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Parents' Knowledge, Attitudes and Beliefs of Childhood Fever Management in Jordan: a Cross-Sectional Study

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Introduction

Parents' unrealistic concerns for childhood fever, "Fever Phobia", have been documented since 1980.[1-11] Three decades of research on this topic has not changed parents' concerns and management of fever.[1]

Studies report that parents have false beliefs and limited knowledge regarding fever, its management, and its role in illness.[1] Parents are usually anxious about maintaining a "normal" temperature in their sick child, which leads many parents to administer medications to their children even if there is minimal or no fever.[12] Some studies reported that approximately one-half of parents considered a temperature of 38°C (100.4°F) to be at fever level, and a temperature of 37.8°C (100°F) was high enough for 25% of caregivers to give antipyretics.[1]

A fever in itself is not an illness. It is a method by which the body fights infections,[13-15] hindering the production of viruses and bacteria. This increases the neutrophil production and T-lymphocyte proliferation, helping the body's acute-phase reaction.[16-18] Most parents do not know the benefits of fever and have a high level of anxiety and fear regarding its possible complications.[19]

The cause of fever in young children is often difficult to identify, which poses a diagnostic challenge for health care providers. In most cases, the childhood fever is due to a viral infection that is self-limiting and

the child recuperates without any medical intervention. However, childhood fever may also be due to serious bacterial illnesses, such as urinary tract infections, septicemia, meningitis, and pneumonia,[20] and may present complications, such as convulsions, seizures and dehydration.[1,4] These combined have resulted in a general phobia to fever among both caregivers and healthcare providers.[1,4] Fever continues to be the number one reason for children's visits to the emergency department, which can be expensive, unnecessary, and lead to overcrowding.[21]

Many studies have been published regarding childhood fever management practices in populations around the world,[19,22-32] but to date no study has been conducted to examine fever management practices among children in Jordan, particularly among Arab parents.[19,33] Jordan is an Arab country in the Middle East, with a population of approximately 6.338 million people residing in 13 governorates as of 2012. The average income of Jordanian males in 2011 was 429 Jordanian Dinars (JDs) and 379 JDs for females per month.[36] The study was conducted in the Irbid governorate whose population of over 1,137,100 residents is the highest in the country, and of which 83% have health insurance.[36] This study provides a broad perspective and identifies factors that might affect parental fever management practices, knowledge, and beliefs among Jordanian parents of children aged six weeks to six years. Findings of the

study can assist community-based healthcare professionals in positively influencing parents' health decisions by identifying the largest gaps in knowledge and targeting education towards these gaps.

Aims

The aims of this study were to investigate parents' knowledge, attitudes, and beliefs regarding childhood fever management in Jordan in comparison to current National Institute for Health and Care Excellence (NICE) and Italian fever management guidelines,[20,34] as well as to identify factors that might affect some practices of fever management.

Methods

Study Design and Area

An observational, survey-based cross-sectional study design was carried out with a convenience sample of Jordanian adults. As of 2012, children ages zero to six years comprised 17.5% of Irbid's population while 49.9% of the population was aged 17 to 64 years. The total number of families was 202,382 and the average family size was 5.5 members with a 2.2% rate of natural increase. In 2013, 14.8 % of women and 85.2% of men age 15 or more were found to be members of the workforce, with 12.7% of the population unemployed.[35]

Study Setting

The data were collected from willing adult participants in Irbid's places of public congregation, (eg, public playgrounds, malls, and play areas). The inclusion criteria where parents aged 18-64, who had at least one child aged six years or less. The investigators provided a basic explanation of the study purpose, procedures, confidentiality issues, risks and benefits to participation both verbally and in written form. Completing and returning the questionnaire implied consent. The sample represents the general population of pre-school children who live in the study data collection area.

Sample Size

We used the 2012 total number of families in Irbid (202,382) to calculate the sample size needed for this study.[35] The minimum effective sample size was estimated to be 384 using the Raosoft sample size calculator (http://www.raosoft.com/samplesize.html). This allowed for a 5% margin of error at 95% confidence interval, 80% power and assuming a response distribution of 50% for temperatures of 38℃ (100.4℉) considered feverish.

Ethical Approval

This study received approval from the Committees for the Protection of Human Subjects (CPHS) and the Institutional Review Board (IRB) at the University of Houston.

