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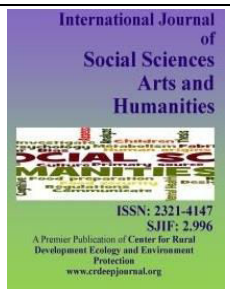

Full Length Research Paper

Demographic Profile among the two Caste Populations of Andhra Pradesh, India

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ABSTRACT

Despite globalization and a declining importance of the caste system in urban regions, caste still plays a major role in determining life outcomes in rural areas, where more than two thirds of India's population live. The structure of human population can be understood as the study of biological, social and demographic factors that influence the genetic makeup of the population. It is important to mention that population genetics has been said to assume the existence of mechanisms for heredity and variation and enquires into the ways in which the genetic makeup of the population is altered or is held in equilibrium by the multiple influence of selection, migration and breeding structure. Demography learns about the dimensions, composition, allocation and their inter-relationship about a population or cluster of population only, as study of human being can be made by various view points. Beneath the size of population, fertility and mortality are studied in view of its rates and determinants while sex ratio, classification by sex and age, life-table, population pyramid and public health are categorized under the composition of population. In this paper we study the determinants of population i.e. Fertility, mortality, nuptiality, migration and social mobility in relation to its composition and time aspect especially the two caste populations i.e. Mala community and Velama Community in the three districts of Andhra Pradesh. The most popular schedule method is adopted for this study. A schedule was constructed with different questions covering the area of study including socio-economic aspects and information is obtained from every woman of the household. The results of each socio economic variable of the two study populations are prepared and the final conclusion on the total two population studies is interpreted from the complete results.

Introduction:

Physical anthropology or biological anthropology is the division of anthropology that mainly studies the development of the human species, the study of the past and present, evolution of the human species and especially concerned with understanding the causes of present human diversity. The expansion of demography as sole subject and anthropological interests in demography has a much longer history. The term '*demography*' is first mentioned by a French Man, Achille Guillard. The term took its origin from two words '*demo*' meaning the people and '*graphics*' meaning to write or draw. Bogue DJ (1969) described that "*Demography is the empirical, statistical and mathematical study of human populations"* dealing with the growth and decline, composition and territorial distribution of the population.

Nineteenth century witnessed a stirring interest in research in the field of fertility and widespread research work in this area sustained during the twentieth century. In 1922, Carn Saunders published '*The Population Problem'* which contained a systematic statement of the problems of population size and growth. In 1965, Louis I. Dubblin and Alfred J. Lokta published *'A treatise on the stable population'* which is considered as a landmark in the development of population studies. The Oxford dictionary describes - "Demography is a part of Anthropology which treats the statistics of births, deaths and diseases'. Contemporary Physical Anthropology is engrossed in demographic themes like fertility, mortality, population size, composition and migration. These parameters are significant in the study of genetic structure, gene flow and changes in gene frequencies.

Demography learns about the dimensions, composition, allocation and their inter-relationship about a population or cluster of population only, as study of human being can be made by various view points. Beneath the size of population, fertility and mortality are studied in view of its rates and determinants while sex ratio, classification by sex and age, life-table, population pyramid and public health are categorized under the

composition of population. Demography can be defined from two main perspectives - narrow view point and broad view point. From the narrow view point we study all the five determinants of population i.e. Fertility, mortality, nuptiality, migration and social mobility in relation to its composition and time aspect. The notion of a Mendelian population is used to signify a group of individuals who reproduce sexually amid themselves. A Mendelian population is made up of individuals who can potentially mate or who are associated by kinship, marriage or common ancestry (Sinnott et al, 1961).

Anthropologists of late 20th century, who are concerned in the connection with social structure and ecological aspects show concern with demography for understanding human ecology. The micro-demography facilitates as primary unit for macro-demography. In demographic studies, mating patterns of population has significance, as they decide the pattern of inheritance, composition and occurrence of genotypes and finally the destiny of an allele derived from common ancestor. Two individuals are said to be consanguineous if they include more than one common ancestor. Studies regarding consanguineous marriages in a population give important information about genetic course such as the genetic load, which is associated in inbreeding. The genetic load is the eminence designed to calculate the loss of fitness in a population due to selection.

