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Knowledge, attitudes and practices with respect to risk factors for otitis media in a rural South Indian community

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ABSTRACT

Objectives: (a) To study knowledge, attitudes and practices with respect to risk factors of otitis media in a rural South Indian Community where the prevalence of otitis media is high. (b) To discover the association between parental education, socioeconomic status (SES) and family type (nuclear or joint) with knowledge, attitudes and practices regarding risk factors for otitis media.
Methods: Using a cluster sampling design, the caregivers of 150 children attending daycare were interviewed to note knowledge, attitudes and practices with respect to risk factors for otitis media. Data on level of education of the caregiver, house type (an indicator of SES) and type of family structure were noted. A questionnaire was administered to collect all the relevant data. Statistical analysis of the data obtained was performed to note frequencies. Correlations between sociodemographic parameters and knowledge, attitudes and practices were studied using Chi-square test of proportions.
Results: Over 50% of the population showed knowledge deficits with regard to the various risk factors for otitis media. Caregivers from nuclear families were slightly less knowledgeable regarding lack of immunization and household smoke as risk factors for the disease. There was no correlation between any of the sociodemographic factors and attitudes. However, educated mothers were more likely than illiterate mothers to clean their children's ears of wax on a regular basis with the belief that it would prevent ear disease ($p = 0.05$). Treatment practices in the community were more or less uniform in that earache was either disregarded (26.4%) or treated with home remedies (67.2%) by most caregivers, while a doctor's opinion was often sought for ear discharge (50%). Parents of higher SES were more likely to use home remedies than those of lower SES ($p = 0.008$).
Conclusions: Sociodemographic factors as well as poor knowledge and attitudes and unhealthy practices with respect to risk factors of otitis media contribute to the high prevalence of otitis media in this rural South Indian community. Health education regarding risk factors and provision of accessible health care is essential to reduce the disease burden.

1. Introduction

Otitis media is one of the common ear diseases of childhood and the most important cause of hearing loss among Indian children. Various recent reports have suggested that the prevalence of otitis media among Indian children aged 5–15 years is 9.4–20% [1–3]. In an earlier study in 1997, the prevalence of otitis media in a rural South Indian community was found to be 17.6% [4]. More recently, the prevalence of otitis media in a different community from the same district was found to be 8.9% (Rupa et al., unpublished data). While a reduction in the prevalence may have occurred due to overall improvement in health indices and economic prosperity, it is still high compared to figures from developed countries. In India, the disease continues to be a significant component of an otolaryngologist's practice and operative sessions. Evaluation of the various risk factors of the disease, particularly those that can be modified, should be a priority if substantial reduction in disease prevalence is to occur.

The various known risk factors of otitis media include recurrent upper respiratory infections causing persistent rhinorrhoea, malnutrition, allergy, poor hygiene, overcrowding and exposure to smoke. Knowledge deficits about these risk factors can adversely affect the prevalence of the disease. Most of these risk factors are modifiable and their importance is often underestimated when dealing with the overall problem.

One of the strategies of reducing the prevalence of otitis media is to ascertain existing knowledge, attitudes and practices with

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respect to risk factors for the disease and take measures to introduce changes in these. In a previous study we found that several erroneous beliefs and practices regarding otitis media are prevalent in Vellore district [5]. Many of these traditional beliefs and practices are influenced by cultural factors. Additionally, the influence of poverty, lack of health education, and inability to access affordable health care is also contributory.

Very few Indian studies have looked at the knowledge, attitude and practices which affect the prevalence of otitis media. One such is a study conducted in rural North India where the prevalence of chronic suppurative otitis media was as high as 15.3% [1]. The study found that literacy of the mothers and SES of the family did not correlate significantly with knowledge about treatment seeking and ear cleaning practices. The authors related this to the narrow range of incomes and literacy levels in the community studied. The majority of mothers had received their limited knowledge from lay persons (89.6%) rather than from doctors or health workers. The role of health education in this setting could be significant.

