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AGE AT MENARCHE AMONG FOUR ENDOGAMOUS POPULATIONS OF REDDIS IN ANDHRA PRADESH

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ABSTRACT

Present study attempts to find the mean age at menarche among girls of four endogamous sub populations of Reddis. The four sub-castes include Desuri Reddis (DSR), Kodide Reddi (KDR), Motati Reddi (MTR) and Pedakanti Reddi (PKR) respectively, inhabiting in Rayalaseema region of Andhra Pradesh. For this purpose, a total of 800 samples are selected out of which 200 from each of the four sub-castes are studied. In pooled Reddis, majority of the girls attain menstruation at the age of 13 years (34.63%). The same trend is observed in all four sub-castes of the present study. The mean menarcheal age (13.10± 0.06 years) obtained for the pooled Reddis was almost the same as the one observed for majority of the girls in other sub-castes except PKR (12.95±0.10).Significant inter group differences are observed in the mean menarcheal age between DSR-KDR (2.2285) and KDR-PKR (2.9167). The mean menarcheal age of pooled Reddis of this study was compared with other populations of Andhra Pradesh to understand the affinity, if any, between them. The differences between these groups may be due to variation in nutrition, bio-cultural history, etc. Knowledge of the age at menarche will help the government to design and implement Reproductive Health Programmes for women.

Key words: Menarcheal age, Sub- castes, Reddis, Andhra Pradesh.

INTRODUCTION

Menarche is a biological process which gets expression only in women. As an important event in the physiological life of a female, it represents a definite stage after which the woman becomes capable of conception. The age at menarche demonstrated a secular declining trend over the past two centuries across the globe [1]. Menarcheal age is an important aspect of population dynamics which varies from population to population. Among most of the females, it occurs between the ages of 10 and 16 years; which show a remarkable range of variation. However, enormous spatial variations in age at menarche were documented both between and within sub populations. In Developing Countries, the mean menarcheal age varied as high of 16.2 years in Nepal, 15.8 in Bangladesh, 14.3 in India (the Punjab), to as low of 13.5 in Sri Lanka, while in the Industrialized world, it ranged from as high of 13.3 years in Great Britain, 13.1 in France to as low of 12.8 in the United States [2].

This variability in the menarcheal age across subgroups of human population is influenced by various factors such as environment, nutrition, socio-economic status, blood group type, diet, heredity, education, rural-urban system of living, health services and family size/number of siblings etc [3-5].

Average age at menarche is also widely used as a demographic indicator of population fecundity [6]. Improvements in the quality of life during early childhood can result in earlier menarche. Nutritional status is one of the dominant determinants of age at menarche. Diet having high contents of calories and rich in protein causes better physical maturation and early menarche [7]. With this background the present paper aims to assess the mean age at menarche among the women of four endogamous sub-groups of Reddi caste in Andhra Pradesh state, India by comparing the data on age at menarche from previous studies.

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MATERIAL AND METHODS

The material selected for the present study was Reddi, the most numerous single castes in South India and were mainly concentrated in Andhra Pradesh. Over 88 sub-castes were reported among them and were found over the entire state with particular sub-caste being dominated both numerically and economically in certain areas than in other areas. More than 80 percent of the people lived in rural areas. Agriculture was the mainstay of their economy. Sub-caste endogamy was strictly followed. Monogamy was the general pattern of marriage. Nuclear family was of common occurrence and 40 percent of their marriages were consanguineous. In which first cross cousin marriages (23.75%) were more than uncle-niece marriages (11.63%) and 1.5 percent occurrence beyond amount to 5.13 percent.

The four sub-castes selected for this study were Desuri Reddis (DSR), Pedakanti Reddis (PKR), Motati Reddis (MTR) and Kodide Reddis (KDR). They were predominantly found in Chittoor, Kadapa and Anantapur districts of Rayalaseema region of Andhra Pradesh. The data were drawn from thirty randomly selected villages in 16 mandals from the above districts. For this purpose, data was collected following interview schedule method from 800 women, 200 from each of the sub-castes.

The questionnaire included socio-demographic information about the respondent's age, educational status of self, family income and type of residence. The questions related to menstruation comprised menarcheal age, month of onset and dietary habits. The questionnaire were verbally interpreted in vernacular language and properly explained to avoid any form of ambiguity and to facilitate accurate response from the subject. Every case was examined physically to exclude the presence of any disease. The girls were interviewed separately and privately. Their ages were recorded. The menstrual history was inquired; the exact date of menarche was noted. Appropriate statistical tools were used for analyzing the data.

Table 1. Frequency distribution of Age at Menarche among four Reddi sub-castes

Age at Menarche (Years)	DSR		KDR		MTR		PKR		Pooled Reddis	
	No	%	No	%	No	%	No	%	No	%
10	6	3.00	5	2.50	7	3.50	7	3.50	25	3.13
11	17	8.50	6	3.00	14	7.00	14	7.00	51	6.38
12	55	27.50	35	17.50	44	22.00	56	28.00	190	23.75
13	59	29.50	87	43.50	63	31.50	68	34.00	277	34.63
14	31	15.50	25	12.50	41	20.50	27	13.50	124	15.50
15	18	9.00	27	13.50	17	8.50	16	8.00	78	9.75
16	8	4.00	10	5.00	9	4.50	7	3.50	34	4.25
17^{+}	6	3.00	5	2.50	5	2.50	5	2.50	21	2.63
Total	200	100	200	100	200	100	200	100	800	100

