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Research Paper

HEALTH STATUS AMONG SCHOOL CHILDREN RESIDING IN URBAN FIELD PRACTICE AREA OF BELGAUM - A CROSS SECTIONAL STUDY

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Background and aims: Child's health is the nation's wealth. The nutrition and health status of the children is the index of what the nation is investing in the development of its future manpower potential. In Karnataka Suvarna Arogya Chaitanya Program was started in 2006, conducted every year in month of August. Health clinics are set up under this program. This study takes in to consideration all the morbidities occurring in the children. With this theme in mind conducted the present study to determine the health status of school children attending schools under Urban Field Practice Area of Belgaum. Methods and Material: This cross-sectional study was done from August 1, 2012 to August 31, 2012 among 9537 school children studying in 1st to 10th standard in Urban Field Practice Area of Belgaum District using predesigned and pretested questionnaire. Statistical analysis was done by tables and charts in percentage. Results: Health survey was conducted in the Urban Field Practice Area of Belgaum in the month of August 2012. A total of 9537 students were examined out which 48.42% were boys and 51.58% were girls. Out of total 9537 students examined in urban area of Belgaum 11.5% had Anaemia, 24.9% had Dental Caries, 1.9% had Refractory Error, 3.1 %, 0.2% had CHD, 0.4% had GE, Pyoderma and Scabies Conclusion: Periodic supplementation of Iron and Folic Acid and Periodic de-worming of Hook worm infestation for anaemic children should be done. Health Education should be conducted for maintenance of good oral hygiene, importance of safe drinking water and good nutrition for all the students. Early diagnosis and appropriate treatment of URTI, Scabies, Pyoderma should be done. Higher Centre referral for children with CHD and other severe diseases should be done.

Keywords: School children, Health Status

INTRODUCTION

Child's health is the nation's wealth. The nutrition and health status of the children is the index of what the nation is investing in the development of

its future manpower potential (Bhandari *et al.*, 1975). There are about 6.3 lakh schools in India, both primary and upper primary, with 128.3 million children in primary schools and about 50 million

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in upper primary schools (Rama, 2008). The importance of school health has been acknowledged across countries since the beginning of 20th century. In several developed countries, school health programs have evolved during the post-2nd World War period and addressed nutritional and physical-fitness aspects. This was in response to poor nutritional status among lower middle class and working class children. School health services have tended to focus on nutritional support and clinical assessment. These inputs are absolutely necessary but so is the need to assess the state of personal hygiene, which is directly or indirectly related to the above-mentioned factors, especially in a developing country like India (Rama, 2008). Formal school programs are non-existent in India. However school medical inspection was started in Baroda city in 1909. In the succeeding years practically every province in India introduced some form of school health program particularly in middle and high schools (Park, 2009). School health programs and services help to link the resources of the health, education, nutrition and sanitation sectors in an existing infrastructure, the school. Health problem of the school children vary from one place to another, surveys carried out to indicate that the main emphasis will fall in malnutrition, infectious diseases, intestinal parasites, disease of skin, eye and ear and dental caries (Pandey *et al.*, 1985). With this theme in mind conducted the present study to determine the health status of school children attending schools under Urban Field Practice Area of Belgaum.

MATERIALS AND METHODS

This school based cross sectional study was

carried out between August 1, 2012 to August 31, 2012. After taking prior permission from principal of the school, interview dates of study were fixed. All the students thus registered were subjected to anthropometric measurements and clinical examinations. School record was used for getting reasonable accuracy in age assessment. All schools in Urban field practice area of JNMC, Belgaum were visited and health check up of 9537 school children studying in 1st to 10th standard in these schools was carried out using pre-designed structured Performa. Data entry was done in MS Word Sheet and analysis was done by tables and charts in percentage.

RESULTS

Out of 3713 students examined in the Urban area under Ram Nagar 52.7% were boys and 47.3% were girls, Out of 2867 students examined in the Urban area of Ashok Nagar 52.4 were boys and 47.6% were girls and Out of 2957 students examined under Urban area of Rukmini Nagar 39.2% were boys and 60.8% were girls (Table 1).

Out of total 9537 students examined in Urban area of Belgaum 2374 (24.9%) had Dental Caries, 1093 (11.5%) had Anaemia and 186 (1.9%) had Refractory Error (Table 2).

Among the students examined in Urban area of Belgaum 0.4% had GE, Pyoderma and Scabies (Table 3).

Out of total 9537 students examined in urban area of Belgaum 3.1% had URTI and 0.2% had CHD (Table 4).

