

## Perception and Management of Acute Respiratory Tract Infections in a Slum Cluster of Delhi



### Anthropology

**KEYWORDS :** ARI, Slum, Delhi, pneumonia, common cold.

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### ABSTRACT

*Globally, acute respiratory tract infection (ARI) is responsible for more than 2 million deaths of under five children annually. The present study aims to highlight the perceptions and management of pneumonia in a slum community.*

*In this study, 50 caretakers were interviewed in a slum cluster of Delhi through door to door survey by a trained social scientist. Scheduled interview technique and focus group discussions were used for collecting data. The findings indicated that majority of the caretakers could recognize chest in-drawing (pasli chalna) as a key indicator of pneumonia however, very few could recognize fast breathing as early symptom of pneumonia. Hospitals were the last resort for seeking health care among this community. The study provides baseline data on attitudes and behaviour of caretakers related with ARI.*

### Introduction

Acute respiratory tract infection (ARI) remains a worldwide health concern as it is responsible for more than 2 million deaths of children under five years of age annually. In India, pneumonia constitutes a major public health problem and 18.5% of the childhood mortality and the morbidity among under five are mostly contributed by it (WHO, 2008). Therefore, ARI represents a great challenge in the field of communicable diseases even greater in the case of an urban slum since the slum environment has a direct impact on the health and well-being of the children who are more vulnerable and prone to certain transmissible diseases.

This situation aggravates when there is lack of care takers' knowledge about the management of pneumonia and early detection of the symptoms of pneumonia. A few community based studies on maternal knowledge and their practices about ARI in children have been reported from other parts of the world during 1990s (Hudelson, *et. al.*, 1995 and Mull, *et. al.*, 1993). Very few community based research had been conducted India on the maternal perceptions and management of ARI (Saini, *et. al.*, 1992; Singh, *et. al.*, 1996 and Chhabra, *et. al.*, 1993 ). Thus, the present study aims to highlight the perceptions and management of ARI among this community.

### Materials and Methods

The present study was conducted in a slum cluster namely JJ.Camp, Patrachar Vidyalaya located in North Delhi which holds an approximate household population of about 1500. This is a preliminary study conducted for a duration of about two months from December, 2008 to January, 2009. Majority of the people residing in this area were Hindu and Muslim who had migrated to Delhi from Uttar Pradesh, Bihar and other states.

Qualitative and quantitative research methods namely scheduled interview technique, case study method and focus group discussions were used sequentially to explore maternal beliefs and practices regarding ARI. Verbal consent was obtained from the respondents before any discussion or interview. Ethical clearance for the study was also obtained from the ethical clearance committee of the Department of Anthropology, University of Delhi. About 50 cases were collected by conducting door to door survey by a trained social scientist. This information was collected about only under 5 children who were suffering from symptoms related to ARI as reported by the caretakers at the time of visit or within the past two weeks.

### Results

A total of fifty caretakers for children under 5 years of age were interviewed. Number of index children suffering from common cold were 34 (68%) and pneumonia were 16(32%) and among them 30 were male and 20 female. From Table 1, it is observed that the average age of the children showing ARI symptoms was 30.5 +\_19.07 (in months). The highest numbers of children (36%) sick with ARI were between the age group 49-60 months. More than half of the caretakers (54%) had studied up to their primary and secondary level schooling while 46% were illiterate. Majority of the caretakers (82%) were housewives and a few of them (18%) were domestic helpers.

**Table 1: Demographic characteristics of the study population**

Mean age of the index children	30.5+ 19.07 (in months)
Sex	n(%)
Male	30(60)
Female	20(40)
Father's Education	
Illiterate	11(22)
Primary	27(54)
Secondary	12(24)
Mother's Education	
Illiterate	23(46)
Primary	22(44)
Secondary	5(10)
Father's Occupation	
Wage earner	23(46)
Self employed	22(44)
Domestic helper	5(10)
Mother's Occupation	
Housewife	41(82)
Domestic helper	9(18)

Most of the fathers (78%) had completed primary and secondary level schooling. Around 90% of the fathers were casual laborers.

Almost all the families (94%) had 3 to 4 children in each family. Majority of the caretakers (90%) were Hindu with a few (10%) Muslim.

All the fifty caretakers had heard about ARI which is known as *nazla jukham* in their local dialect. Around 66% of the caretakers knew that common cold was a health problem whereas another 34% think that it was not an illness as they considered it as normal and natural to have common cold during seasonal transitions and it was considered rather abnormal not to have common cold during this period. Majority of the parents (70%) considered nasal symptoms and eye symptoms i.e., running nose, nose block, teary eyes, sneezing and slight fever as symptoms of common cold while 28% caretakers considered difficulty in breathing and excessive crying also as symptoms of common cold. Aggravation of *nazla*, *zukkham*, *khansi* (running nose, cold, cough), and continuing fever with increased irritability, excessive crying are considered as a manifestation of *numonia* (Pneumonia). Some caretakers (20%) described the illness as *double numonia* in the presence of very high fever, refusal of feeds, bluing of lips or unconscious and considered as potentially fatal condition. Whereas 36% identified chest in-drawing (*pasli chalna*) as a key indicator of pneumonia while, 34% recognized pneumonia as difficulty in breathing (*saans lene mein taklif*) or high fever with chills, excessive crying or a combination of all these symptoms and remaining 28% felt that symptoms is pneumonia. Very few caretakers (2%) distinguished fast breathing as a symptom of pneumonia without any prompting.

