

## PARENTAL KNOWLEDGE ON UPPER RESPIRATORY TRACT INFECTION AND ITS TREATMENT

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*A survey was carried out among parents of children who sought treatment at the Seremban Health Centre, Rasah Road, Negeri Sembilan to assess their knowledge on upper respiratory tract infection (URTI) and its treatment and 239 parents were selected randomly and participated in the survey. The result showed that the majority of respondents did not know the causes of URTI. Only 0.8% knew that virus is the usual cause of URTI and only 0.4% had heard about antibiotic resistance. Most did not ask the doctor about their children's illness. A good proportion of parents (56.5%) had never heard about paracetamol but many knew about Panadol<sup>®</sup>. However, 93.7% had heard of antibiotic before. Many (59.4%) gave antibiotics to their children based on hourly intervals instead of the frequency of administration. About 40.2% of respondents used tablespoon to administer medication to their children. 82% of the respondents said they gave antibiotics after food. Overall, the study showed that the level of knowledge among parents on URTI and its treatments were inadequate. Necessary steps to improve parental knowledge is recommended.*

**Keywords:** Parental knowledge, URTI, Treatment, Malaysia

### INTRODUCTION

Acute upper respiratory tract infections (URTI), predominantly of viral origin, are the most common acute infections affecting children and adults worldwide. Infants and pre-school children experience six to ten respiratory illnesses per year, and school-age children and adolescents experience 3–5 illnesses annually. Fever occurs in approximately 30–40% of viral respiratory illnesses in pre-school children and lasts for an average of 3 days with a usual maximum of 5–6 days (Carson, Collier and Shih-Chin 1985).

Hueston (1999) found that more than 50% of episodes of URTI were treated with antibiotics. Such a high tendency of antibiotics prescribing contributed to the emergence of antibiotic-resistant strain from the isolates of respiratory tract, particularly to the first-line, inexpensive, broad-spectrum antibiotics. The spread of resistant organisms in developing countries contributed to the escalating problem of antibiotics resistance worldwide.

Counsell *et al.* (1993) found that there was an overall lack of information provided by the doctor on the side effects of medication and its management. Another study carried out by Kyingi (1993) also found that patients had less knowledge on the correct time of administration and the duration of treatment. Data on parental knowledge on URTI and its management in this country are scarce. This study was aimed to assess the level of knowledge regarding URTI and its management among parents who sought treatment for their children at the Seremban Health Centre. It is hoped that the findings of the study would enable us to identify areas of limited understanding, as well as to provide a foundation for the development of educational program for parents.

## METHODS

This study was carried out at the Seremban Health Centre, Rasah Road, Negeri Sembilan. All parents presenting a prescription for the treatment of their child's URTI were eligible for the study. Every fourth parents or guardians presenting their prescription to the pharmacy counter were selected for the study. Any parent of a child more than 12 years old and who do not understand Bahasa Malaysia would be excluded from the study. Parents were informed about the study and requested to sign a log book to indicate their consent to participate.

A set of questionnaire was developed and used for parent interview. One of the researchers (BN) conducted the interview with the parents and completed the questionnaires in the counselling room, while their medications were being prepared by the pharmacist.

The questionnaire was written in Bahasa Malaysia (Malaysian National Language). It consisted of 50 questions or statements related to the knowledge on URTI and its treatment. The questionnaire was adapted from previous studies and standard texts (Collet 1999; Lam 2001) and was pretested on 20 parents or guardians who visited a nearby Health Centre at Zaaba Road, Seremban, Negeri Sembilan to determine the reliability of the questionnaire. The Chronbach's alpha score for the questionnaire was 8.3.

The completed questionnaires were coded and analyzed using the SPSS version 10.01. Descriptive statistic was used as appropriate and presented as percentages.

## RESULTS AND DISCUSSION

A total of 239 respondents participated in the study. The majority of parents who took part in the study were Malay (69.5%) and the mean age of the parent was 31.15 years (range: 20 to 45 years). Table 1 gives the demographic data of the respondents.

