

Prevalence of Anaemia in Bazigar (Ex-nomadic Tribe) Preschool Children of Punjab

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ABSTRACT A study on the prevalence of anaemia was conducted among the Bazigar preschool children of Amritsar, Ludhiana, Moga and Patiala districts of Punjab. Blood sample was collected from 1200 children ranging in age from 1+ to 5+ years, and haemoglobin was estimated by cyanmethaemoglobin method. Anaemia was diagnosed when haemoglobin was less than 11 g/dl. The study revealed an overall prevalence of anaemia as 90.50%. The frequency of anaemia was maximum in age group 2+. Thereafter, the frequency of anaemia decreases as the age increases.

INTRODUCTION

Iron-deficiency anaemia is a problem of serious public health significance in preschool children, as it imparts its effect on physical growth, cognitive functions and emotional development (Lozoff et al., 1991; Bhatia and Seshadri, 1993). According to Indian Council of Medical Research (ICMR, 1997), iron deficiency is the most common nutritional problem in India. The National Family Health Survey-2, conducted in 1998-99, documented that about 74% children between the ages of 6-35 months were anaemic (NFHS-2, 2000). The results of various community surveys from different regions in the country have also reported a similar high prevalence (ICMR, 1977; Visweswara Rao et al., 1980; Seshadri et al., 1984; Gupta and Shukla, 1985; Mann and Stones, 1988; Sidhu, 1996; Gomber et al., 1998; Kapur et al., 2002; Kapil, 2003). In Punjab, systematic studies on the prevalence of anaemia among Bazigar preschool children are meagre. Therefore, in the present study, an attempt has been made to report the extent of anaemia among Bazigar children of Punjab. Bazigar is a Persian word meaning, 'who does bazi or any sort of game', but it is applied only to jugglers and acrobats. They used to make their living by display and show of acrobat exercises. But now this has lost its status of entertainment. With an overall economic development of the Punjabi society, Bazigars too have shifted from their traditional profession of acrobatic shows to

agriculture or industrial labour, civil service, etc. Bazigars are a wandering tribe, setting camps in the vicinity of large villages and towns. Bazigars are endogamous at the level of tribe but exogamous at the level of clan.

MATERIAL AND METHOD

The data for the present study have been collected from 1200 Bazigar children ranging in age between 1-5 years. Various Bazigar settlements, Anganwadis and Balwadis of Amritsar, Hosiarpur, Moga and Patiala districts of Punjab were selected randomly for data collection. The age of the children was recorded from the date of birth records in Anganwadi's or Balwadi's registers or directly by questioning their parents. All children between the ages 1.00-1.99 were included in 1+ age group, 2.00 to 2.99 in age group 2+, and so on, up to 5+ (Eveleth and Tanner, 1990). Informed consent of the parents of each child has been obtained before taking sample. Haemoglobin estimation was done using cyanmethaemoglobin method (INACG, 1985) on the blood sample obtained by finger prick. Anaemia was diagnosed when haemoglobin concentration was less than 11 g/dl for children below 6 years of age (WHO, 1989).

RESULTS AND DISCUSSION

It is apparent from Table 1 that out of 1200 preschool Bazigar children studied, only 9.50%

were normal and 90.50% were affected with various grades of anaemic conditions, 6.33% being mildly anaemic and 75.75% moderately anaemic while 8.42% suffered from severe anaemia. Sidhu (1996,1997) studied Scheduled Caste preschool children of Amritsar district and reported that 95.65% children were affected with various grades of anaemia. Swami et al. (1998) also indicated a high prevalence (78.70%) of anaemia in low-income group children of Chandigarh. Devi (2000) studied low-income families of Andhra Pradesh and reported the prevalence of anaemia as 82.60% in children. As per the NFHS-2 (2000) report, 80% of Punjabi children aged 6-35 months have some level of anaemia, including 17% who are mildly anaemic, 57% who are moderately anaemic and 6% who are severely anaemic. Thus, it is apparent from the present sample that Bazigar children have a high prevalence of anaemia than other populations of India. The occurrence of anaemia among the children of poor socio-economic status is a well-documented fact (Mann and Stones, 1988; Sidhu, 1996,1997; Sidhu et al., 2002).

It is quite discernable from Table 1 that there was an age differential in the prevalence of anaemia. A higher proportion of children were severely anaemic in age groups 1+ (15.00%) and 2+ (13.64%) as compared to the older age groups. It became evident that the frequency of severe anaemia decreases as the age increases, but the frequency of mild anaemia increases with age. Similar results have also been shown by Visweswara Rao et al. (1980), Sidhu (1996,1997) and Sidhu et al. (2002).

Although more of the girls were suffering from anaemic conditions (Table 1), but the percentage difference at the general level was not very wide. 9.83% boys were found to be

normal compared to 9.17% girls. A mild form of anaemia was present in 6.33% of male and female children. 75.83% female children suffered from moderate type of anaemic conditions as compared to 75.66% males. A severe form of anaemia was 8.17 and 8.67% among boys and girls, respectively. So, male children could not be grouped in a better state of health, since both the sexes have to face the acute shortage of good quality food and hostile environmental conditions. Baseline prevalence rates of anaemia in different age groups of the two sexes found in multicentric study conducted in several villages around Hyderabad by NIN (1986-87) indicated that the prevalence rates are high while there are no differences between boys and girls below the age of 6 years. Similar findings have also been reported by Sidhu (1997) and Visweswara Rao et al. (1980), but Swami et al. (1998) indicated an overall prevalence of anaemia to be 54.70% with more of females (67.70%) suffering from it rather than their male counterparts (32.30%).

CONCLUSION

There is an urgent need to initiate specific public health action to prevent iron deficiency in preschool children of Punjab, because the health consequences of anaemia during first two years of life are not only serious but also irreversible (Kapil, 2003). Higher frequency of anaemia among the groups might be due to higher dietary inadequacy of all nutrients, including iron, in younger age groups than in older age groups. Bazigar children of the studied group also consumed mainly the cereal based diet, and the frequent consumption of iron absorption inhibitors, like tea, associated with lack of safe drinking water, inadequate human

Table 1: Number and percentage prevalence of anaemia among Bazigar preschool children

Age group	No. of subjects	Normal		Anaemic		Mild		Moderate		Severe	
		No.	%	No.	%	No.	%	No.	%	No.	%
1+	200	11	5.50	189	94.50	6	3.00	153	76.50	30	15.00
2+	220	12	5.45	208	94.55	10	4.55	168	76.36	30	13.64
3+	250	18	7.20	232	92.80	11	4.40	203	81.20	18	7.20
4+	300	38	12.67	262	87.33	19	6.33	230	76.67	13	4.33
5+	230	35	15.22	195	84.78	30	13.04	155	67.39	10	4.35
Total	1200	114	9.50	1086	90.50	76	6.33	909	75.75	101	8.42
Girls	600	55	9.17	545	90.83	38	6.33	455	75.83	52	8.67
Boys	600	59	9.83	541	90.17	38	6.33	454	75.66	49	8.17

waste management, maternal illiteracy and mother being frail and having no food reserves because of excessive child bearing can be the underlying causes of anaemia. The root cause of all these factors is poverty.

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