Caretakers' knowledge about the causes of common cold and pneumonia was diverse. Around 36% of caretakers expressed that a child gets common cold due to mother's or child's exposure to cold or due to cold foods or drinks that means transmission of *thand* through breast milk while feeding by the mothers. On the other hand, around 58% of caretakers said that pneumonia is caused by seasonal change whereas, 4% attributed to physical contact.

During the first two to three days, most mothers (70%) felt that home remedies could cure common cold and thus resorted to home remedies while 30% caretakers said that it was not needed at all. Some mothers (18%) relied on home remedies in case of pneumonia as well in the initial stages of the illness episode. Massage with hot mustard oil, camphor with kerosene to get rid of the *thand* was reported as common practice. All the caretakers continued breast feeding during common cold episodes whereas, only 20 (40%) caretakers continued breast feeding during pneumonia episodes. Remaining (60%) reflected that breast-feeding in case of pneumonia will worsen the condition of the child.

Majority of caretakers (86%) felt that allopathic medicines were necessary for common cold. In case of pneumonia, most caretakers (88%) considered that allopathic medicines cure the illness faster at the same time prevents it from getting serious. Approximately 76% caretakers gave medicines dispensed by the informal prescriber or over-the-counter medicines. Antibiotic in the form of unlabelled syrup were commonly dispensed by the informal prescribers.

Many caretakers (60%) did not consult any health care provider during ARI, even though they recognized symptoms such as fast and difficult breathing as symptoms of pneumonia. Informal prescribers were consulted only when a child does not get well for 2/3 days with home remedies. Only 10% of the caretakers took the child to the nearby informal prescribers the following day if they thought the sickness was serious (difficulty in breathing, stops taking food and unconsciousness). Also a quick turnaround of 'doctor', if no improvement was visible in one or two days because they lose confidence in the doctor. Only 4% visited

formal private practitioner. Most of the time consulting a formal prescriber was preceded by consultation with an informal prescriber. Only (20%) caretakers actually visited government dispensaries / hospitals.

### Discussion

From the present study, it was observed that recognition of pneumonia was universal, with a good correspondence between local terms and their clinical equivalent especially for danger signs chest in-drawing (*pasli chalna*) and difficulty in breathing (*saans leneme taklif*). Similar findings have been reported by other ethnographic studies (WHO, 2008 and Hussain, 1997). However, most caretakers could not identify fast breathing as the early manifestation of pneumonia and is different from most Punjabi women who were aware of fast breathing as a sign of pneumonia (Rehman *et al.*, 1994). Onset or increase in intensity of fever was the most common triggering mechanism for seeking outside care. Caretakers are needed to be encouraged to continue feeding their children during pneumonia episodes as well since the awareness was alarmingly low among the mothers about its necessity.

From this study, it could be said that ARI related problem is manifold. Firstly, caretakers delayed seeking healthcare advice unless the symptoms were alarming (Amuyunzu-Nyamongo *et al.*, 2006). Generally, the sequence of management was to initially start home care and supplement it with allopathic medicines taken over-the-counter within one to three days of the onset of symptoms. Constraints at the home level such as lack of money, limited female autonomy and mobility were among other reasons for delay in seeking outside care and hospitalization (D'Souza, 2003). Secondly, mother's lack of awareness about symptoms of illness and unrealistic expectation of quick relief leads them to change doctors often. Thirdly, poor quality of care available in these slum areas mostly in the form of informal prescribers. Some informal prescribers operating in the area had absolutely no medical background even though easily accessible and affordable. These 'doctors' perpetuate the attitude of quick fix cure of any illness. This was also reported by Malik Kundi and could be talked by encouraging caretakers to ask practitioners for the full recommended dose usually five days' worth of medicines in case antibiotics are required (Malik, *et al.*, 1993).

Most caretakers attribute the cause of pneumonia to exposure to cold (*thand*) and hot-cold imbalance of the body of the child. This shows that the notion of hot-cold imbalance is very common in this community. Moreover, caretakers do not have any idea about hygiene. This could become a stumbling block in promoting any hygienic measures like proper disposal of the nasal and the mouth discharge of the children (Rehman *et al.*, 1994). The above finding is also supplemented by Wilson's findings on diagnosis and management of acute respiratory infections by Swazi child where exposure to cold weather and chill winds were attributed as the major cause of ARI (Wilson, *et al.*, 1991).

Different forms of home remedies were given during common cold and pneumonia especially in the initial stages. Most of the caretakers relied on hot liquid food to counter or balance the excess cold elements in the body. However, in case of pneumonia, caretakers mostly used steam inhalation and massaging the body with Vicks balm, hot mustard oil or kerosene mixed with camphor as it is also similar with other studies (Rehman *et al.*, 1994 and Hudelson, *et al.*, 1995). These remedies were largely safe except for the practice of hot mustard oil and kerosene with camphor which could prove to be harmful to the sick child (Hudelson, *et al.*, 1995).

### Conclusion:

This study provides baseline data on attitudes and behaviours that can be built on in the national ARI control programme.

Foremost among positive findings is that the majority recognized difficult breathing and chest in-drawing. Over-the-counter medicines and the informal prescribers served as the first resort for seeking care and there was a general delay in seeking formal medical help on the part of the caretakers. Therefore, awareness about early signs and symptoms of pneumonia should also be extended to the caretakers and informal practitioners.

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