

Original Article

Assessment of Ear Nose and Throat morbidities prevalent in the school going children aged 5-14 years in rural area of Jamnagar

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ABSTRACT

Background: India is home to more than 400 million children forming about 35% of its total population. Upper respiratory tract infections predispose a child to complications such as otitis media, tonsillitis, and sinusitis that further contribute to morbidity leading to hearing impairment and learning disability & even RHD. Unfortunately these morbidities are either not detected or remain untreated making situation worse.

Aims and objectives: 1. To assess the prevalence of common Ear Nose and Throat symptoms among children aged 5-14 years and to study its relationship with socio-demographic factors 2. To know regarding health seeking behavior in relations to Ear Nose and Throat morbidities.

Materials and method: A cross-sectional study was done over a period of 2 months among 300 school children aged 5-14 years of six government schools of Jamnagar district. Assessment was done through clinical examination and oral questioners.

Results: Prevalence of Ear Nose and Throat morbidity was 46.66%; Ear (14.33%), Nose(28.66%) and Throat(10%). Common Ear Nose and Throat problems were– common cold(23%), cough(9.67%), sore throat(8.34%) and ear ache(8.67%). Associations of Ear Nose and Throat morbidity with age and religion were statistically significant. Only 31.40% of children had taken treatment for the problems. Mother's education had statistically significant association on health seeking behavior of school children.

Conclusion: Prevalence of Ear Nose and Throat morbidity was very high among school children, only 1/3 children had taken treatment, indicating negligence towards problems on the part of parents as well as teachers suggesting strong need for sensitization of parents and teachers.

Key words: Ear Nose and Throat morbidity, school children, health seeking behavior.

INTRODUCTION

India being the second most populous country of the world is home to more than 400 million children forming about 35% of its total population [1]. Respiratory tract symptoms such as cough, sore throat, and earache are frequent in children [2]. Upper respiratory tract infections predispose a child to complications such as otitis media, tonsillitis, and sinusitis that further contribute to morbidity [3]. Equally important is the fact that unless a proper diagnosis is made and proper treatment provided, many of these acute or sub-acute Ear Nose and Throat problems become chronic and have the

potential to undermine the child's general health as well as seriously hamper his developmental capabilities like school performance. The present study was undertaken to determine the prevalence of Ear Nose and Throat morbidity in children aged 5-14 years, their relationship with socio-demographic factors and their health seeking behavior in 6 government schools of Aliabada village in Jamnagar district.

MATERIALS AND METHOD

A cross-sectional study was done among 300 school children aged between 5-14 years. Students of six

government schools of Jamnagar district were selected through simple random sampling. Informed consent was taken from guardians to participate in this study. Assessment was done through pretested semi-structured proforma and clinical examination of each study participant. Sample size was determined by using the prevalence of disease of auditory system 57.4% [4] and applying the formula $4PQ/L^2$ taking allowable error 10%, so sample size of 297 would be needed which is rounded up to 300. Data entry and statistical analysis was done using MS Excel by applying proportion and chi-square test.

RESULTS

Prevalence of Ear Nose and Throat morbidity was 46.66%. Figure 1 shows Prevalence of symptoms related to ear was 14.33%, symptoms related to nose were 28.66% and symptoms related to throat were 10%. Table 1 shows Common Ear Nose and Throat problems were common cold (23%), cough (9.67%), sore throat (8.34%) and ear ache (8.67%).

Figure 1: Prevalence of symptoms related to Ear Nose and Throat morbidity

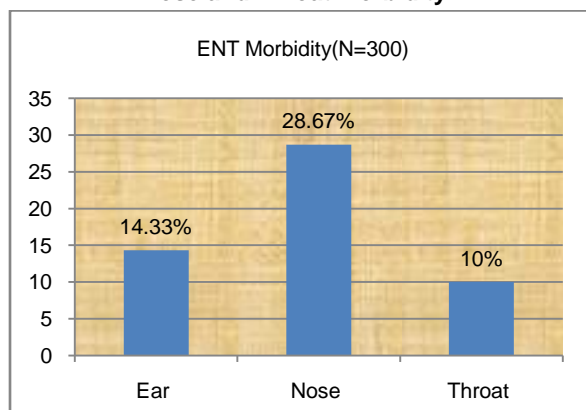


Table 2 shows that Ear Nose and Throat morbidity was higher in 10-14 year age group (52.24%) as compared to 5-9 year age group (35.35%) and it was found statistically significant. No association was found between mother's education and Ear Nose and Throat morbidity. Ear Nose and Throat morbidity was higher in Muslim (88.89%) as compared to Hindu (45.36%) and found statistically significant. Ear Nose and Throat morbidity was almost similar in male (46.25%) and female (47.14%). There was higher Ear Nose and Throat morbidity in lower (50.56%) socio-economic class as compared to upper (43.56%) class.