The benefit of performing studies on knowledge, attitude and practices in areas where the prevalence of otitis media is high is that specific health education may be delivered regarding modifiable risk factors, leading to a decrease in prevalence. In a previous KAP study among caregivers of an urban and suburban population in the United States [6] important lacunae were found in the knowledge of risk factors of otitis media. Following the study, a willingness to modify behaviours was demonstrated in the target population. Targetting primary care providers in rural Mexico, Villasenor et al. [7] showed that workshops on otitis media for these primary care providers greatly helped to improve short-term knowledge of the disease. It is likely that this in turn would reduce the prevalence of the disease in the long term.

The present study aimed to ascertain existing lacunae in knowledge, attitudes and practices with respect to risk factors for otitis media. The data obtained could help towards imparting specific health education to the same population.

2. Materials and methods

2.1. Study design

A prospective survey of knowledge, attitudes and practices regarding risk factors of otitis media among caregivers of children attending daycare was conducted. The caregivers/mothers of 300 children residing in KV Kuppam block of Vellore District were interviewed to note knowledge, attitudes and practices with respect to risk factors for otitis media using a questionnaire. Approval for the study was obtained from the Institutional Review Board as well as the Ethics Committee of Christian Medical College, Vellore, India.

2.2. Study population

A cluster sampling technique was used to select the study population. Thirty Balwadis (Daycare centres) were selected at random from the 57 existing Balwadis in KV Kuppam Block. From each of these 30 Balwadis, ten mothers of children studying in the Balwadi were selected at random.

2.3. Sample size

Sample size was calculated using the results of a previous study performed in this institution in 1999 [5] which showed that 55% of the parents of school going children were aware that otitis media could be caused by repeated upper respiratory infections.

2.4. Methodology

The caregivers were interviewed after obtaining informed consent to ascertain their views regarding the causation and treatment of otitis media. All data was entered in the questionnaire designed for the purpose. Data regarding caregiver's age, education, type of housing [pucca (built with brick and cement), semi-pucca (partly built with brick and cement) and katcha (built with thatch and sticks)] and family type (joint or nuclear) was recorded. In this study, house type was used as an indicator of SES as previous surveys in this region have shown that those of higher SES stay in pucca or semi-pucca houses and those of lower SES stay in katcha houses.

Information regarding the knowledge regarding common risk factors for otitis media was noted. The answers to the five questions regarding knowledge were recorded as "yes", "no" and "do not know". The attitudes of the caregivers towards the problem of risk factors for otitis media were noted. The answers to the four questions regarding attitudes to risk factors for otitis media were recorded as, "agree", "disagree" and "do not know". The type of treatment sought and administered during episodes of earache and ear discharge was noted. The frequency and type of ear cleaning practices was noted.

Following the interview, flip charts were used to provide health education on correct knowledge, attitudes and practices regarding risk factors for otitis media.

2.5. Statistical analysis

Descriptive statistics were computed for continuous variables and frequency distributions for categorical variables. Correlations between SES and parental education were sought using Chi-square test of proportions. Correlations were sought between 4 socio-demographic variables of parental education, SES and family type and the responses to questions regarding knowledge and attitudes using Chi-square test of proportions. The data were analyzed using SPSS 16.0.

3. Results

3.1. Sociodemographic data (Table 1)

There were more female than male caregiver respondents. However, at least 44.7% of the respondents were the fathers.

More than three fourths of the families interviewed were nuclear families (76.3%). The majority of the population (73.6%) were of higher SES suggesting that this community was relatively

Table 1
Sociodemographic variables.

Variable	Mean age (years)
Child's age	3.29 ± 1.08 (S.D.)
Father's age	33.32 ± 6.24 (S.D.)
Mother's age	26.12 ± 3.87 (S.D.)
	Number (%)
Sex	
Male	134 (44.7)
Female	166 (55.3)
Family type	
Joint	71 (23.7)
Nuclear	229 (76.3)
House type	
Kutcha	79 (26.3)
Pucca	127 (42.3)
Semi-pucca	94 (31.3)