DISCUSSION

A health survey was conducted in the Urban Field Practice Area of Belgaum in the month of August 2012. A total of 9537 students were examined out

Table 1: Distribution of the Study Population According to Standard of Study and Gender Ram Nagar, Ashok Nagar and Rukmini Nagar

Standard	Ram Nagar			Ashok Nagar			Rukmini Nagar		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
1 st	222	194	416	138	97	235	111	168	279
2 nd	173	184	357	129	126	255	146	185	331
3 rd	161	170	331	111	102	213	133	197	330
4 th	186	173	359	156	164	320	139	184	323
5 th	175	131	306	150	131	281	122	148	270
6 th	198	194	392	163	155	318	99	150	249
7 th	225	179	404	162	175	337	97	148	245
8 th	171	228	399	183	169	352	99	190	289
9 th	255	152	407	175	131	306	96	217	313
10 th	191	151	342	135	115	250	117	211	328
Total	1957	1756	3713	1502	1365	2867	1159	1798	2957

Table 2: Distribution of the Study Population According to Prevalence of Anaemia, Dental Caries and Refractive Errors

Standard	Anaemia			Dental Caries			Refractive Errors		
	Ram Nagar	Ashok Nagar	Rukmini Nagar	Ram Nagar	Ashok Nagar	Rukmini Nagar	Ram Nagar	Ashok Nagar	Rukmini Nagar
1 st	10	29	39	106	76	68	00	00	02
2 nd	18	33	39	141	101	91	02	00	02
3 rd	16	57	41	89	120	101	02	03	00
4 th	12	69	103	83	95	141	05	00	03
5 th	15	51	96	83	86	142	01	04	01
6 th	09	37	40	71	72	96	05	19	00
7 th	12	73	54	61	62	59	07	16	03
8 th	06	69	46	53	61	57	16	16	08
9 th	12	29	38	60	55	28	00	24	04
10 th	12	28	34	57	37	22	05	26	12
Total	122	475	496	872	779	723	43	108	35

Table 3: Distribution of the Study Population According to Prevalence of Gastro Enteritis, Pyoderma and Scabies

Standard	Gastro Enteritis			Pyoderma			Scabies		
	Ram Nagar	Ashok Nagar	Rukmini Nagar	Ram Nagar	Ashok Nagar	Rukmini Nagar	Ram Nagar	Ashok Nagar	Rukmini Nagar
1 st	0	2	2	2	3	0	0	5	1
2 nd	0	0	3	1	2	0	0	2	3
3 rd	0	4	2	0	4	2	1	3	2
4 th	0	0	2	0	2	0	3	4	0
5 th	1	6	2	4	0	0	0	0	0
6 th	2	2	4	2	4	0	0	2	0
7 th	0	0	2	0	2	0	4	3	0
8 th	0	1	0	0	2	1	1	3	2
9 th	0	2	0	7	1	1	2	3	0
10 th	1	2	0	3	1	1	0	1	0
Total	4	19	17	19	21	5	11	27	8

Table 4: Distribution of the Study Population According to Prevalence of URTI and Congenital Heart Disease

Standard	URTI			CHD		
	Ram Nagar	Ashok Nagar	Rukmini Nagar	Ram Nagar	Ashok Nagar	Rukmini Nagar
1 st	01	10	08	0	2	0
2 nd	05	10	08	1	0	0
3 rd	06	24	05	0	0	0
4 th	03	32	06	0	0	1
5 th	04	19	01	0	0	2
6 th	08	22	01	1	1	0
7 th	08	19	03	1	0	1
8 th	05	21	05	0	0	3
9 th	01	32	08	1	1	1
10 th	06	13	03	2	0	1
Total	47	202	48	6	4	9

which 48.42% were boys and 51.58% were girls. Out of total 9537 students examined in urban area

of Belgaum 24.9% had Dental Caries, 11.5% had Anaemia, 3.1 % had URTI, 1.9% had Refractory

Error, 0.2% had CHD and 0.4% each had Scabies, gastro enteritis and Pyoderma.

Dental caries were found 24.9% in our study which correspondence with Nepal study by Shakya *et al.* (2004), Jodhpur study by Gupta *et al.* (1973), Jammu study by Gupta *et al.* (1997) and Uganda study by Wandera *et al.* (2003). However, Chopdar *et al.* (1980) noticed a very low prevalence of 8.5% in Orissa, India. This may be due to inter-observer variation at different settings.

Jammu study by Gupta *et al.* (1997) shown the prevalence of anaemia was 11.7%, which was similar to our study, i.e., 11.5%. A study carried out among primary school children shown that 28% was the prevalence of anaemia (Dongre *et al.*, 2006). This difference occurred may be because of the difference in place of study was an important factor, because the present study was conducted in an urban school.

Another study conducted by Shakya *et al.* in Nepal shown the prevalence as 65.8% (Shakya *et al.*, 2004). This difference in the prevalence of anemia may be due to the diagnostic criteria. In this study the criteria was clinical pallor for assessment of anemia whereas in the Nepal study hemoglobin estimation was done.