Table 1: Ear Nose and Throat problems

Ear Nose and Throat problems	Frequency (n)	Percent (%)
Common cold	70	23.33
Ear ache	31	10.33
Cough	29	9.67
Sore throat	25	8.33
Ear wax	9	3.00
Ear discharge	9	3.00
Hearing loss	7	2.33
Nasal discharge	5	1.67
Tonsillitis	5	1.67
Epistaxis	4	1.33
Nasal Swelling	2	0.67

Table 2: Relation socio-demographic profile of child with ENT morbidities

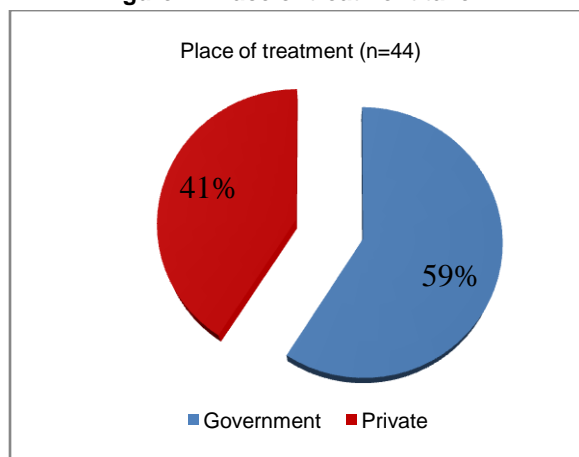
Socio-demographic profile of child	ENT morbidity present	ENT morbidity absent	Total	X ²	P value
Age-group					
5-9	35 (35.35)	64 (64.65)	99	6.93	0.008
10-14	105 (52.24)	96 (47.76)	201		
Total	140	160	300		
Mother Education					
Illiterate	33 (44.00)	42 (56.00)	75	0.62	0.960
Up to 1 ^o	77 (47.53)	85 (52.47)	162		
≥2 ^o	30 (47.62)	33 (52.38)	63		
Total	140	160	300		
Religion					
Hindu	132 (45.36)	159 (54.64)	291	5.01	0.025
Muslim	08 (88.89)	01 (11.11)	8		
Total	140	160	300		
Socio-economic class					
Upper	71 (43.56)	92 (56.44)	163	1.12	0.288
Lower	69 (50.56)	68 (49.64)	137		
Total	140	160	300		
Gender					
Female	66 (47.14)	74 (52.86)	140	0.00	0.969
Male	74 (46.25)	86 (53.75)	160		
Total	140	160	300		

(Figures in parenthesis shows percentages)

Table 3: Health seeking behavior

Treatment taken	Frequency	Percent
Yes	44	31.40
No	96	68.60
Total	140	100.00

Table 3 shows that only 31.40% children had taken treatment, while majority 68.60% had not taken treatment for Ear Nose and Throat problems. Figure 2 shows that among those who taken treatment 41% from private clinics and 59% from government sector.

Figure 2: Place of treatment taken**Table 4: Association table between treatment status and mother education, gender of child**

Association between treatment taken and	Treatment taken	Treatment not taken	Total	χ^2	P value
Mothers education					
Illiterate	07(21.21)	26(78.79)	33	8.89	0.011
Primary	21(27.27)	56(72.73)	77		
Secondary and above	16(53.53)	14(46.67)	30		
Total	44(31.43)	96(68.57)	140		
Gender of child					
Male	19(28.79)	47(71.21)	66	0.2	0.65
Female	25(33.78)	49(66.22)	74		
Total	44	96	140		

Table 4 shows that as the education of mother increases the number of children taking treatment also increases. 21.21% of children of illiterate mother had taken treatment while mothers of 27.27% and 53.53% children, who had taken treatment, had completed their primary and secondary education respectively and it was found statistically significant.

There was no statistically significant association found between gender of child and treatment.

DISCUSSION

The main health problems encountered in the child population in India are low birth weight, malnutrition, infection and parasitosis, accidents and poisoning and behavioural problems. Ear Nose and Throat disorders could be either a consequence of the above or may complicate them adding to problems with growth and development. The focus of the various health plans directed to attend the needs of 6-14 years children population has ignored the significant morbidities that arise in the ear, nose and throat.

This study indicated that ear, nose and throat morbidity, especially nose morbidity were a considerable burden in the rural area of Jamnagar district among the school going age group while Sanjay P. Kishve et al observed in their study that diseases of auditory system (57.3%) were the most common group of Ear Nose and Throat problems among the pediatric population, followed by pharyngo-esophageal (27.4%) and nasal disorders (15.3%) [4].

The study revealed that common symptoms regarding Ear Nose and Throat morbidity common cold (23.33%), Earache (10.33%) and cough (9.67%) were relatively common. Jacob et al and Sharma et al study reported wax as the most common cause of hearing impairment, which accounted for 29.8% and 50% of cases respectively [5,6]. However, in our study wax was found in 3% cases. In the present study, epistaxis and allergic rhinitis accounted for 1.33% and 1.67% respectively. While Arup Sen Gupta et al in their study found similar results 28.69% and 24.18% respectively [7].

Ear Nose and Throat morbidities in our study population were found to be almost equal among male and female children, Majority of the children belonged to age group 10-14 years (52.24%), were from lower socioeconomic status (50.56%), were Muslim (88.89%), and had mothers educated up to primary and secondary (47%).

CONCLUSION

Prevalence of Ear Nose and Throat morbidity was very high among school children (46.66%), leading symptoms being common cold, cough, sore throat and ear ache. Only 1/3 of children had taken

treatment for the problem, indicating negligence towards Ear Nose and Throat problems on the part of parents as well as teachers suggesting strong need for sensitization of parents and teachers. Improvement of health education, socioeconomic status and health facilities will be helpful in reducing the prevalence of Ear Nose and Throat diseases. Community awareness regarding common Ear Nose and Throat symptoms and their complications via mass media like television, radio, posters, news paper etc could play a key role in the prevention. Health check up of school children should be done frequently rather than annually

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