**Table 1:** Demographic Data of the Respondents

		Number	Percentage
Race	Malay	166	69.5
	Chinese	20	8.4
	Indian	49	20.5
	Other	4	1.7
Age	≤ 25 years	43	18.0
	26–35 years	136	56.9
	≥ 36 years	60	25.1
Education	Primary school	36	15.1
	Lower School Certificate	66	27.6
	Malaysian Certificate of Education (MCE/SPM)	102	42.7
	Higher School Certificate	17	7.1
	University degree	2	0.8
	Other	16	6.7
Occupation	Housewife	119	49.8
	Factory worker	32	13.4
	Clerk	12	5.0
	Other	76	31.8
Number of sibling	1	33	13.8
	2	69	28.9
	3	80	33.5
	4	37	15.5
	5 and above	20	8.4

### Knowledge on the Child's URTI

Table 2 shows the knowledge of the parents on their child's illness. The majority of parents (77.8%) claimed that they knew the type of illness of their children. However, those who did not know their children's illnesses, most were interested to know about them. More than half claimed that the doctor did not explain their child's illness to them. In our study, we found that only about one-third of the parents asked their doctors about the

illness. This behaviour is believed to be common in Malaysia where patients do not usually ask about their illness from the doctor.

Similarly, the majority of the parents did not know about URTI and its causes. Very few parents (9.6%) knew that URTI can cause pneumonia. However many of them (75.7%) knew that fever associated with URTI can cause seizure and 72.0% said they knew when it is necessary to see the doctor. The level of parental knowledge in this study may represent the overall patient education or counselling provided by the health care practitioners during their hospital visits. Our findings were similar to an earlier study by Kyingi (1993) that there was an overall lack of information from the prescriber given to their patients.

**Table 2: Knowledge of the Respondents on the Child's Problem**

Statements	Yes	No
	Number (%)	Number (%)
1. Do you know your child's illness?	186 (77.8)	53 (22.7)
2. If your answer is 'no' for the statement number 1, are you interested to know about your child's illness?	37 (69.8)	16 (30.2)
3. Did the doctor tell you about your child's illness?	108 (45.2)	131 (54.8)
4. If your answer is 'no' for the statement number 3 above, did you ask the doctor about your child's illness?	39 (28.3)*	99 (71.7)*
5. Have you ever heard about upper respiratory tract infection (URTI)?	2 (0.6)	237 (99.2)
6. Do you know that URTI is caused by virus?	1 (0.4)	238 (99.6)
7. Do you know that URTI of more than 5 days is likely caused by bacterial infection?	4 (1.7)	235 (98.3)
8. Do you know that URTI can cause serious problem if left untreated?	19 (7.9)	220 (92.1)
9. Do you know that fever during URTI can cause seizure (fit) if left untreated?	181 (75.7)	58 (24.3)
10. Do you know that URTI can cause pneumonia (lower respiratory tract infection)?	23 (9.6)	216 (90.4)
11. Do you know when to seek medical treatment if your child continues to have URTI?	172 (72.0)	67 (28.0)

\* Some respondents who said 'yes' to the previous question also answered this question.

## **Knowledge on the Treatment**

Most doctors agreed that patients should be advised about self-management of URTI (Lam 2001). Our study found that the level of parental knowledge on the proper use of medications in the management of their child's URTI was satisfactory (Table 3). The majority of parents had a good knowledge on the appropriate way of using the medications, their dosage, the right administration time, and the right time to discontinue the medications. Their knowledge on common medications used in the treatment of URTI such as Panadol® and antibiotics were adequate. More than 90% knew about Panadol® and antibiotics. However, our study found that the majority of parents said they would administer the antibiotics based on their convenience at specific time i.e. morning, afternoon, evening and night instead of the actual time. It is possible that these parents were too busy with the household works, hence, they were unable to serve the medications at the right time.

