

A Study Of Morbidity Pattern In School Children Of Nagpur City

Bhaskar S Gaikwad¹, Rajesh V Gaikwad², Ashok D Shelke³

Assistant Professor^{1,2,3}

Department of Community Medicine,

MNR Medical College and Hospital^{1,2}, Sangareddy, Telangana, Bidar Institute of Medical Sciences³, Bidar, Karnataka

Abstract: *Context:* Our children are our wealth and indirectly the wealth of the nation, today's children are tomorrow's citizen, on which development and progress of every country is dependent. The good habits and healthy practices inculcated in the childhood are better, long lasting and are propagated through generation to generations and thus the school health programme is paramount important for healthy development of the pillars of nation. *Aims:* To assess the morbidity pattern in school children in three high schools of Nagpur city. *Settings and Design:* Three high schools of Nagpur city. Cross sectional observational study. *Methods and Material:* A proforma for carrying out school health examination was chalked out. The students were then subjected to thorough medical examination. Height was measured in cm and weight was recorded with the help of libra weighing machine in kg. The collected data was tabulated and analyzed in terms of frequency, percentages, mean and standard deviation. *Statistical analysis used:* Unpaired 't' test used as a test of significance. P value < 0.05 was considered as statistically significant. *Results:* The mean weight and height of male and female both is significantly less as compared with ICMR standards in respective age group. Similarly in table 3, the mean height of school children is compared with ICMR standards. The common morbid conditions found were Dental disorders (17.8%), ENT disease (16.5%), vitA deficiency (15.5%) and GI disorders (15.3%).

Keywords: School children, weight, height.

Key Messages: Regular school health check up is necessary to identify the nutritional deficiency and other morbid conditions.

Introduction:

It is said that, our children are our wealth and indirectly the wealth of the nation, today's children are tomorrow's citizen, on which development and progress of every country is dependent. Next to home, school is the most strategic place for shaping the child's physical and mental health to that they develops into mature, responsible and well adjusted adult.

The good habits and healthy practices inculcated in the childhood are better, long lasting and are propagated through generation to generations and thus the school health programme is paramount important for healthy development of the pillars of nation.

Care of school going children is not the responsibility of any single but is the joint responsibility of the parents, teachers, school management, society, education and welfare departments, animal and husbandry department as well as the government.

The present study has been carried out to assess the morbidity pattern in school children.

Aims & Objectives:

- 1) To find out morbidity pattern among school children.
- 2) To make suitable recommendations based on the findings of present study.

Material and Methods:

Study area: Three high schools in the Nagpur city.

Study design: cross sectional study.

Study period: 28 February 1989 to 15 march 1989

Selection of the study sample: Three high schools from the Nagpur city were selected for the study. All the children present on the day of examination were included in the study.

Exclusion criteria: the students absent on the day of examination in the school were excluded from the study.

Data collection: Necessary permissions from school authorities were obtained and a proforma for carrying out school health examination was chalked out. Out of 2541 students enrolled in the selected three high schools, 1399 school children were examined. The background information was recorded in pretested cyclostyle proforma; the stated age of the student was confirmed

from the school records. The students were then subjected to thorough medical examination. Height was measured in cm and weight was recorded with the help of libra weighing machine in kg. The collected data was tabulated and analyzed in terms of frequency, percentages, mean and standard deviation.

Results & Discussion:

Out of total 1399 school children examined 745(54%) were male and 654(46%) were female. Most of the children were in the group of 12-13 years (24.51%) followed by 15.36% in 13-14 years and 12.50% in 14-15 years (Table 1). In the study conducted by Naresh T. Chauhan et al to know the Prevalence of Vitamin A Deficiency among Primary School Children in Ahmedabad, out of total 1000 school children 53.6% were boys and 46.4% were girls¹. In another study conducted by Vidya P. Paranjape to find the prevalence of iron deficiency of anemia in school going children in Sinnar taluqa of Maharashtra, out of total 359 children, 51.5% were male and 48.5% were females².

Table 2 shows Mean weight of school children according to their age & sex. The mean weight of male and female both when compared with ICMR standards in respective age group, it is significantly less. Similarly in table 3, the mean height of school children is compared with ICMR standards. The mean height is also significantly less than the ICMR standards. In the study conducted by K Anand et al to know the Nutritional Status of Adolescent School Children in Faridabad district of Haryana, the weights and heights of the children were significantly low compared with the WHO (NCHS) standards³. Such difference in the mean weight and height of school children was not observed by S Khalil & Z Khan⁴.