Table 2. Mean age at menarche in four Reddi sub- castes

Sub-Caste	No	Menarche	
		Mean±S.E.	S.D.±S.E.
Desuri Reddi (DSR)	200	13.04 ± 0.11	1.53 ±0.08
Kodide Reddi (KDR)	200	13.37 ± 0.10	1.43 ±0.07
Motati Reddi (MTR)	200	13.16 ± 0.10	1.48 ±0.21
Pedakanti Reddi (PKR)	200	12.95 ± 0.10	1.44 ±0.07
Pooled Reddis	800	13.10± 0.06	1.60±0.04

't' values for inter group difference:
DSR-KDR=2.2285* KDR-MTR=1.4431
DSR-MTR=0.8637 KDR-PKR=2.9167*
DSR-PKR=0.6058 MTR-PKR=1.4382 *****Significant at 5% level

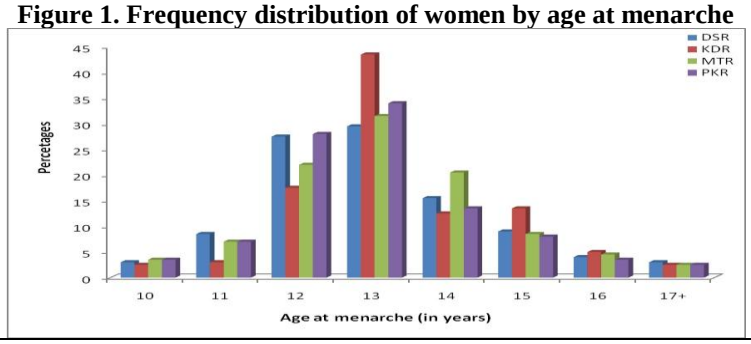
Table 3. Age at menarche in some populations of Andhra Pradesh

S.No	Population	Sample size	Age at Menarche (Mean±S.E.)	Source
1.	Reddi	800	13.10±0.06	Present study
2.	Brahmin	389	14.63±0.08	[8]
4.	Konda Reddi*	152	13.85±0.08	[9]
5.	Chenchu – I*	201	14.30±0.04	[10]
6	Rayalam Reddi	98	13.95±0.11	[11]
7.	Panta Kapu	102	14.35±0.12	[12]
8.	Kamma – I	395	14.35±0.09	[13]

9.	Balija	207	12.78±0.09	[14]
10.	Sugali – I*	262	12.85±0.07	[14]
11.	Chenchu – II*	222	13.92±0.06	[15]
12.	Mala	1108	13.04±0.02	[16]
13.	Yerukula*	444	12.95±0.06	[17]
14.	Sugali – II*	205	13.50±0.06	[18]
15.	Sugali – III*	367	12.72±0.05	[19]
16.	Motati Reddi	152	12.98±0.37	[20]
17.	Pokanati Reddi	147	13.03±0.09	[20]
18.	Kamma – II	204	14.09±0.05	[21]
19.	Relli	428	13.07±0.05	[22]
20.	Kshatriya	1500	13.86±0.03	[23]
21.	Arya Vysya	301	13.56±0.06	[24]
22.	Kalinga Vysya	287	13.04±0.06	[24]

* Tribal populations

Figure 1. Frequency distribution of women by age at menarche



RESULTS AND DISCUSSION

The frequency distribution of Women by Age at Menarche is shown in Table 1 and Figure 1. In pooled Reddis the menarcheal age ranges from 10 to 17+ years, with majority of the girls attaining menstruation at the age of 13 years (34.63%). At the age of 17 years the proportion of girls menstruated was found to be the lowest (2.63%). The same trend was observed in all four sub-castes of the present study. The value of the mean menarcheal age of 13.10± 0.06 years obtained for the pooled Reddis was almost the same as the one observed for majority of the girls in other sub-castes except PKR (12.95±0.10). Table 2 shows that there were intergroup differences observed in the mean menarcheal age between the Reddi groups of the study, the differences being significant also for some of the groups as shown by the 't' values (DSR-KDR: 2.2285; KDR-PKR: 2.9167). These differences, including the negligible ones, as between the PKR and the KDR speak of the heterogenous nature of the groups for the trait of menarcheal age.

The mean menarcheal age of pooled Reddis of our study is compared with other populations of Andhra Pradesh to understand the affinity, if any, between them (Table 3). It ranges from 12.78±0.09 years among the Balijas to 14.90±0.05 years among the Kammas-II, whereas in tribal populations it ranges from 12.72±0.05 years among the Sugalis-III to 14.30±0.04 years among the Chenchus-I. The Reddis show a lower menarcheal age (13.10±0.06 years) than in other caste groups except for the Balijas (12.78±0.09), the Malas (13.04±0.37), the Motati Reddis (12.98±0.37), and Pokanati Reddis (13.03±0.09). The comparison on the whole reveals higher mean values of menarcheal age in upper caste girls (Brahmins, Vysyas, Kammas-I, Rayalam Reddis) and lower means among the tribal girls (Sugali-I, Sugali- II, Yerukula). The differences between these groups may be due to variation in nutrition, bio-cultural history, etc.

CONCLUSION

Generally the communities at the lower range of the society like the tribal groups prefer non-vegetation food which, is due to rich proteins, may help in the quicker growth of the body causing early menstruation. Knowledge of the age at menarche will help the government to design and implement Reproductive Health Programmes for women.

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