9.93
25-29	(45) 9.04	(20) 7.72	(25) 10.46	(27) 8.82	(15) 9.67	(12) 7.95
30-34	(52) 10.44	(23) 8.88	(29) 12.13	(19) 6.21	(11) 7.10	(8) 5.30
35-39	(50) 10.04	(27) 10.43	(23) 9.62	(24) 7.85	(11) 7.10	(13) 2.65
40-44	(28) 5.62	(17) 6.57	(11) 4.60	(15) 4.90	(11) 7.10	(4) 8.61
45-49	(13) 2.61	(7) 2.70	(6) 2.51	(5) 1.63	(4) 2.58	(1) 0.66
50-54	(15) 3.01	(4) 1.54	(11) 4.60	(6) 1.96	(3) 1.93	(3) 1.99
55-59	(6) 1.20	(4) 1.54	(2) 0.84	(6) 1.96	(2) 1.29	(4) 2.65
60 +	(7) 1.41	(3) 1.16	(4) 1.67	(2) 0.65	-	(2) 1.32
	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)
Total	498	259	239	306	155	151

The total population of the Chenchus increased from 17,609 to 24,178 during the decade 1961-1971, recording an increase of 37.3% in the total Chenchu population. As the successive census figures reveal that the differential growth rates in the two regions are different, the fertility indices of the present study are seperately dealt for the Kurnool & Mahbub-nagar districts in order to find out if there are still any significant differences in the trends of fertility and population growth.

The present population structure district wise is presented in table No. 38. The table reveals that the percentage of children in the age-groups 0-15 are more in the Mahbubnagar district than that of Kurnool district. It is interesting to note that the women in the reproductive age of 15-45 are 51.04% in the Kurnool district as against 44.37% in the Mahbubnagar district there by revealing that more children were born to Mahbubnagar women inspite of lesser percentage and that effective workers and persons in the reproductive age are comparatively more in Kurnool district in contrast to an excess of dependent children etc., in the Mahbubnagar district. However the number of females for 1,000 males are 974 in Mahbubnagar as against 923 in Kurnool district.

Table No. 39

Comparision of Fertility Rates.

	Mahbubnagar	Kurnool
G.F.R.	283.58	213.11
T.F.R.	7435.00	6122.00
C.B.R.	62.09	52.20
T.M.F.R.	9159.00	6578.00
G.M.R.	345.45	228.07

The current level of fertility in the two regions shows striking dis-similarities with reference to crude birth rate, general fertility rate etc. As against a crude Birth Rate of 55.97 in the total sample, the Mahbubnagar sample records a C.B.R. of 62.09 and Kurnool sample 52.20. Thus the number of births per 1,000 population in the Mahbubnagar district is nearly 10 more per 1,000 than that of the Kurnool population. The gross fertility rate of 283.58 for Mahbubnagar district is 70.47 more than that of Kurnool (213.11). The total fertility rate of Mahbubnagar is 7435 as against 6122 for Kurnool. Thus the total fertility of Mahbubnagar women is between 7 to 8 children against 6 children in the Kurnool sample.

The general marital fertility rate of the Mahbubnagar women(345.45) is also relatively far higher than the Kurnool women(228.07)

The age specific fertility rates show that the women of Mahbubnagar have higher fertility rate between 20 to 34 years as against higher fertility rates of Kurnool women during 15-19 years. This reveals that the **first birth takes** placed a bit later in the Mahbubnagar region. The age specific marital fertility rates also reveal that the Mahbubnagar women are relatively more fertile between 20-35 years than the Kurnool women. Thus the women of Mahbubnagar district are producing more children than the Kurnool women during their reproductive life.

The present rate of annual increase among the Chenchus of Kurnool district is 2.4% as against 2.94% among the Chenchus of Mahbubnagar there by revealing that the Mahbubnagar Chenchus are increasing at a higher rate. In addition there may be some migration from Andhra region to Telangana region during past decade.

