

Prevalence of Anaemia Among Adolescent Girls of Scheduled Caste Community of Punjab

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ABSTRACT Two hundred sixty-five adolescent girls (age 11+ to 15+) of Scheduled Caste community of Amritsar were the subjects of study. The study showed that only 29.43% girls were normal and 70.57% were affected with various grades of anaemic condition, 30.57% girls being mildly anaemic and 27.17% moderately anaemic while 12.83% suffered from severe anaemia. Severe anaemia had its wrath in age group 15+.

INTRODUCTION

Adolescents constitute about 25% of the population and form an important physiological group whose nutritional needs demand special attention (Visweswara Rao, 1987). Adolescence is a period of rapid growth, weight gain and blood volume expansion. The overall iron requirement of the body increases during this period. During adolescent period, the risk of iron deficiency and anaemia among boys and girls appears to be more due to growth spurt, and in girls it remains as such during their reproductive life (Gawarikar et al., 2002). Iron deficiency is the most widespread form of malnutrition among women and children. In India, anaemia affects an estimated 50% of the population (Seshadri, 1998). Numerous studies (Vasanthi and Pawashe, 1994; Chaturvedi and Kapil, 1996; Seshadri, 1997; Aggarwal, 1998; Rajaratham et al., 2000; Sivakumar et al., 2001; Gawarikar et al., 2002) among adolescent girls have shown that the prevalence of anaemia ranges from 22.00-96.50% in India. In Punjab, systematic studies on the prevalence of anaemia among Scheduled Caste girls are meagre. Therefore, in the present study, an attempt has been made to report the prevalence of anaemia among Scheduled Caste adolescent girls of Amritsar (Punjab).

MATERIAL AND METHODS

The data for the present study has been collected from 265 Scheduled Caste girls ranging

in the age between 11-15 years. The data was collected during the years 1998-1999 from various government schools located in Putlighar and Karimpura of Amritsar City. The exact date of birth was collected for every student from the concerned school registers. The doubtful cases were excluded from the present sample. All subjects between the ages 11.00 to 11.99 years were included in 11+ age group, 12.00 to 12.99 years in 12+ age group and so on up to 15+ age group. Informed consent of the parents of each child has been obtained before taking the sample. Haemoglobin estimation was done using cyanmethaemoglobin method (INACG, 1985) on the blood sample obtained by the finger prick. Anaemia was diagnosed according to WHO guidelines (Demaeyer, 1989).

RESULTS AND DISCUSSION

It is apparent from Table 1 that out of 265 girls studied, only 29.43% were normal and 70.50% were affected with various grades of anaemia i.e. 30.57% mildly anaemic, 27.17% moderately anaemic and 12.83% severely anaemic. High prevalence of anaemia has also been noted by various scientists (Malhotra and Srivastava, 1982; Gopaldas and Kale, 1985) among children of economically weaker sections and rural school children. In a multicountry study (Kunt and Johnson, 1994) on the nutritional status of adolescents carried out by the International Centre for Research on Woman, anaemia was found to be the widespread nutritional problem and its prevalence ranged from 32-55%. Aggarwal (1998) studied urban slums of North-East Delhi and reported the prevalence of anaemia among

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Table 1: Number and percentage prevalence of anaemia among Scheduled Caste girls

Age group (in years)	Sample size	Normal	Anaemic	Severity of Anaemia		
				Mild	Moderate	Severe
11+	65	23 (35.38)	42 (64.62)	25 (38.46)	14 (21.54)	03 (04.62)
12+	58	19 (32.76)	39 (67.24)	22 (37.93)	13 (22.41)	04 (06.90)
13+	55	16 (29.09)	39 (70.91)	15 (27.27)	18 (32.73)	06 (10.91)
14+	45	11 (24.44)	34 (75.55)	10 (22.22)	16 (35.55)	08 (17.77)
15+	42	09 (21.43)	33 (78.57)	09 (21.43)	11 (26.19)	13 (30.95)
Total	265	78 (29.43)	187 (70.57)	81 (30.57)	72 (27.17)	34 (12.83)

adolescent girls as 47.60%. Rajaratham et al. (2000) documented the prevalence of severe anaemia as 2.10%, moderate anaemia as 6.30% and mild anaemia as 36.50% among Tamil Nadu girls. Mehta (1998) found 4.80% severe anaemia, 22.40% moderate and 36.60% mild anaemia among adolescent girls of urban slums of Bombay. In the present study, the prevalence of mild and moderate anaemia is quite same as that of Bombay slum girls, but the frequency of severe anaemia is quite high. Thus, it is apparent from the present sample that anaemia among Scheduled Caste girls of Punjab is also high as in other parts of the country.

It is quite discernible from Table 1 that there is an age differential in the prevalence of anaemia. In age group 11+, only 35.38% girls were normal and 64.62% were affected with various grades of anaemia. The prevalence of anaemia increases with age and becomes maximum (78.57%) in the age group 15+. The frequency of mild anaemia was displayed to the maximum (38.46%) by age group 11+ and the minimum (21.43%) by age group 15+. In the present sample, the largest number of girls fell in the category of moderate anaemia, with maximum (35.55%) present in age group 14+ as compared to age group 11+ where the number of lowest (21.54%). Maximum level of severity of anaemia was seen to be present in age group 15+ (30.95%). The age group 11+ has the least (4.62%) number of severely anaemic girls. This may be accounted for as repeated menstrual blood loss with each cycle which results in drainage of iron reserves ending in anaemia. The mean age at the menarche of this population is also one of the contributing factors towards this state of health, as among the Scheduled Caste girls of Punjab (Sidhu, 2002), the mean age at menarche is 12.23±1.043.

This study highlights a high prevalence of severe anaemia among adolescent girls of Scheduled Caste community. Further studies with a larger sample size were needed.

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