Sex wise morbid conditions are presented in table 4. Dental disorders were found to be most common morbid condition (17.8%), followed by ENT disease (16.5%), vit A deficiency (15.5%) and GI disorders (15.3%). In the study by Nigudgi et al⁵ to know morbidity pattern among school children in Gulbarga city, 17.48% were having dental caries followed by 8.44% hearing defect, 8.18% anemia and 3.87% otitis media. In another study conducted by Das et al⁶ to find out nutritional status and morbidity pattern of primary school children in north Kolkata, 39.4% had worm infestation while 22.3% children had anemia, 20.7% had vit B12 deficiency and 10.4% had tonsilar enlargement.

Conclusions:

1. The mean weight and height of school children is significantly less than the ICMR standards.
2. The morbid conditions like dental caries, ENT

Table 1: Age and sex wise distribution of school children.

Age Group (Years)	Male	Female	Total
5-6	11	5	16
6-7	42	63	85
7-8	40	48	88
8-9	41	47	88
9-10	54	40	94
10-11	45	42	87
11-12	76	46	122
12-13	113	230	343
13-14	127	88	215
14-15	131	44	175
15-16	38	12	50
16-17	27	9	36
Total	745(54%)	654(46%)	1399(100%)

Table 2: Mean weight of school children according to their age & sex (weight in Kg)

Age Group (Years)	Male		Female	
	Mean	ICMR Standard	Mean	ICMR Standard
5-6	15.8	18.4	15.8	18.4
6-7	15.9	22.1	16.1	21.4
7-8	19.2	24.5	17.7	24.8
8-9	20.2	26.4	19.0	26.1
9-10	21.5	30.0	20.1	29.7
10-11	23.3	32.4	24.5	33.5
11-12	24.8	35.3	27.4	36.5
12-13	26.6	38.8	29.9	42.6
13-14	30.7	42.9	34.3	44.4
14-15	35.5	48.3	37.5	46.7
15-16	39.7	52.2	39.1	48.2
16-17	42.4	55.5	35.4	49.8

t-test

For Male $t = -2.126$ with 22 degrees of freedom; $P = 0.045$ (significant)

For Female $t = -2.156$ with 22 degrees of freedom; $P = 0.042$ (significant)

diseases, vit A deficiency and GI disorders needs timely intervention to prevent complications.

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Table 3: Mean height of school children according to their age & sex

Age Group (Years)	Male		Female	
	Mean Height (cm)	ICMR Standard	Mean Height (cm)	ICMR Standard
5-6	108.0	108.7	108.6	109.1
6-7	110.0	118.9	109.4	117.3
7-8	118.5	123.3	114.6	122.7
8-9	122.2	127.9	118.2	126.8
9-10	125.3	133.6	122.2	132.3
10-11	132.9	138.5	132.8	138.5
11-12	136.8	143.4	136.2	144.1
12-13	139.6	148.9	142.7	150.3
13-14	146.4	154.9	147.5	153.0
14-15	153.2	161.7	149.7	155.1
15-16	157.1	165.3	150.7	155.3
16-17	160.6	168.4	152.0	155.4

t-test

For Male $t = -0.909$ with 22 degrees of freedom; $P = 0.373$ (significant)

For Female $t = -0.927$ with 22 degrees of freedom; $P = 0.364$ (significant)

Table 4: Sex wise Morbid Conditions

Morbid Condition	Male	Female	Total & Percentage
Dental disorder	52	41	93(17.8%)
Respiratory infections	24	21	45(8.6%)
G I infections	60	20	80(15.3%)
Nervous system disorders	6	-	6(1.1%)
ENT diseases	41	45	86(16.5%)
Eye diseases	54	21	55(10.5%)
Skin disorders	15	25	40(7.6%)
Vit A deficiency	53	28	81(15.5%)
Vit B deficiency	6	4	10(1.9%)
Others	4	1	5(0.9%)
Total	315	206	521(100%)

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Corresponding Author:

Ashok D Shelke,
Assistant Professor,
Department of Community Medicine,
Bidar Institute of Medical Sciences,
Bidar-585401
Karnataka,
E-mail: drashok_shelke@yahoo.co.in