

# A CROSS-SECTIONAL SURVEY OF KNOWLEDGE, ATTITUDE AND PRACTICE OF ACUTE OTITIS MEDIA IN CHILDREN AMONG PARENTS IN URBAN POPULATION

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## Abstract:

**Background:** Acute otitis media (AOM) is a common infection seen mostly in childhood. Even though it is an easily curable condition, there is not much knowledge and awareness of such a disease in parents. So, this study will help to ascertain the parental knowledge and awareness of acute otitis media and the practices involved. **Methodology:** A cross-sectional survey was done in our ENT OPD in Chennai from May 2025 to July 2025 where parents with children  $\leq 5$  years of age were given a questionnaire which collected data on their knowledge, attitude and practice about otitis media. **Results :** Out of 110 responses, overall, most parents displayed an average knowledge (47.3%), good attitude (50.9%) and positive care seeking practices (57.5%). There was also a positive correlation of knowledge and practice with education. **Conclusion:** This study shows acceptable levels of attitude and practice but below average of knowledge of otitis media. The need for more education about the knowledge of otitis media is needed as it is a preventable and curable disease. The positive correlation between education and practices also highlight their role in parental awareness and practice.

**Keywords:** Acute otitis media, Knowledge, Attitude, Practice, Parents, Children, Awareness, Urban population, Education level.

## INTRODUCTION

Acute otitis media (AOM) is defined as inflammation of middle ear cleft for less than 12 weeks. Most commonly occurs in children aged less than 12 years. [1] Normally develops behind an intact tympanic membrane but may also occur in tympanic perforation or due to ventilation tube block. The most common organisms seen *S. pneumoniae* and *H. influenzae*. There are four subgroups of AOM

1. Sporadic
2. Resistant
3. Persistent
4. Recurrent

Patients usually present with ear pain, hearing loss, ear discharge and fever. The first stage is tubal occlusion after which there is suppurative where tympanic membrane becomes congested, suppuration occurs when there is pus in the mastoid cells after which there is stage of resolution and compliance. Diagnosis is usually made with otoscopic examination where we can see congestion or any discharge from the tympanic membrane. Bacterial swab should be taken to determine the organism. Treatment is by giving antibiotics and decongestant nasal drops, analgesics and antipyretics are added to reduce fever and pain. If left untreated it can lead to chronic otitis media, hearing loss abscess and meningitis.

Globally, 23% of children are affected with acute otitis media. [2] Hearing loss may delay speech and language development and impair scholastic performance. Passive smoking, breast feeding position, allergies and recurrent upper respiratory tract infection are all risk factors for AOM. Parents are sometimes not aware that ear infections should be addressed with appropriate antibiotics and they end up using home remedies like coconut oil, ear buds or even over the counter ear drops and antibiotics which leads to antibiotic resistance. [3] There are very few studies which have investigated parental knowledge and awareness of acute otitis media in children and its management in developing countries. This study is aimed to assess the parental knowledge, awareness and practices in Chengalpattu, India.

## AIM

To assess the knowledge and practice of parents in acute otitis media of children

## OBJECTIVE

- To measure the proportion of parents with adequate knowledge of acute otitis media in children
- To determine the positive or negative attitude of parents to this condition

Parents who were 20 and above with children aged 5 years and less and parents who were willing to participate in the study with informed consent were included. Parents with children older than 5 years,

parents who could not understand the questionnaire and parents not willing were excluded.

## MATERIAL AND METHODS

This cross-sectional study was done from May 2025 to June 2025. A predesigned validated questionnaire (RFOMQ-24) in Tamil and English was given to 122 parents of children  $\leq 5$  years of age.[4] The term otitis media was explained to the parents and data was

collected regarding the knowledge, attitude and practice with 24 close-ended questions with yes or no options. The questionnaire contained 24 close-ended multiple-choice questions covering Knowledge (causes, symptoms, prevention, consequences of otitis media), Attitude (concerns, sources of information, willingness to seek treatment) and Practices (care-seeking behavior, choice of treatment, use of self-medication or traditional remedies).

## RESULTS AND OBSERVATIONS:

A total of 122 questionnaires were collected out of which 12 were discarded for having inadequate responses leaving 110 complete responses.

