Original article

MORBIDITY PATTERN AMONG PRIMARY SCHOOLCHILDREN IN A RURAL AREA OF UTTAR PRADESH

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ABSTRACT

Background: Health of the child is viewed as absence of disease not as comprehensive health in the developing Countries. The present study was conducted with the objectives to assess the morbidity pattern among school children in rural area of Mainpuri and to find out the status of personal hygiene among primary school children.

Methods: The present study was a field based cross-sectional study carried out for a period of 3 months from December 2013 to February 2014 in a randomly selected primary school of block karhal in rural area of district Manipuri, Uttar Pradesh. A list of all the students was obtained and days were fixed for examination of the students after consultation from the principal. For data collection we used predesigned, pretested structured questionnaire. .

Result: A total of 171 children were examined, amongst them 71 (42.71 %) children were having more than one ailment at the time of examination. Main problems observed were dental problems (35.78%), wax in the ear (33.91%), nutritional anemia (26.90%) and poor personal hygiene (34.5%) among children.

Conclusion: Dental problems, nutritional anaemia and poor personal hygiene were more common among school children. Therefore, there is need for parents and teachers as agent of health promotion to enshrine the value of personal hygiene in school children.

Key words: School Health Programme, Personnel hygiene, School Children

INTRODUCTION

Children are the country's biggest human investment for development. Health of the child is viewed as absence of disease and not as comprehensive health in the developing countries. The present position with regard to the health and nutritional status of the children in our country is very unsatisfactory. Surveys indicate that malnutrition, infectious diseases, intestinal parasites, diseases of skin, eye and ear and dental caries are more prevalent in them.[1]

Children under 15 years of age comprise 35.3 % of the total population of India.[1] The total child population in the age group (5-14 years) is 259.64 million.[2] Out of total 136 million enrolled primary school children in India, Uttar Pradesh constitutes almost 19 % of them.[3]

The increased burden of communicable diseases among school children due to poor personal hygiene practices and inadequate sanitary conditions remains a concern on the public health agenda in developing countries.[4] Research indicates that nutritional deficiencies, poor health in

school age children are among the causes of low school enrollment, high absenteeism, early drop-out and poor class performance which can be easily prevented by promotion of nutrition, personal hygiene and early diagnosis and treatment of the diseases.[5] Good personal hygiene now forms part of primary health prevention strategy and this has been found to be effective by reducing morbidity and mortality in children.[6]

The School Health Programme was launched to address the health needs of school going children and adolescents in the 6-18 year age groups in the Government and Government aided schools.[7] The programme entails biannual health screening and early management of disease, disability and common deficiency and linkages with secondary and tertiary health facilities as required.[7]

Extensive surveys have been carried out in different parts of the country and the findings show that sickness, morbidity and mortality rates of school going children in India are among the highest in the world. Due to lack of epidemiological data about morbidity pattern among school going children in the study area, a need was felt to carry out survey in school going children in rural area of Mainpuri district of Uttar Pradesh. Thus the present study was planned to carry out with the objectives to assess the morbidity pattern among school children in rural area of Mainpuri and to find out the status of personal hygiene among primary school children.

METHODS

The present study was a field based cross-sectional study carried out for a period of 3 months in a randomly selected primary school of block Karahal in rural area of district Mainpuri , Uttar Pradesh from December 2013 to February 14. A team comprising of faculty members, PG students, interns and medical social worker from department of community medicine and dentistry UPRIMS&R, Saifai, Etawah visited the selected school.

A list of schools of the block Karhal was taken from the office of district education officer, Mainpuri and one school was randomly selected. Prior permission was sorted from the principal of the school after explaining the aims and objectives of the study. A list of all the students was obtained and days were fixed for examination of the students after consultation from the principal. Prior intimation was made to parents of children regarding the examination by school authority so that maximum attendance of children would be made. There were total 171 students examined those who were present at the time examination.

The tools and equipments used for data collection were predesigned, pretested structured questionnaire method, weighing machine, measuring tape, Snellen's vision chart and regular examination equipments. Validity of the questionnaire was done by conducting pilot study among randomly selected 10% children of study population prior to the start of the study. A study protocol was put in front of institutional ethical committee and necessary ethical clearance was sorted before the start of study.

