

Age at Menarche in Three Caste Populations of Andhra Pradesh

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KEY WORDS Menarcheal Age. Endogamous Group. Secular Trend. South India

ABSTRACT In the present paper menarcheal age in three endogamous Vysya populations, Arya Vysya, Thrivarnika and Kalinga Vysya is reported. It has been observed that there is a decrease in mean menarcheal age with moving down in social hierarchy. Further, among the three population groups of Andhra Pradesh which have been studied at different times, decrease in mean menarcheal age has been found which show a secular trend.

INTRODUCTION

Menarche is an important event in the physiological life of a female. It has long been recognized that the mean age of menarche varies from one population to another. The present paper reports the age at menarche in the three endogamous subpopulations of Vysya community, Arya Vysya, Thrivarnika and Kalinga Vysya. Though several studies have been reported on effect of various factors on the onset of menarche, there are few studies available related to age at menarche and secular trend and social hierarchy. In the present study an attempt has been made to study relationship between these.

MATERIALS AND METHODS

As a part of genetic and demographic investigations on Arya Vysya, Thrivarnika and Kalinga Vysya populations, data on age at menarche were collected by recall method from post menarcheal women.

The three populations, Arya Vysya, Thrivarnika and Kalinga Vysya are endogamous and according to Sherring (1881) supposed to belong to one common stock. Arya Vysyas are distributed throughout Andhra Pradesh. Kalinga Vysyas are mostly spread in Srikakulam and Vijayanagaram districts whereas Thrivarnikas are small in number and spread in small pockets of Vijayanagaram, Visakhapatnam, East Godavari and Warangal districts. Arya Vysyas are vegetarians whereas the other two populations are non-vegetarians. A detailed description of the three populations is given elsewhere (Lakshmi et al., 2002). The sample includes 301 women from Arya Vysya, 258 from Thrivarnika and 287 from Kalinga Vysya, aged between 17 and 71 years.

The data were collected from Visakhapatnam, Vijayanagaram and Srikakulam districts of Andhra Pradesh.

RESULTS AND DISCUSSION

Mean menarcheal ages of the present study populations and other endogamous caste populations of Andhra Pradesh are given in table 1. Seventy two percent of the Arya Vysya, 86% of the Thrivarnika and 92% of the Kalinga Vysya subjects had experienced their first menstruation before the fourteenth birthday and all of them had attained menarche by 17th birthday. None of the subjects menstruated before the age of 11 years (except one Kalinga Vysya who attained menarche at 10th year) or after 18 years of age.

The mean ages at menarche are 13.56, 13.50 and 13.04 years for Arya Vysya, Thrivarnika and Kalinga Vysya respectively. Arya Vysya and Thrivarnika belong to the same hierarchy whereas Kalinga Vysya is below them. Thus a decrease in mean menarcheal age is observed along with decrease in social hierarchy. This is further supported statistically (t-test) also. The difference between Arya Vysya and Thrivarnika is not significant ($t = 0.5803$) whereas the difference between Kalinga Vysya and Arya Vysya and that between Kalinga Vysya and Thrivarnika are significant ($t = 5.2899$ and 4.7521 , respectively).

Mean menarcheal age in different endogamous caste populations of Andhra Pradesh ranges from 12.76 in Viswa Brahmins (Subba Rao, 1996) to 14.76 in Telaga (Chakravarti and Renuka, 1970). Kalinga Vysyas exhibit a value on the lower side of the range. Arya Vysya and Thrivarnika exhibit a value in the middle of the range. Vaisyas (Arya Vysya) studied by Chakravarti and Renuka (1970) record much

Table 1: Mean menarcheal ages in present study populations and in other castes of Andhra Pradesh

Population	N	Mean $\pm$ S.E	Reference
Arya Vysya	301	13.56 $\pm$ 0.06	Present Study
Kalinga Vysya	287	13.04 $\pm$ 0.06	Present Study
Thrivarnika	258	13.50 $\pm$ 0.07	Present Study
Brahmin I	389	14.63 $\pm$ 0.48	Chakravarti & Renuka, 1970
Brahmin II	631	13.03 $\pm$ 0.05	Sita Lakshmi, 2002
Chakali	104	13.01 $\pm$ 0.08	Babu & Naidu, 1989
Ediga	104	14.18 $\pm$ 0.18	Bhaskar et al, 1986
Kamma	147	14.50 $\pm$ 0.32	Chakravarti & Renuka, 1970
Kapu	300	13.70 $\pm$ 0.57	Chakravarti & Renuka, 1970
Kshatriya I	40	14.45 $\pm$ 0.36	Chakravarti & Renuka, 1970
Kshatriya II	1500	13.86 $\pm$ 0.03	Dharani Priya, 2001
Kummari	63	13.33 $\pm$ 0.11	Babu & Naidu, 1989
Madiga	92	13.21 $\pm$ 0.11	Babu & Naidu, 1989
Mangali	112	13.13 $\pm$ 0.08	Babu & Naidu, 1989
Naidu	73	14.38 $\pm$ 0.45	Chakravarti & Renuka, 1970
Reddi	30	13.86 $\pm$ 0.25	Chakravarti & Renuka, 1970
Relli	428	13.07 $\pm$ 0.05	Ramesh, 1992
Telaga	121	14.76 $\pm$ 0.06	Chakravarti & Renuka, 1970
Vaisya	16	14.60 $\pm$ 0.52	Chakravarti & Renuka, 1970
Viswa Brahmins	516	12.76 $\pm$ 0.06	Subba Rao, 1996

higher mean menarcheal age when compared to the present study Arya Vysya populations.

The Brahmins, Kshatriyas and Arya Vysyas in Table 1 belong to the same area and were studied by different authors (Chakravarti and Renuka, 1970; Dharani Priya, 2001; Sita Lakshmi, 2002; Lakshmi et al., present study) at different times with a time lapse of 20 to 30 years, almost equal to one generation gap. When the mean menarcheal ages of these populations at different periods are compared, a secular trend leading to decrease of the mean menarcheal age is evident.

Brown (1966) proposed that improvements in nutrition and the elimination of infectious diseases (characteristics associated with socio-economic development) tend to reduce the average menarcheal age. Several studies (Uche and Okorafor, 1979; Sidhu and Sidhu, 1987; Bagga and Kulkarni, 2000; Padez and Rocha, 2003) reported that improved socio economic status may be responsible for early menstruation. The Brahmin, Kshatriya and Arya Vysya populations compared in the present study experienced a significant improvement in their economic position and dietary habits over a period of 20 to 30 years. Therefore the secular trend by these populations supports the studies mentioned above.

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