Majority of parents were in the 20–25-year age group (47%) followed by 26–30 (44%) and in 30–35 age group (9%). (fig 1)

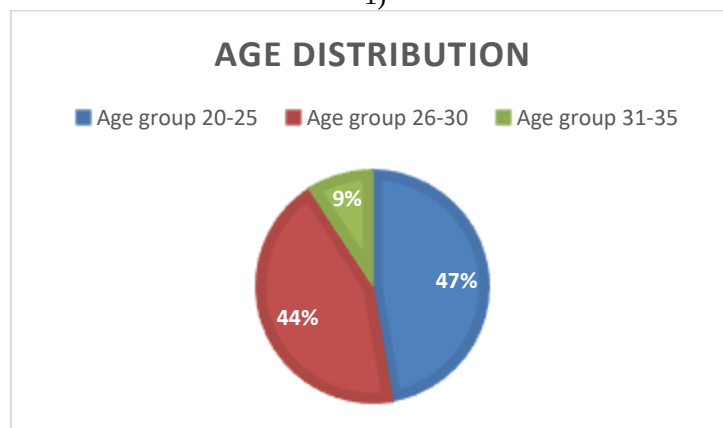


Figure 1 shows pie chart showing age distribution among patients  
Among the study, 63% were females and 37 % were males (figure 2)

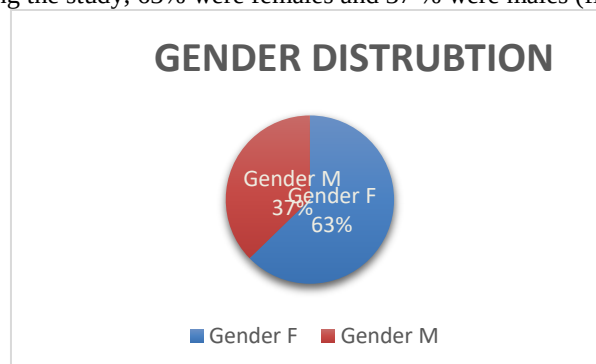


Figure 2 Gender distribution 70% did not have degree, while 30% had degrees of education. (figure 3)

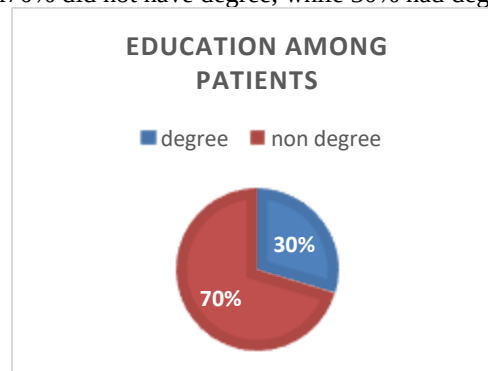


Figure 3 pie chart showing levels of education among patients

**Table 1: showing knowledge among parents**

| Knowledge                                                                            | Percentage<br>(no of<br>participants who<br>said yes) |
|--------------------------------------------------------------------------------------|-------------------------------------------------------|
| 1. aware that ear fullness, ear discharge, fever and hearing loss are symptoms       | 42.7%(47)                                             |
| 2. aware that ear infection is preventable                                           | 52.7%(58)                                             |
| 3. aware that ear infection is common in children                                    | 63.6%(70)                                             |
| 4. are you aware that immunisation reduce ear infection                              | 39.1%(43)                                             |
| 5. are you aware that breastfeeding can reduce ear infection                         | 49.1%(54)                                             |
| 6. are you aware that recurrent Upper Respiratory Tract Infection can be risk factor | 52.0%(58)                                             |
| 7. are you aware that persistent rhinorrhoea can be a risk factor                    | 44.5%(49)                                             |
| 8. are you aware that recurrent sneezing and exposure to dust is a risk factor       | 41.8%(46)                                             |
| 9. Are you aware AOM can cause hearing loss                                          | 48.2%(53)                                             |
| 10. are you aware that ear infection can cause speech delay due to hearing loss      | 40.9%(45)                                             |
| 11. are you aware that untreated infection can lead to complications                 | 42.7%(47)                                             |
| 12. are you aware that ear infection can be treated medically or surgically          | 42.7%(47)                                             |
| Average                                                                              | 47.3%                                                 |

Table 1 shows the knowledge distribution among parents. In our study, 63.6% of parents were aware of otitis media and that it is common in children and 52.7% were aware that ear infections are preventable. 52% of parents knew that recurrent URTI can lead to ear infections. 42.7% of parents were aware of symptoms of ear infection.

