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ENT MORBIDITIES AND SOCIO-DEMOGRAPHIC RELATION AMONG SCHOOL CHILDREN IN A RURAL AREA OF WEST BENGAL

Community Medicine

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ABSTRACT

Background: Hearing health and other ENT diseases have not been given due importance by majority of the school authorities. The importance of hearing screening is to identify the children at-risk, which may hamper their scholastic performance, and to refer them for detailed investigation and intervention. **Objectives:** 1. To find out the Prevalence of common ENT diseases among School children. 2. To find out the association if any regarding ENT morbidities and socio-demographic variables. **Study Design:** Cross-sectional, descriptive type of observational study. **Methods and Materials:** The school was chosen by random sampling method. Data were collected by interviewing the school children with a pre-designed and pretested schedule. Clinical examinations were done with the help of a check list containing the standard answer and definition of ENT morbidities. **Statistical Analysis:** Proportions and *Chi-square* test. **Results:** Among study population 52.6% were female and most of the children (63.5%) were < 14 years of age group. 61.6% having some form of ENT morbidities. Literacy status of parents and economic condition of the family were significantly associated with ENT morbidities. **Conclusion:** Urgent need for health education and health checkup among the school children to increase their level of awareness and knowledge regarding ENT diseases and also decrease morbidities.

KEYWORDS

ENT morbidities, Socio-demographic relation, School children

INTRODUCTION:

The prevalence of hearing loss in school age population is about 11.3%.[1] The National Sample Survey Organization (NSSO), Government of India, 2001 report shows that in rural and urban India hearing impairment in the age group 0 to 14 years is 2.7% and 3.0 % and for speech disability it is 8.9% and 8.3% respectively.[2]

Incidence of CSOM is higher in developing countries because of poor socio-economic standards, poor nutrition and lack of health education. It affects both sexes and all age groups. In India, the overall prevalence rate is 46 and 16 persons per thousand in rural and urban population respectively. In spite of impacted wax, ear infections, growths, noise and trauma etc are common ear morbidities. CSOM is the single most important cause of hearing impairment in rural population.[3,4]

DNS, Rhinitis are the major two nasal problems. DNS can involve any age and sex. Males are affected more than females.[4] Acute tonsillitis often affects school going children, but also affects adults. It is rare in infants and in persons who are above 50 years of age.[4]

The practice of screening among school - age children has been in existence for more than 75 years in the west. In India, school screening programmes have been conducted since 1965 as per reports available.[5-8] However, hearing health and other ENT diseases have not been given due importance by a majority of the school authorities. The importance of hearing screening is to identify the children at- risk. With this background, and fortified by the fact that no such study has been carried out specially in this part of the country, this cross-sectional study was conducted among the school children with the following objectives: 1. To find out the Prevalence of common ENT diseases among School children. 2. To find out the association if any regarding ENT morbidities and socio-demographic variables.

MATERIALS & METHODS:

It was a cross-sectional study carried out in a rural area of Singur Block, Hooghly District, West Bengal. The area is inhabited by people of poor socioeconomic status. Study was conducted in June – August'08. In the Singur Block all High schools were registered first and from them Paltagarh High school was selected by SRS method as a study school which is situated in Paltagarh village. Students of class VII & class VIII were the target population for the study.

Students who were present on the day of visits were registered as a study population. Data were collected by interviewing the school children with a pre-designed and pretested schedule. For auditory canal, nasal septum & throat examinations Otoscope, Tuning fork, Nasal speculum, Tongue depressor were used. From these population data were collected and clinical examination were done with the help of a check list containing the standard answer and definition of ENT morbidities. After consecutive 4 day visit out of 372 students 359 students were examined. Rest were absent on those days.

Collected data were then analyzed and statistical test were done with the help of Microsoft Excel & Epi-info (3.5.1) software. Test for the statistical significance was applied by using x^2 test for analyzing the difference between the two proportions ($P < 0.05$ was considered significant).

RESULTS:

The present study was carried out to determine the prevalence of ENT morbidities among rural school children of West Bengal. Study was conducted in Paltagarh village of Singur Block and 359 students were participated in the study. Out of them 170 (47.4%) male and rest (52.6%) were female. Participated students were divided into two age groups, less than 14 yrs and more than 14 yrs. Among them 63.5% were less than 14 years of age and rest (36.5%) were more than 14 years. Among the total study population 61.6% were suffering some form of ENT disorders (Table – I). Ear discharge (CSOM), ear wax, otitis media and hearing deficit [air conduction (AC) less than bone conduction (BC)] were common ear problems among the study population and they were 24.8%, 17.5%, 4.2%, & 2.5% respectively. DNS (deviated nasal septum), rhinitis, hypertrophy turbinate, epistaxis were found as nasal problems and they were 27.0%, 18.1%, 6.7% & 1.1% respectively. Throat problems were found as caries tooth, enlarged tonsil & congested pharynx and they were 24.0%, 10.0% & 6.1% respectively (Table – I).