Higher rate of congenital malformations and mortality are reported among the progeny of inbred parents in the world population (Neel, 1958; Schull and Neel, 1965; Friere – Maia, 1964, etc.). A number of caste populations of the Andhra Pradesh practise uncle-niece marriages which are more than 10 percent of all marriages. Fertility is largely controlled by economics and by human objectives. The high fertility of the developing world can be partly explained by the large number of hands needed to execute low-technology agricultural tasks. In these areas, families with huge number of children realize an improved economic status. As technology expands, parents realize that having more children reduce rather than increasing their standard of living.

The Andhra Pradesh state now records for about 7.02 % of the total population in India but this part had declined from 8.3 per cent in 1961 with about 84.66 million in 2011 (Census of India, 2011). Andhra Pradesh is said to have been the dwelling of the Pre- Dravidian dark colored inhabitants ruled by different dynasties. The coastal districts had the lowest growth rates, West Godavari with 0.34%, Vizianagaram with 0.41%, East Godavari 0.51% and Srikakulam (0.64%) - all had population growth of less than 1 % (Census of India, 2011). The yearly compound growth rate for Andhra Pradesh was 1.11%, which was much lesser rate than the all-India average of 1.76%.

The present demographic study covers information on age and sex compositon, age of different stages of woman's reproductive period, consanguinity, marriage distance, fertility and mortality trends, selection intensities, etc. Relevant discussions of the results were presented along with the comparison of available data on other Andhra caste populations which is inevitably an addition to the existing knowledge on different demographic indicators.

Materials and Methods

Study area

The main focus of this study is to understand the levels and differentials of fertility and mortality among the two selected caste populations viz. Mala and Velama from Andhra Pradesh. It is also aimed to study the socio-economic variables, type of family, life course events such as puberty and age at first marriage, as proximate factors that might bring about the fertility differences in-addition to understanding their mortality conditions; birth events, levels of infant and childhood mortality and their differentials; proportion of prenatal and embryonic deaths per woman in order to estimate the selection potential. the present study is designed to be a narrative or descriptive one. Andhra Pradesh is one of the 29 States of India and it harbors about 200 Hindu castes, thirty-five tribal and a few religious minority communities. The two caste populations selected for the study – Mala and Velama are predominant caste groups living in North Coastal districts of Andhra Pradesh. Hence, the study is proposed to be taken up in the three north coastal districts viz Srikakulam, Vizianagaram and Visakhapatnam.

Sample Population and sample size

Srikakulam district is one of the 9th coastal districts among the 13 districts in the Indian state of Andhra Pradesh located in the extreme north eastern direction of the state. Vizianagaram district is a northern coastal district of Andhra Pradesh, India bounded on the east by the district of Srikakulam, southwest by the district of Visakhapatnam, southeast by the Bay of Bengal, and northwest by the state of Odisha. It is the least populous district in Andhra Pradesh. Visakhapatnam district is one of the nine coastal districts in the state. It is bounded on the North partly by the Orissa State and partly by Vizianagaram District, on the South by East Godavari District, on the West by Orissa State and on the East by Bay of Bengal.

A total of 465 households; 234 belonging to Mala caste group and 231 households belonging to Velama caste group have been covered from the the three districts for the present demographic study. Before conducting the field work a pilot suvey was conducted to identify the caste groups and their approximate scope of distribution and also villages where the intrabreeding (endogamous) of specific caste expand to test the first round schedule in order to map and find out the techniques of data collection. Rapport built up was made easy for the investigator to reside either in the Sapanch house or school teacher's house or school/hostel building. Further, school teachers, community workers,, anganwadi workers helped the investigator to establish rapport with local people. In each region the investigator resided for overnight and collected all the data personally from each family.

For selection of sample, where Mala and Velama are residing were scheduled out with the help of statistics of Census of India (2001); The three districts with higher concentration of these two caste groups are identified at different villages. The villages with the number of households above the average have been selected from each district in order to get maximum number of subjects. Many of the villages are either multicaste groups or entirely inhabited by a single caste in a separate colony with few households ranging from 10 to 50. Thus, the sample for Mala caste group is 234 households and similarly the sample for

Velama is 231 households with at least one woman in the house which may include elderly, widow, married or single.

Data analysis

A schedule was constructed with different questions covering the area of study including socio-economic aspects covering education, occupation, landholdings, annual income, type of house, life style, living condition, family size and their age and sex, age at menarche and first marriage of women, marriage type, multiple marriages, marriage distance, family type, age at first conception, last conception and menopause, total live births, surviving children, pregnancy wastage, neonatal, infant, under 5 and juvenile mortality, causes of child deaths and fertility behavior of women to eliciting the needed information.. The data elicited were entered into computers after careful editing of the same. After the analysis of the data and statistical treatment, the observations are neatly tabulated so as to facilitate comparison among the two caste groups under study as well as to facilitate comparison with other caste groups of the state. These were supplemented with graphical presentations for easy understanding of different levels and trends.