**Table 2: shows attitude of risk factors among parents**

| Attitude                                                            | Percentage<br>(No who<br>said yes) |
|---------------------------------------------------------------------|------------------------------------|
| <b>Risk factors</b>                                                 |                                    |
| 1. do you think exposure to cigarette smoke can cause ear infection | 40.0%(44)                          |
| 2. exposure to firewood smoke can lead to ear infection             | 37.3%(41)                          |
| 3. bathing in Pond can lead to ear infection                        |                                    |
| <b>Socioeconomic factors</b>                                        | 60.9%(67)                          |
| 4. aware that poor hygiene can lead to ear infection                | 59.1%(65)                          |
| 5. child is underweight whether it can predispose to ear infection  | 57.3%(63)                          |
| AVERAGE                                                             | 50.9%                              |

Table 2 shows that 40% of parents and 37.3% were aware that exposure to cigarette and firewood smoke can lead to ear infection. 60.9% of parents had awareness that bathing in pond can lead to infections. Table 3 shows that 59.1 % of parents and 57.3% of parents were aware that poor hygiene and underweight children can lead to ear infection.

**Table 3: shows the practice of parents with children**

| Practice                                                                    | Percentage<br>(no who said<br>yes) |
|-----------------------------------------------------------------------------|------------------------------------|
| <b>Practice at home</b>                                                     |                                    |
| 1. do you frequently clean your child's ear with ear buds                   | 54.5%(60)                          |
| 2. have you used other tools like hair pin, safety pin to clean child's ear | 31.8%(35)                          |
| <b>Practice about medications</b>                                           |                                    |
| 3. do you visit doctor when your child has symptoms                         | 63.7%(70)                          |
| 4. do you provide home remedies                                             | 53.6%(59)                          |
| 5. do you self-prescribe or give over the counter medications               | 50.9%(55)                          |
| 6. do you ask doctor about causes of ear infection                          | 64.5%(71)                          |
| 7. do you follow doctor's instruction                                       | 65.6%(72)                          |

Table 3 shows in our study, 54.5% of parents and 31.8% of parents were using ear buds and safety pins to clean their child's ear. In our study, it was proven that 63.7% of parents visit the doctor and 65.6% of parents follow their doctor's instruction, while 53.6% of parents give home remedies and 50.9% self-prescribe medications to their child.

## DISCUSSION

There was no correlation between gender and knowledge of AOM as proven by studies done by Mukara et al. In our study, parents showed low knowledge (47.3) about acute otitis media as compared to other studies done by Mukara et al who showed that parents had good knowledge. [5]. A good number of parents (52.7%) were aware that acute otitis media was preventable and 42.7% of parents knew that if not treated it may lead to complications which was similar to studies done by Ramesh et al. [6]. The studies showed that 42.7% of parents were aware of the symptoms of AOM like ear fullness, ear discharge, fever and rhinorrhoea and that it could lead to speech delay (and hearing loss in children which was also proven by studies done by Meherali et al. [7] It is positive that 63.6% of parents knew that ear infections were common in children and that 49.1% of parents knew that breastfeeding can prevent AOM and that proper breastfeeding techniques are required. These results show that there should be more awareness and education about ear infections among parents. There was a positive correlation between education and awareness of symptoms of ear infection and their complications, i.e. the more educated the parent was the more they were aware of ear infections. [8]

Parents showed good attitude (50.9%) towards AOM, with parents having knowledge that poor hygiene (59.1%) and being underweight (57.3%) predisposes their children to AOM. There was also awareness of bathing in a pond (60.9%) could lead to ear infections which were also proven by studies done by Shaheen et al. [9] On the other hand, there was low awareness of risk factors of cigarette smoke (40 %) and firewood smoke (37.3%) among the parents.

There was also good practice (54.5%) among parents in our study with 63.3 % of parents who visited a specialist doctor when their child had symptoms of ear infection and 64.5% of parents also asked their family doctor for opinions. Our study also showed that 54.5% of parents used ear buds to clean their child's ear and were not aware of their consequences, but they were aware that hair pins (31.8%) are not suitable for ear cleaning. Parents also showed that they were capable of following doctor's orders (63.6%) but some parents gave self-prescribed medicines (60.9%) and gave home remedies like using coconut oil, garlic and onions in the ear (53.6%). [10]. These findings show that more education and awareness should be given among parents about the effects of acute otitis media in children in their development and that it can lead to further complications if not addressed.

## CONCLUSION

Acute otitis media is an easily preventable and curable disease especially in children. The purpose of the study was to ascertain the awareness of Acute otitis media in the population and it was found that further need for education among parents is required. This also proves the need for educational research programmes and targeted initiatives to improve the understanding of AOM in parents.

### ETHICAL CLEARANCE AND INFORMED CONSENT:

Ethical clearance has been obtained from our university and informed consent was obtained from the parents

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