Health appraisal of children was done for presence of morbidities in school premises under natural light. General information was collected under these headings like name, age, father's name, sex, class, caste, father's occupation and parent's education. Status of personal hygiene in children was assessed using parameters of examination of hair, hands, nails, clothes, and ear.

1. Hair was assessed whether they are combed or not, if they combed scored '1 'and not combed scored '0'. [8]
2. The cleanliness of the hands was assessed by observing whether students had mud-spattered or ink stained hands or clean. Clean hands scored '1' and dirty hands given ' 0'. [8]
3. Uniform of students was assessed by dirty or clean uniform . Dirty uniform scored 'o', clean uniform '1'[8]
4. The nails were classified whether they had clean and trimmed nails or not.
Clean and trimmed nails were scored '1' and dirty and untrimmed were scored '0'. [8]
5. Hygiene status of ear was assessed by presence of wax and no wax in the ear. If it was present scored '1 ' and other who had wax in the ear given '0' score. [8]

A thorough clinical examination was carried out. Following points were noted during the clinical examination.

Weight- body weight was measured (to the nearest 100 gm) with the subject standing motionless on the weighing machine and weight distributed equally on each leg.

Height- It was measured (to the nearest 0.5 cm) with the subject standing in erect position so that

tip of the external auditory meatus was the label with the inferior of the bony orbit.

Lips, gums and tongue of the children were examined for presence of angular stomatitis, cheilosis, glossitis and gum swelling and bleeding. Ear and throat were examined for hearing loss, chronic otitis media, mastoiditis, and tonsillitis. During dental inspection we observed for presence of dental caries & cavity, malocclusion and calculus. Neck region was inspected for presence of any swelling in this region. Eyes were examined for any sign of conjunctivitis and xeropthalamia. If any child had pallor which was examined on lower palpebral conjunctiva, tongue and palm referred for blood investigation by sahli's haemoglobinometer. Cut off level of Hb (g/dl) for anemia in children was taken as (12 g /dl). Vision was tested by means of Snellen's chart test. A thorough systematic examination was done to detect presence of any sign associated with respiratory system, circulatory system, gastro-intestinal system, skeletal system and central nervous system.

Definitions of terms used in the study

Nightblindness: Child not able to see in late evenings.[1]
Bitot's Spot: Triangular, pearly white or yellowish, foamy spots on the bulbar conjunctiva on either side of the cornea.[1]
Wax- A substance secreted by the glands at the outer third of the ear canal.[9]
Caries & cavity- Tooth decay, progressive decalcification of the enamel, and dentin of the tooth.[9]
Calculus – Mineralized dental plaque, located above or below gums.[9]

RESULTS

A total of 171 children were examined. Out of 171 children examined 85 (49.70%) were girls and 86 (50.30%) were boys. Overall maximum number of children 82 (47.95%) were in 8-10 years age group and minimum 27 (15.79%) in 11-13 years age group. In 5-7 years age group boys were 35 (20.46%) while girls were 27 (15.79%).Almost equal number of boys and girls in age group of 8-10 years and 11-13 years age group. (Table -1)

Table 2 reveals that 71 (41.52 %) out of 171 children were having more than one ailment at the time of examination. Amongst them main problems observed were dental problem, wax in the ear and nutritional anemia in 36.25%., 33.91% and 26.90% children respectively.

Table 1: Distributions of children according to age and sex

Age (yrs)	Boys (%).	Girls (%)	Total (%)
5- 7	35 (20.47)	27 (15.79)	62 (36.26)
8-10	39 (22.81)	43 (25.14)	82 (47.95)
11-13	12 (7.02)	15 (8.77)	27 (15.79)
Total	**86(50.30)**	**85(49.70)**	**171(100.00)**

Table 2: Distributions of children according to morbidities (Multiple responses) (n=171)

Type of Morbidities	Children (%)
Dental Problems	62 (36.25)
Wax present in the ear	58 (33.91)
Nutritional anaemia	46 (26.90)
Generalized tenderness in the abdomen	20 (11.70)
Upper respiratory tract infections	08 (4.67)
Speech not clear	01 (1.16)
Diminished hearing	02 (1.16)
Vitamin A deficiency	01 (0.58)