Table – I: ENT morbidities among study population (n=359) (multiple response)

Clinical Problems		Total	Percentage (%)
Without any clinical problem		138	38.4
Ear problem	Otitis Media	15	4.2
	Wax	63	17.5
	CSOM	89	24.8
	Hearing deficit (AC<BC)	9	2.5
Nasal problem	DNS	97	27.0
	Rhinitis	65	18.1
	Epistaxis	4	1.1
	Hypertrophy Turbinate	24	6.7
Throat problem	Enlarge Tonsil	36	10.0
	Congested Pharynx	22	6.1
	Carries Tooth	86	24.0

Table - II: Relationship between Socio-demographic Variables and ENT Morbidities (n=359)

Socio-demographic Variable		ENT Morbidities		Statistical Test
		Present	Absent	
Father's Literacy	Illiterate & Just literate (n=99)	70 (70.7)	29 (29.3)	X2= 4.83, p=0.028, df=1, OR= 1.74, RR= 1.22, Significant
	Literate (n=260)	151 (58.1)	109 (41.9)	
Mother's Literacy	Illiterate & Just literate (n=93)	83 (89.2)	10 (10.8)	X2= 40.66, p=0.000.., df=1, OR= 7.7, RR= 1.72, Significant
	Literate (n=266)	138 (51.9)	128 (48.1)	
Per Capita Family Income/Month (Rs)	<1000 (n=148)	104 (70.3)	44 (29.7)	X2= 13.07, p= 0.0014, df=2, Significant
	1000-2000 (n=173)	102 (59.0)	71(41.0)	
	>2000 (n=38)	15 (39.5)	23 (60.5)	

Table II shows relationship between socio-demographic variables and any form of ENT morbidities. Study shows parents who were literate and per capita monthly family income were more chances of developing ENT morbidities were less and these differences were statistically significant ($p < 0.05$).

DISCUSSION:

Ear, nose and throat diseases in children are major public health problems not only in India but also in developing country. WHO suggests that, in developing countries, children should be screened regularly for early identification of ENT morbidities.[9] Present study was conducted in Paltagarh village of Hooghly district of West Bengal for finding the ENT morbidities among school children. ENT disease one of the major public health problems in this region and 62.4% of study population having some form of ENT disease whereas study conducted by Sanjay Kumar et al[10] hearing loss was 15.96%. The study revealed that CSOM was 24.8% whereas study conducted by Sen Gupta Arup et al[11] it was slightly higher (37.6%). Other common ear morbidities in present study were ear wax (17.5%), otitis media (4.2%) whereas study conducted by Sen Gupta Arup et al[11] it were 9.9% and 19.6% respectively.

In present study common nasal problems were DNS (27.0%), Rhinitis (18.1%), Epistaxis (1.1%) but the study conducted by Sen Gupta Arup et al[11] these were 15.6%, 24.2%, 28.7% respectively. Present study shows enlarged tonsil, congested pharynxes were common throat problems and they were 10.0% and 6.1% respectively but Sen Gupta Arup et al[11] study they were 57.5% and 35.8%. Present study shows parents who were literate and per capita monthly family income were more chances of developing ENT morbidities were less and these differences were statistically significant. Similar finding was seen by study conducted by Sen Gupta Arup et al[11]

CONCLUSIONS & RECOMMENDATIONS:

In conclusion, data suggest that there is an urgent need for health education in the study population in order to increase their level of awareness and knowledge about common ENT diseases.

This is particularly important in a developing country such as India. Increasing the awareness and knowledge of common ENT diseases could lead to an increase in understanding and acceptance of the importance of routine ENT examination for early detection and treatment of such conditions, thereby reducing hearing impairment or other unwanted morbidities

Hearing impairment and preventable ear, nose & throat diseases were found to be important health problems among School children specially <15 years age group in this region. It is the child's right not to be disabled at birth, or later. Prevention of impairment and disability are of primary importance.

Regular screening of School children, giving education about common knowledge & practices of hygiene related to ENT will ensure that children continue their school-life and also future life without these disabilities.

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