

A Note on Menarcheal Age of Mirdha Women of Orissa

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KEY WORDS Menarcheal Age. Mirdha Women. Orissa.

ABSTRACT A sample of 184 Mirdha women from Sambalpur district of Orissa, was studied to determine the menarcheal age among them. The mean menarcheal age is observed to be 13.30, with a range of 12 to 15 years. No abnormal case is found. The present finding is compared with those of some other populations of Orissa in particular and India in general. The mean menarcheal age of Mirdha women is nearer to those of the Karan and Kondh of Orissa. t-test shows significant inter-tribal variation.

The term menarche, the sign of puberty among girls experiencing physiological changes from childhood to adulthood, refers to the first appearance of menstruation. The term was first introduced by Kisch (1910). Menstruation is the periodic physiological phenomenon of discharging a matured ovum occurring between menarche and menopause. The onset of first menstruation is influenced by environmental, genetical, educational, occupational (of the head of the family), family size, food habit, nutrition and socio-economic factors. There is also the influence of moral and psychic environment on the onset of the first menstruation of an individual (Tanner, 1962; Hiernaux, 1971; Valsik et al., 1973; Shastree et al., 1974; Brundtland et al., 1982; Balmaker, 1982; Liestol, 1982). Due to variability of different factors, there is a wide range of variation of menarcheal age in different populations.

Robertson (1895) investigated into the period of puberty in Hindu women. Curjel (1920) attempted a study on the reproductive life of Indian women. Since then, some work on different populations has been done in different parts of India. References may be made to a number of studies by Sen (1953) among Bengali girls, Dubey and Srivastava (1963) among

women of Uttar Pradesh, Rakshit (1960) among Assamese girls, Pattnaik (1971) among urban upper caste women of Orissa and many others. The present note aims to report the menarcheal age among the Mirdha women of Sambalpur district, Orissa.

MATERIALS AND METHODS

The present study includes 184 married Mirdha women of different age groups, from Meghpal and Badsahir villages of Sambalpur district, Orissa. Mirdhas are a small endogamous Dravidian tribe of western Orissa, inhabiting particularly the districts of Sambalpur and Bolangir. According to 1981 census, the Mirdha population of Sambalpur district is 19203. The subjects were asked to recall their age at menarche. Proper care was taken to obtain the correct age of each woman under study by confirming the dates of local events like establishment of schools, dug wells, ponds, electrification etc. The present data compared with the other tribal and general populations to show the inter-tribal differences.

RESULT AND DISCUSSION

The frequency distribution of age at menarche among Mirdha women is presented

in table 1. The recalled age at menarche ranges from 12 to 15 years. The highest percentage of women (66.30), who have attained their menarche is at the age of 13. The lowest percentage (0.55) is at the age of 15 years. The mean menarcheal age of the sample is 13.30 ± 0.03 years with a standard deviation of 0.5 ± 0.02 years. The median age is found to be 13.73 years. Ashley Montagu (1945) is of the opinion that the occurrence of menarche before 12 years is abnormal; such abnormality is not observed in the present sample.

The mean menarcheal ages of different caste and tribal populations of Orissa reported by

Kissan x Kharia, Mirdha x Kandha and Kissan x Oraons are significant at 5% level.

Table 1 : Age of menarche among Mirdha women

Age	Frequency	Percentage
12	3	1.63
13	122	66.30
14	58	31.52
15	1	0.55
Total	184	100.00

Range = 12-15 years Mean $\pm$ SE = 13.30 ± 0.03 years
S.D. $\pm$ SE = 0.5 ± 0.02 years Median age = 13.73 years

Table 2 : t-values between Mirdha and other populations of Orissa for mean menarcheal age

Population	No.	Mean $\pm$ SE	S.D. $\pm$ SE	t-value	Authors
Brahmin	100	12.94 ± 0.08	0.87 ± 0.06	4.21	Pattnaik (1971)
Karan	100	13.28 ± 0.10	0.09 ± 0.07	0.19	Pattnaik (1971)
Khandayat	100	13.41 ± 0.84	0.84 ± 0.05	0.13	Pattnaik (1971)
Gonda	144	14.32 ± 0.09	1.22 ± 0.07	10.75^1	Das (1987)
Urban girls	—	11.38	—	—	ICMR (TRS-18)(1972)
Kharia	201	14.27 ± 0.05	0.65 ± 0.05	16.63^1	Nayak (1988)
Kissan	100	14.28 ± 0.13	1.30 ± 0.09	7.35^1	Panda (1978)
Kondh	207	13.40 ± 0.10	1.20 ± 0.10	0.96	Panda (1987)
Oraon	167	14.07 ± 0.08	1.02 ± 0.05	9.01	Pati (1981)
Mirdha	184	13.30 ± 0.03	0.50 ± 0.02	—	Present study