In our study prevalence of refractive errors was 1.9%. Low prevalence of refractive errors of 2% has been reported from Eastern India by Datta *et al.*, among primary school children of 5-13 years (Wedner *et al.*, 2000).

Internationally, lower prevalence of refractive errors (2.7-5.8%) has been reported among children of age 5-15 years from Africa, Finland, Chile and Nepal as compared to the present study (Wedner *et al.*, 2000; Laatikainen and Erkkila, 1980; Maul *et al.*, 2000; Negrel *et al.*, 2000).

The prevalence of skin disorders like scabies and pyoderma was 0.4%. A study conducted among school children in a rural block of coastal Karnataka shown the 8% prevalence of scabies (Rotti *et al.*, 1985).

Limitations of the study were the data was a cross-sectional; so precise causes of morbidities could not be ascertained. Laboratory investigations were not carried out for blood for hemoglobin, MCV and stool examination, etc., which would help exact diagnosis of some of the diseases.

CONCLUSION

In our study most important three health problems detected were dental caries (24.9%), anaemia (11.5%) and upper respiratory tract infections (3.1%). Periodic supplementation of Iron and Folic Acid and Periodic de-worming of Hook worm infestation for anaemic children should be done. School health education should be given on hand washing, keeping ear clean and on personal hygiene especially brushing technique to prevent dental caries. Early diagnosis and appropriate treatment of URTI, Scabies, Pyoderma should be done. Higher Centre referral for children with CHD and other severe diseases should be done.

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CONFLICT OF INTEREST

Nil

REFERENCES

1. Bhandari B, Jain A M, Padma Karna, Asha Mathur and Sharma V K (1975), "Nutrition and health status of rural school boys of Udaipur district", *The Indian Journal of Pediatrics*, July 1975, Vol. 42, No. 7, pp. 186-193.
2. Rama B Varu (2008), *School Health Services in India: The social and economic context*, Sage Publications Pvt.Ltd., p. 1-2
3. Park K (2009), *Textbook of Preventive and Social Medicine*, 19th edition. Publishers: Banarsidas Bhanot, Jabalpur, pp. 436, 466.
4. Pandey S, Dudani I and Pradhan A (2005), "Health profile of school children in Bhaktapur", *Kathmandu University Medical Journal*, Vol. 3, No. 3, pp. 274-280
5. Shakya S R, Bhandary S and Pokharel P K (2004), "Nutritional status and morbidity pattern among governmental primary school children in the Eastern Nepal", *Kathmandu Univ Med J.*, Vol. 2, pp. 307-14.
6. Gupta B S and Jain T P (1973), "A comparative study of the health status of rural and urban primary school children", *Indian J Pediatr.*, Vol. 40, pp. 135-41.
7. Gupta R K, Bhat A, Khajuria R K and Bhat A M (1997), "Health status of primary school children in Jammu", *Indian J Prev Soc Med.*, pp. 28:90-4.
8. Wandera M and Twa-Twa J (2003), "Baseline survey of oral health of primary and secondary school pupils in Uganda", *Afr Health Sci.*, Vol. 3, pp. 19-2.
9. Chopdar A and Mishra P K (1980), "Health status of rural school Western Orissa", *Indian J Pediatr*, Vol. 47, pp. 203-6.
10. Dongre A R, Desmukh P R and Garg B S (2006), "The impact of school health education programme on personal hygiene and related morbidities in tribal school children of Wardha district", *Indian J Community Med.*, Vol. 31, pp. 81-2.
11. Datta A, Choudhury N and Kundu K (1983), "An epidemiological study of ocular condition among school children of Calcutta Corporation", *Indian J Ophthalmol.*, Vol. 31, pp. 505-10.
12. Wedner S H, Ross D A, Balira R, Kaji L and Foster A (2000), "Prevalence of eye diseases in primary school children in a rural area of Tanzania", *Br J Ophthalmol.*, Vol. 84, pp. 1291-7.
13. Laatikainen L and Erkkila H (1980), "Refractive errors and other ocular findings in school children", *Acta Ophthalmol.*, Vol. 58, pp. 129-36.
14. Maul E, Barroso S, Munoz S R, Sperduto R D and Ellwein L B (2000), "Refractive error study in children: Results from La Florida", *Chile. Am J Ophthalmol.*, Vol. 129, pp. 445-54.
15. Negrel A D, Maul E, Pokharel G P, Zhao J and Ellwein L B (2000), "Refractive error study in children: Sampling and measurement methods for a multi-country

- survey", *Am J Ophthalmol.*, Vol. 129, pp. 421-6.
16. Rotti S B, Prabhu G D and Venkateshwara Rao (1985), "Prevalence of Scabies Among School Children in a Rural Block of Coastal Karnataka", *Indian Journal of Dermatology Venereology Leprology*, Vol. 51, No. 1, pp. 35-37.



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