Table No. 40

(Age specific fertility rates).

Age group years	Mahabubnagar district			Kurnool district		
	No. of births	No. of women	A.S.F.R.	No. of births	No. of women	A.S.F.R.
15-19	2	15	133.33	7	19	368.42
20-24	8	15	533.33	2	15	133.33
25-29	5	12	416.66	8	25	320.00
30-34	2	8	250.00	4	29	137.93
35-39	2	13	153.84	4	23	173.91
40-44	-	4	--	1	11	90.90

Table No. 41

Age Specific Marital Fertility Rates

Age group	Mahabubnagar district			Kurnool district		
	No. of births	No. of married women	A.S.M.F.R.	No. of births	No. of married women	A.S.M.F.R.
15-19	2	10	200.00	7	17	411.76
20-24	8	15	533.33	2	14	142.85
25-29	5	12	416.66	8	25	320.00
30-34	2	4	500.00	4	27	148.14
35-39	2	11	181.81	4	22	181.81
40-44	-	3	-	1	9	111.11

SUGGESTIONS.

The Chenchus live in jungles and are characteristically rural. The population trend since 1931 shows a continuous increasing trend. As the available area of forest in which they can hu-nt and gather natural food resources and the area available for cultivation is limited, the growth of population if unchecked may result in further fall in their already meagre family income and adversely affect their economic progress. About 43% of the population consists of children hence the dependancy rate is very high. The percentage of children lost before they reach 15 years of age is 40% as against 27% (1951-60) for the whole of India. Similarly the maternal mortality rate of the present sample is 44.44 per thousand. The high child and maternal mortality reveals lack of adequate ante-natal and pre-natal services, poor nutrition, bad living conditions and unhygenic surroundings. Hence there is an immediate need to provide maternal care and child health services. Though mobile medical units and nutrition services are existing, the Chenchus are not utilizing them properly, due to age old conservatism, shyness and ignorance. Hence it is desirable to educate the Chenchu mothers about the practical advantages of utilizing the health

services. If the Auxillary Nurse Midwives and P.H.C. doctors take a door to door campaign and provide vaccination against communicable diseases, pre-natal and antenatal services, it will go a long way in decreasing the infant and maternal mortality rates. Once these improvements are made it is possible to limit their family size and increase the economic conditions.

It was observed that marriages are contracted very early and every girl is married immediately after menarche, whether she is physically fit to carry pregnancy or not. As the girls are not fully grown by the time they are married, they are loosing their health very quickly as evidenced by their early on set of menopause in contrast to the later on set in the well-fed communities. Though the reproductive span of the Chenchu women is short, as a result of unchecked utilization of this reproductive period, they are giving more births than the mothers of advanced communities. Hence the Chenchus may be educated to delay the marriages of girls by a few years in order to enable them to improve their health conditions, and to reduce the birth rates.

It was observed that women above 40 years of age also are still bearing children. As congenital malformations and child deaths will be very high among the children born to very old mothers, it is desirable to take up family limitation measures immediately among the women aged above 35 years. The Chenchus have no idea of family planning, child health or child feeding due to illiteracy and extreme poverty. Hence improvement in educational and economic conditions can only bring about desirable effects in the long run.

SUMMARY.

The population structure of the Chenchus reveal that nearly 43 out of every hundred individuals are children below 15 years and about 2.16% are old aged persons above 55 years. If these groups are considered as dependents, nearly every second person in the population is a dependent. The population is very young typical of Primitive communities experiencing high fertility and high child mortality. There are 942 females for every 1,000 males.

Marriage is universal. The usual marriage age for girls is between 15-19 and for boys it is about 20-24 years. The marriages are contracted usually in related circles preferably between cross-cousins. The families are nuclear and the average size of the house hold is 4.62.

