

## MORBIDITY PATTERN OF SCHOOL GOING CHILDREN (1-15 YEARS OF AGE) IN POOR URBAN AREAS OF ALIGARH

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### ABSTRACT :

Cross-sectional study of 802 school children were carried out in poor urban areas of Aligarh with the objective to find out the morbidity pattern and to make recommendation. Out of 802 school children 82.04% were suffering from one or more than one disease. Most common morbidity they had, dental caries (25%), Anaemia (24.8%), Refractive error (9.9%), worm infestation (9.2%), skin disease (5.4%), and ear discharge (4.2%). The prevalence of anaemia was higher in females (30.6%) compared to males (20.7%). This difference was statistically significant ( $\chi^2=4.8$ , d.f.=1  $p<0.05$ ). 36.53% children were malnourished and 65.9% normal. 34.09% male and 40.07% female were malnourished. Difference in prevalence of malnutrition in male and female was statistically significant ( $\chi^2=4.21$ , d.f.=1  $p<0.05$ ). The prevalence of disease in school going children were found to be high.

**Key Words:** School children morbidity pattern, Malnutrition, Aneamia

### Introduction :

The 2001 census shows that 25% of the population of India comprises of children aged 5-15 years. School children constitute a large pool of children of this age group. It is expected that morbidity pattern of the children who are going to the school represents approximately whole children of that area. The usual spectrum of morbidity in them are malnutrition, infectious diseases, intestinal parasite, disease of skin, eye & ear and dental caries. There are many other diseases which directly or indirectly affect the academic performance of school children. They are anemia (causes weakness and early fatigue), refractive error (causes visual disturbance) and ear problem (leading to communication barrier). These all are preventable problems. The 5-15 years old children are on the threshold of adulthood. If they are to reach adulthood in healthy state, then it is necessary to provide targeted and concerted services to improve their health status.

So the present study was carried out to find out the morbidity pattern of school children in Aligarh and to make recommendation.

### Materials and methods :

This cross sectional study was a part of routine school health services provided by department of Community medicine. 802 school children were randomly selected from different schools which were visited by

school health team after prior informed consent from the school in-charge and parents of the students. Proper clinical examination (i.e. Anthropometrics measurements, vision test etc) was done using standard procedures. Data were filled in pre-tested questionnaire. Statistical analysis were done by simple proportions and Chi square test applied wherever applicable. Period of data collection was one year (i.e. June 2000-May 2001)

### Results :

Out of 802 school children 82.04% were suffering from one or more than one disease. The morbidity pattern is reflected in Table-I. Most common morbidity they had, Dental caries (25%), Anaemia (24.8%), refractive error (9.9%), skin disease (5.4%) and ear discharge (4.2%). The prevalence of anaemia was higher in females (30.6%) compared to males (20.7%). This difference was statistically significant ( $\chi^2=4.8$ , d.f. = 1  $p<0.05$ ). 36.53% children were malnourished and 65.9% normal. 34.09% male and 40.07% female were malnourished (weight for age, according to Indian Academy of Pediatrics classification), Table-II. Difference in prevalence of malnutrition in male and female was statistically significant ( $\chi^2=4.21$ , d.f. = 1,  $p<0.05$ ). Some of them also had conjunctivitis (1.8%) and nasal discharge (1.3%).

### Discussion :

In the present study prevalence of dental caries were 25% in school children, which is comparable to other

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studies 23.1% in Ludhiana,<sup>2</sup> 38.6% in Madras<sup>3</sup> and 20.9% in Tirupati<sup>6</sup> school children. Anaemia was detected clinically in 24.8% of school children in the study, comparable to the other studies 22.5% in Punjab<sup>4</sup>. Prevalence of malnutrition in the present study was 36.53% comparable to 34.2% in Keraia<sup>6</sup>, 37.6% in Punjab<sup>4</sup> and 32.6% in Madras<sup>3</sup>. Refractive error was in 9.9% which can be compared with the study of Ludhiana<sup>2</sup> school children (5.6%).

### Conclusion :

The prevalence of disease in the school going children under study were found to be high, more so in females than males. Malnutrition and anemia make the children more susceptible to infection and causes early fatigue. Refractive errors and hearing defects reduces attention span. This directly affects the academic performance of the children. Following recommendations have been made:

**Table-I : Morbidity pattern of school children under study**

		Children					
S.No.	Sickness	Male		Female		Total	
		No.	%	No.	%	No.	%
1.	Dental caries*	112	23.6	89	27.0	201	25.0
2.	Anaemia**	98	20.7	101	30.6	199	24.81
3.	Refractive error*	31	6.5	49	14.8	80	10.01
4.	Worm infestation	46	9.7	28	8.5	74	9.22
5.	Skin disease	39	8.2	5	1.5	44	5.5
6.	Ear discharge	26	5.4	8	2.4	34	4.2
7.	Conjunctivitis	14	2.9	1	0.3	15	1.9
8.	Nasal discharge	5	1.0	6	1.8	11	1.4
9.	Total	371	46.26	287	35.78	658	82.04

Gender differences in the prevalence of the three most common diseases suffered by the students.

\* $X^2 = 0.043$ , d.f. = 1,  $p > 0.05$ , \*\* $X^2 = 4.87$ , d.f. = 1,  $p > 0.05$ , \*\*\* $X^2 = 9.46$ , d.f. = 1,  $p < 0.05$ .

**Table-II : Distribution of school children by Nutritional Grading  
(According to Indian Academy of Paediatrics)**

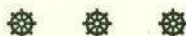
		School Children					
S.No.		Male		Female		Total	
		No.	%	No.	%	No.	%
A	Normal	313	65.9	196	59.93	509	63.47
B	Grade-I	128	26.9	116	35.47	244	30.42
C	Grade-II	28	5.9	15	4.60	43	5.36
D	Grade-III	6	1.27	-	-	6	0.75
E	Grade-IV	-	-	-	-	-	-
F	Total	475	100	327	100	802	100

$X^2 = 4.21$  d.f. = 1,  $p < 0.05$  (To know the gender difference, Grade I, II, III & IV were grouped together)

- (i) Medical check-up at the time of admission.
- (ii) Periodic medical check-up.
- (iii) Establishment of well-knit school health services.
- (iv) School health survey.

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