In a study conducted in pediatric patients, a high percentage of parents reported having given their children the full prescribed course of an antibiotic (Hilding 1994). In contrast, our study found about 30% of parents completed the course of antibiotic. This finding confirmed an earlier study that 87% of parents reported stopping antibiotics once their child feeling better (Carson 1985).

Most of the antibiotics prescribed by the Malaysian government hospitals need to be taken on empty stomach (Hooi 2001). More than 90% of parents read the instructions on the label and understood the instructions given by pharmacy assistants. However, only 11.7% of parents complied with the instructions to give the medications on empty stomach. Similarly, although medications were labelled according to their generic names, a large proportion of parents claimed they have never heard about paracetamol. This further proves that parents did not read the name of the medication on the label. Since majority of them have good education background (secondary school and above), they should not have any problem reading the drug label.

In contrast to the earlier study that found 60% of the respondents have never heard about antibiotic resistance (Collet 1999), our finding showed almost all parents have never heard about it. This could be due to lack proper patient education given to them. Our pharmacists may have put too much emphasis on the instructions of use and adverse effects associated with the medications but rarely discuss aspects of antibiotic resistance with patients.

**Table 3: Knowledge of Parents on the Treatment of URTI**

Statements		Yes Number (%)	No Number (%)
1.	Do you understand the instructions on the use of your child's medications?	234 (97.9)	5 (2.1)
2.	If your answer is 'no' for the statement number 1 above, did you ask the pharmacy assistant or the pharmacist about the instructions on the use of the medications?	16 (88.9)*	2 (11.1)*
3.	Do you remember the instructions on the proper use of your child's medications?	172 (71)	67 (28)
4.	Do you have/ever read the instructions provided on the label of your child's medications?	238 (95.4)	1 (0.4)
5.	Did your doctor tell you about the side effects of your child's medications?	137 (57.3)	102 (42.7)
6.	Do you know the name of your child's medications?	19 (7.9)	220 (92.1)
7.	Do you know the amount of your child's medications to be given each time?	224 (93.7)	15 (6.3)
8.	Do you know the correct tools to administer your child's medications?	151 (63.2)	88 (36.8)
9.	Do you know when is the best time to administer your child's medications?	233 (97.5)	6 (2.5)
10.	Do you know when to give the medications to control your child's fever?	112 (46.9)	127 (53.1)
11.	Have you ever heard about Panadol® ?	226 (94.6)	13 (5.4)
12.	Have you ever used Panadol® for the management of your child's illness?	218 (91.2)	21 (8.8)
13.	Have you ever heard about paracetamol?	104 (43.5)	135 (56.5)
14.	Have you ever used paracetamol for the management of your child illness?	98 (41.0)	141 (59.0)
15.	Do you know that fever medications should be discontinued once the fever subsides?	202 (84.5)	37 (15.5)
16.	Have you ever heard about antibiotic?	224 (93.7)	15 (6.3)
17.	Have you ever used antibiotics for the management of your child's illness?	223 (93.3)	16 (6.7)
18.	Do you know that antibiotic should be given for the whole course of treatment?	77 (32.2)	162 (67.8)
19.	Do you know that the frequency of the antibiotic dosing is usually expressed in hours rather than in the number of administrations per day?	142 (59.4)	97 (40.6)
20.	Do you know that antibiotic should be given on empty stomach?	196 (82.0)	28 (11.7)
21.	Have you ever heard about antibiotic resistance?	1 (0.4)	238 (99.6)

\* Some respondents who said 'yes' to the previous question also answered this question.

## CONCLUSION

The level of parental knowledge on the causes of URTI was inadequate, however, their knowledge on the medications used for the management of URTI was quite satisfactory. These findings could reflect the current practice in patient counselling whereby the doctors and pharmacists were both good in providing information related to drug therapy. Nevertheless, the information on the illness and its causes may not be well covered by both professions.

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