Results and discussion

Level of education

Though 'Literacy' has increased substantially over time, the attainment of different levels of education is dependent on several other socio-economic factors. This has reflected in the present observations also - the proportion of illiterates is higher among women than men in two caste groups with an increase following social hierarchy. At all levels, men had better educational attainment than women and this is again directly proportional to the social hierarchy.

Income & Household characteristics

Among the Velamas, about 60 percent are agriculturists with their own agricultural land while 66 percent of the Mala households are dependent on daily wage earnings without any agricultural lands. Both the communities are living in pucca houses and tiled houses.

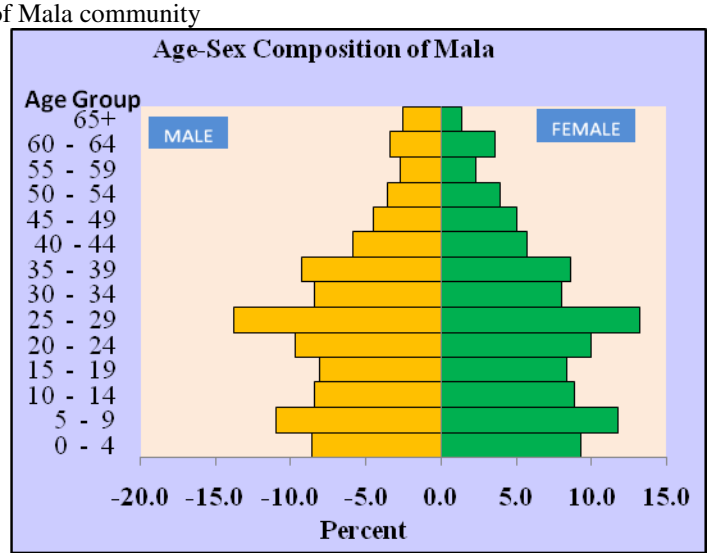
Marriage and family

Kind of marriage and type of family are important parameters in demographic analysis. Particularly the genetic transmission depends broadly on the affinal (non blood relationship of marriage) and consanguineous type of marriages. About 66 percent of the total respondents, the type of marriage is affinal and the remaining 34 percent reported consanguineous marriages among which Mala community has major part. Dowry system is reported in almost all the marriages and very negligible bride price is reported. 93 percent of Velama community reported nuclear type of family while Mala community is reported 99 percent. The average family size is found to be 3.8 among the two caste groups. On average about 50% of the males in both the caste groups found to consume alcohol and tobacco chewing. It is remarkable to note that among the two caste populations covered in the study, there is a clear preference for non-consanguineous marriages. The proportion of affinal marriages is as high as 72 percent among Velamas while it is 52 percent among the Malas. Among consanguineous marriages, Mother's Brother's Daughter is the most frequently preferred type among Malas (19 percent) while the Cross Cousin marriage is preferred more by Velama groups. 57percent of the Mala community and 46 percent of Velama community recorded to have village endogamy.

Age and sex composition

Age structure is the balanced number of persons in consecutive age categories in a given population where its characteristics vary considerably with age. In the present analysis, the population is separated into 5 age groups with a 5 year period from the birth of an individual to 65+years.

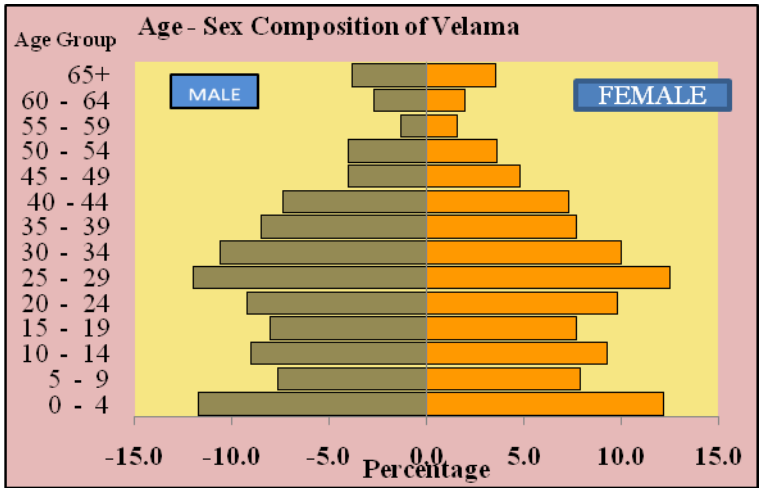
Table: 1 Age- Sex Composition of Mala community