Table 3: Distribution of children according to status of personal hygiene (n=171)

Parameters	Children	Percentage
Status of hands		
Clean	131	76.61
Dirty	40	23.39
Status of uniform		
Clean uniform	121	70.76
Dirty clothes	50	29.24
Status of Ear		
Wax present	58	33.92
No wax	113	66.08
Status of nails		
Trimmed &clean nails	112	65.50
Dirty & untrimmed nails	59	34.50
Status of hair		
Uncombed hair	17	09.94
Combed	154	90.06

Table 4: Sex wise distributions of the students as their personal hygiene status

Personal hygiene status	Girls	Boys	Total
Good(4-5)	48	47	95 (55.56%)
Fair (2-3)	6	11	17 (9.94%)
Poor (0-1)	31	28	59 (34.50%)
Total (%)	85(50.30)	86(49.70)	171 (100.00)

Generalized pain in the abdomen was complained by 11.70% children and only few (4.67%) had upper respiratory tract infections. Others morbidities prevalent among children were diminished hearing (1.16%) and Vitamin A deficiency (0.58%).

In table- 3 data the physical examination conducted for status of personal hygiene among

children reveals that 34.5% children had dirty& untrimmed nails while wax in the ear in 33.92% and dirty uniform in 29.24% children.

Out of 171 children examined, only 95 (55.5%) children had good personal hygiene while 17 (9.94%) children had fair personal hygiene and poor personal hygiene was seen in 59 (34.50%) children (Table- 4).

DISCUSSION

In the present study, 71(41.52%) children reported more than one morbidity. According to present study, dental problem was found in 36.25% children which is more in comparison to the findings of studies by Anathakrishnan et al,[10] Panda et al [11] , Shakya et al[12] and JP Singh etal[13] who reported it in 27.9%, 23.0%, 19.8% and 1.07% respectively in school going children. The higher dental problems in the present study may be due to the fact that this study was conducted in rural area where children had low level of awareness about oral hygiene.

33.92 % of children had wax in their ears as compared to 2.59 % reported by Dambhare DG[14] et al among peri –urban school going children at Wardha in Maharashtra. This may be attributed to low level of awareness about personal cleanliness in our study area. We found that 26.9 % of the children were suffering from anaemia which is similar with the findings of Panda et al,[10] Gangadharan et al[15] and Merchant etal[16] who reported 26.0%, 25.25% and 25.7% respectively in their studies. In contrast it was higher to the findings reported by Nigudgi etal[5] in 8.18% school going children in Karnataka. In our study percentage of anaemia was higher in children of illiterate mother which may be due to their lack of knowledge about iron rich food. 0.58% children were affected by vitamin A deficiency in our study which is similar to observations of Dambhar DG et al [14](0.86%). Present study revealed that 11.6% of the children had generalized pain in the abdomen as compared to study done by J P Singh et al [13]who reported abdominal pain in 3.92 % children, which may be due to the fact that maximum number of children were from very poor families who were not able to have access to the health services. In present study, 4.67 % children had upper respiratory tract infections which are similar to the observations of study done by Nigudgi et al[5] who reported it in 3.61% children.

With reference to the hygienic status we found that 90% children had combed hair followed by clean hands in 76.61% and these findings are lower to the findings of study conducted by Mhaske MS[8] in Pune who reported combed hair in 97.1% children and clean skin in 88.05% children. In present study hygienic status was lower in those children who belonged to lower class of society where maximum number of mothers were illiterate and had low level of awareness about personal hygiene. Common unhygienic status observed in our study was uncombed hair (9.90%), dirty uniform (29.24%) and untrimmed dirty nails (34.50%). A similar pattern was noted by Oylbo PG[4] in Nigeria who reported that 17.9%, 45.2% and 57.4% of them had dirty hair, dirty uniform and dirty nails respectively.

CONCLUSION

In our study dental problems, nutritional anaemia and poor personal hygiene were more common among school children. There is need for paying more emphasis on prevention of diseases, improvements of personal hygiene and nutritional status as a part of health education under School Health Program in collaboration with governmental and non governmental agencies.

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