1. Significant at 5% level

various authors are presented in table 2. The lowest (11.38) and highest (14.32 ± 0.09) mean age are observed among urban girls (ICMR - 1972) and Gondas (Das, 1987). The tribal women show a higher mean menarcheal age as compared to the higher caste women of Orissa. However, the Mirdha women exhibit a close affinity with some higher caste women namely, Karan and Khandayat and Kandha tribe. When the t-test is performed, the value shows a significant statistical difference between Mirdha on the one hand and Brahmin, Gonda, Kharia, Kissan and Oraon on the other.

Table 3 shows the t-values for inter-tribal comparisons. It is noted that all values except

Table 3: t-test for inter-tribal variation for mean menarcheal age

Population	Mirdha	Kharia	Kissan	Kondh	Oraon
Mirdha	—				
Kharia	16.63^1	—			
Kissan	7.35^1	0.07	—		
Kondh	0.96	7.78^1	5.36^1	—	
Oraon	9.01^1	2.12^1	1.38	5.23^1	—

1. Significant at 5% level

In table 4, the comparison of means, and t-between Mirdhas and various Indian populations by different authors have been presented. The mean age at menarche ranges from 11.71 among pooled Assamese (Srivastava and Goswami, 1968) to 14.88 among

Table 4 : Comparison of means and t-value between Mirdha and various Indian populations

Region	Population	No.	Mean $\pm$ S.E.	t-value	Author
Assam	Pooled	166	11.71 $\pm$ 0.09	16.76 ¹	Srivastava & Goswami (1968)
	Pooled	120	12.36 $\pm$ 0.42	2.23	Banerjee (1972)
	Kalita	172	12.61 $\pm$ 0.14	4.82	Das & Das (1967)
	Brahman	60	12.46 $\pm$ 0.26	3.21	Rakshit (1960)
	Kayastha	32	12.45 $\pm$ 0.20	4.20	Rakshit (1960)
	Kalita	17	12.12 $\pm$ 0.26	4.51	Rakshit (1960)
	Muslim	29	13.35 $\pm$ 0.15	0.33	Rakshit (1960)
	Brahman	26	12.51 $\pm$ 0.11	6.93	Das & Das (1967)
	Vaishya	35	12.97 $\pm$ 0.12	2.67	
	Kaibarta	30	12.89 $\pm$ 0.12	3.31	
Bengal	All castes (Urban)	647	12.78 $\pm$ 0.05	8.92	Sen (1953)
	Kayastha	219	12.87 $\pm$ 0.08	5.03	Sen (1953)
	Brahmin	153	12.80 $\pm$ 0.10	4.79	Sen (1953)
	Vaidya	275	12.70 $\pm$ 0.08	7.02	Sen (1953)
	Bagdi	60	12.25 $\pm$ 0.15	6.86	Sen (1953)
Uttar Pradesh	Total	361	13.57 $\pm$ 0.06	4.02	Dubey & Srivastava (1967)
Calcutta & Delhi	All castes	250	12.50 $\pm$ 0.10	7.66	Bardhan (1962)
Bombay	Different social groups	230	13.60	—	Robertson (1845)
Maharashtra	Brahmin	103	14.34 $\pm$ 1.41	0.74	Rakshit (1962)
Kerala	Nayar	74	14.29 $\pm$ 0.19	5.15	Sen (1953)
Andhra	Hospital patients	169	14.88 $\pm$ 0.11	13.86	Manuel (1957)
	Chenchus	201	14.30 $\pm$ 0.04	20.00	Ramana & Aruna (1976)

1. Significant at 5% level

hospital patients of Andhra (Manuel, 1957). The Assam state shows the lowest menarcheal age. A gradual increase in the mean value is observed in Bengal, Delhi, Uttar Pradesh, Maharashtra, Kerala and Andhra. Maharashtra Brahmins (Rakshit, 1962) and Andhra data exhibit higher mean menarcheal age. The present Mirdha population shows a mean value nearer to that of other populations like Muslims of Assam (Rakshit, 1960), (pooled) UP (Dubey and Srivastava, 1967) and different social groups of Bombay (Robertson, 1845). When the t-test is performed, the Mirdha women did not show any significant difference from Muslim women of Assam and Brahmins of Maharashtra. But, they show a statistically significant difference with the rest of the populations of Assam, Bengal, UP, Delhi, Kerala and Andhra. It appears from the data that the average age at menarche of the Mirdha women is relatively low.

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