Interpretation: Table: 1*: The population distribution in Mala population although tapers like pyramid, it either shows conventional broad base or narrow base. The bars are asymmetrical and uneven at different age groups but roughly equal proportions of individuals. This distribution of Malas as per the diagrammatic representation is typical of populations that have recently experienced fertility decline. The men and women are considered almost equal proportion (31 percent) is noticed in 15-29 years. It is significantly*

noticed that the proportion of females that would be fed from pre reproductive age cohorts of 5-9 and 10-14 years to the active reproductive cohorts is smaller than the presently existing proportion 15-19 and 20-24 year cohorts respectively. This specify more decline in fertility in the next five years and after a decade which decreases the size of recent born 0-4 year's cohort.

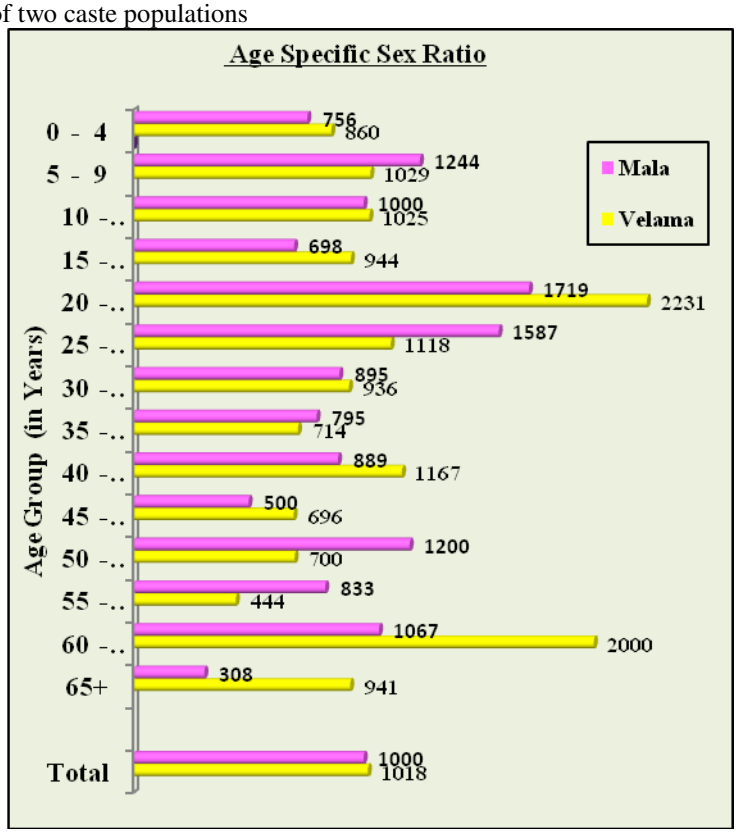
Table: 2 Age Sex Composition of Velama community



Interpretation: Table: 2*: The population pyramid of Velama (Figure I.8) depicts a relatively broad base with higher proportions of young people when compared to 45-54 years. It expects higher potential reproductive age group. We also observed that in Velama population, older men out number older women. The graph clearly indicates that smaller percentage of females will be fed to active reproductive cohorts for the next 15 years which will further decrease potential women who can conceive and finally result in decreased fertility than the current fertility rate.*

Sex ratio: Sex ratio is used to describe the number of females per 1000 males.

Table: 3 Age specific sex ratio of two caste populations

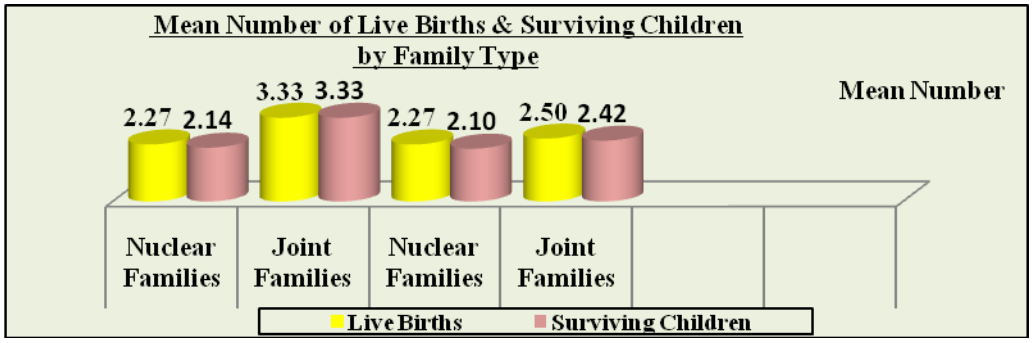


Interpretation: Table: 3: *The sex ratio at different age groups is not uniform in the two populations. Overall sex ratio of mala study group is 995 females per 1000 males. The data specifies the dearth of marriageable age females during the next decade i.e. 2020's.*