The infant mortality is very high being 165.68 in all age cohorts. However, the I.M.R. is found to show a declining trend over years. It came down from 179.31 among the pre 1960 birth cohort, to 171.87 in the post 1960 birth cohort, to 140.42 in the post 1970 birth cohort. The decline during the recent years is very rapid. The child mortality is observed to be very high among children born to young and very old mothers and the death rate is found

to increase with the order of births. As against the maternal mortality rate of 4 per 1000 live births in the whole of India, the M.M.R. among the Chenchus is 44.44 i.e. nearly 10 times higher than the all India rate. The survey results reveal that the parents are not able to provide due care and food for children during their early childhood due to extreme poverty and thus the chances of their survival are considerably less than among the well cared children.

The mean marriage age of Chenchu girls is found to be very low i.e. 14.04 ± 0.12. The existence of child marriages especially among the girls is observed in about 12.93% of the total marriages. The mean age at first effective marriage is between 14.76 to 15.85 and the mean age at menarche is 14.30 ± 0.04; which shows that girls enter into reproductive life immediately after menarche. The mean age at first effective marriage in different age cohorts did not differ much and hence no real change has occured in the female age at effective marriage over the last 3 to 4 decades. The normal span of fertility i.e. the period between menarche and menopause is about 27 years. As there were no restrictions on remarriage the incidence of presently seperated and divorced women is very low. The average age at first conception is

16.61 ± 0.06 years, that means these women are in general getting their first conception less than 2 years after their effective marriage.. The average age at first maternity is 17.35 ± 0.03 and the average age at last maternity is around 32.67 ± 0.99 and hence the mean effective reproductive period is 15.32 years. The spacing between children is about 2.06 years.

The overall pregnancy wastage of 4.74 is rather low. The wastage in terms of abortions and still births is found to be more among young mothers and among the 4th and 5th order pregnancies. Pregnancy termination analysis reveal that the women are experiencing one pregnancy on the average for every two years during their reproductive period, characteristic of high fertility and absence of family limitation. The sterility rate of about 1.44% for Chenchu women is low and the fecundity of Chenchu women may be considered good.

The current level of fertility among the Chenchu females is high as indicated by the general fertility rate of 238, total fertility rate of 6724, gross

reproduction rate of 2824 reveals that out of the average 7 births 3 are daughters, general marital fertility rate of 266, total marital fertility rate is 7441.

The age specific as well as age specific married fertility rates indicate that the maximum number of births occur among women in the age group 25-29 years. The maximum parity specific fertility rate was observed for women of the 4th and 3rd Parities. The living children specific fertility rate did not indicate any reduction among women having more living children, as the community has no idea about family limitation. The crude birth rate is 55.97.

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REFERENCES.

1. Agarwala, S.N. (1970)   A demographic study of six urba-
                            nising villages. Asia Publishing
                            House, Bombay.

2. Bogue, J.D. (1969)   Principles of Demography
                            John Willey & Sons., New York.

3. Census of India (1961)   District Census Hand Book
                            Kurnool District.

4.   -do-   (1961)   District Census Hand Book
                            Mahabubnagar District.

5. Chandra Sekhar,S. (1959) Infant mortality in India.
                            George Allen & Unwin Ltd.,
                            London.

6. Council for Social   Shadnagar Standard fertility
   Development, (1971)   Survey. Interim report C.S.D.
                            Hyderabad.

7. Dandekar Kumudini,   Communication in Family Planning
   (1967)   in India. Gokhale Institute of
                            Politics and Economics, Poona.

8. Mamoria, C.B. (1965)   Population and Family Planning
                            in India. Kitab Mahal Pvt. Ltd.,
                            Allahabad.

9. Mandelbaum, G.D. (1974) Human Fertility in India.
                            University of California,
                            Press California.

10. Mathur, Dr.J.S.(1971) Introduction to Social and Preventive Medicine; Oxford and I.B.H. Pub. Co., New Delhi.

11. Saksena, D.N.(1973) Differential Urban fertility Lucknow Demographic Research Centre. University of Lucknow.

12. U.N.O.(1967) Demographic year book U.N.O. New York.

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