Velama study group recorded sex ratio of 991 females per 1000 males, which is lower than Malas and certainly on par to the current sex ratio of 992 reported for general population of Andhra Pradesh and sex ratio of 940 for Indian population (Census of India, 2011). Among Mala, the women attained menarche between the age of 12 and 15. This is considerably an early age at menarche compared to Velama women who attained during 14th year. Teenage pregnancy is very common in the present study populations with 19 years among Mala and 20 years among Velama for age at first conception. Majority of the women among the two groups have shorter gap / spacing between marriage and first delivery. Menopause among the two populations occurred after 45 years. It is found that 96 percent of Mala men and 93 percent of Velama men are not using any contraceptives.

Fertility:

Table: 4: Mean Number of live births and surviving children by family type



Interpretation: Table: 4*: The mean number of surviving children per nuclear and joint families among two groups reveals very marginal variation without specific trend or consistencies specifying that family type do not influence the fertility in the form of surviving children in the two caste groups. Among the two study populations, relatively lower General Fertility Rate value of 60.4 among Mala and 80.3 among Velama are recorded.*

Mortality:

Table: 5 Differential Mortality among Village Exogamous and Endogamous Marriages

Caste	Type of Marriage	N	Prenatal Mortality		Post natal Mortality		Total Mortality	
			N	Mean	N	Mean	N	Mean
Mala	Exogamy	99	13	0.13	7	0.07	20	0.20
	Endogamy	125	37	0.30	21	0.17	58	0.46
	Total	224	50	0.22	28	0.13	78	0.35
Velama	Exogamy	119	7	0.06	9	0.08	16	0.13
	Endogamy	103	14	0.14	23	0.22	37	0.36
	Total	222	21	0.09	32	0.14	53	0.24

Interpretation: Table: 5: *The mean mortality is found to be slightly more among the Mala (0.38) than in Velama (0.14). Among the two groups, prenatal mortality is more than postnatal mortality among the Mala and the reverse is seen among the Velama group. Neonatal Mortality Rates observed in the study are relatively high with a value of 187.50 among Mala and 136.36 among Velama. Remarkably the present study recorded more than twice the infant mortality rate among Mala caste group.*

Conclusions

The proportion of illiterates among both men and women is more in Mala (SC) followed by Velama (BC) communities. The houses of most of the respondents (46 percent) are concrete slab houses while 28 percent are living in pucca houses. On an average, the Velamas reported 3.19 acres of agricultural land while Malas reported 0.66 acres of agricultural land on an average. Consanguinity is found more among the Malas compared to Velamas. The average size of the family is 3.8 among Malas and Velamas. Marital status among the two study populations is more or less similar and there no conspicuous differences. Among the two caste groups, the total number of inmates in a household ranged from one to seven people. Although the two caste groups exhibit slight differences in the consanguineous and affinal marriages between younger generation and older generation women the differences are marginal and not significant indicating no clear temporal variation. As expected, women above 30 years have more number of conceptions than below 30 years old in all the populations. The early age at first marriage of women among Mala is due to their traditional cultural practice of child marriages and lack of education and awareness. Absence of enough birth interval could be one of the causes for infant and child mortality, due to malnutrition in children, shortage of due care, low birth weight of succeeding children, in addition to anemia, infectious diseases, worm infestations etc.

The prenatal and post natal mortality situation needs immediate attention which can be arrested by providing quality antenatal care, doctor visits, clinical checkup for blood pressure, weight gain of pregnant women and other blood and urine parameters for maintaining proper health during pregnancy. To avoid

malnutrition among pregnant women and young children, vitamin supplements, fortified food, de-worming drugs, tetanus injection etc are to be made mandatory. Girls may be provided additional incentives for continuation of studies beyond secondary school for better employment opportunities postpone marriage and avoid early age at conception and empower them to participate in socio-economic development and health care activities.

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