Data Collection Instrument

We developed the questionnaire by selecting a mix of questions from six previously validated studies.[23,24,27,36-38] The questionnaire consisted of four major categories with a variance of 32 yes/no and multiple-choice questions. One section of the questionnaire captured the socio-demographic information of respondent's age, gender, number of children, age of youngest child, marital status, employment status, income, level of education, and health care insurance type. The remaining sections were designed to elicit information about the parents' knowledge, beliefs, and practices of fever management such as: methods used for measuring and controlling the body temperature, frequency of monitoring the temperature, beliefs regarding potential side effects of fever, methods to decide the right medications or doses administered, beliefs about alternating drugs, and practices in obtaining and using antibiotics drugs.

Data Collection Procedure

We carried out the data collection using a self-administered questionnaire that was distributed to the parents by the investigators. A total of 423 parents consented to the questionnaire, of which 419 were included in the final analysis while four were excluded. Questionnaires were excluded using the following criteria: more than half the questions in the questionnaire were not answered or had more than one chosen answer, and not having a child under age six

As the questionnaire combined questions from six previous studies and was not validated in the Jordan population, the survey was pilot tested on 10 parents to confirm face and content validity, as well as to verify the language clarity and understandability of the questions before the distribution. To establish test–retest reliability, we randomly selected 10 subjects who were asked to fill the questionnaire twice in a two-week interval. We analyzed test–retest data on each item using correlation coefficients for each item ranging from 0.75 to 1.00, which suggest that the questionnaire was reliable.

Statistical Analysis

First, we entered data into Excel, presented the descriptive statistics of the study population, calculated the percentages of participants choosing a

specific response to each question, and presented results as absolute numbers and percentages. Then, we performed a chi-square test to compare the demographics in this study to the frequencies of oral versus rectal drug administration and beliefs about the usefulness of alternating drugs. We used the Fisher exact test for variables with expected frequencies of five or less (marital status and insurance type) and we used a t-test to compare the means for the continuous variables included in the study such as age. The statistical analysis was conducted at a significance level of 0.05 using SAS 9.2 (SAS Institute Inc., Carey, North Carolina).

Results

Demographic Data

A total of 419 parents completed questionnaires. The distribution of the socio-demographic characteristics of the participated parents is shown in Table 1.

The study sample consisted mainly of mothers (83%), employed (60%), with a mean age (±SD) of 34.7 ± 7.8 years. One third (32.46%) of parents had one or two children. Interestingly 26.44% had five or more children. More than half (60.86%) of the parents reported having a youngest child two years of age or younger.

Table 1. Socio-demographic data of parents participating in the study (N=419)

Variable	Frequency N=419	Percentages
Number of children		
1	40	09.55
2	96	22.91
3	91	21.72
4	81	19.33
5	57	13.60
6+	54	12.89
Age of the youngest child		
<1	042	10.02
1	098	23.39
2	115	27.45
3	039	09.31
4	040	09.55
5	062	14.80
6	023	05.49
Marital status		
Single	018	04.30
Married	386	92.12
Divorced	013	03.10
Widowed	002	00.48
Education level		
Less than high school	054	12.89
High school degree	104	24.82
College or university degree	228	54.42
Graduate degree (Masters or PhD)	033	07.88
Insurance type		
Public	320	76.37
Private	055	13.13
Both	004	00.95
None	040	09.55
Income		
Very high	10	02.39
High	56	13.37
Moderate	266	63.48
Low	62	14.80
Very low	25	05.97

Parents' Beliefs about Fever and Its Treatment

Table 2 shows that 43% of the parents believed that the best place to take a temperature of a child under 6 is the armpit (axilla). In this study, about 10% of parents believed that 38℃ (100.4℉) or 39℃ (102.2℉) are the normal body temperatures of a small child while approximately 14% considered a child with a temperature of 36℃ (96.8℉) or 37℃ (98.6℉) as feverish.

In this study, more than 97% of parents believed that there is potential harm from fever if left untreated, with brain damage (58%) being the most frequently reported side effect, then seizure (20%), dehydration (10%), coma (6%), and finally death (3%). About 47% of parents believed that alternating drugs is useful in cases where the temperature did not go down after administering the first antipyretic drug. When asked the reasons for preferring fever lowering drugs administered rectally (if they do), only 42% reported using the rectal routes for the right reasons, such as the doctor's orders, the child's refusal, or vomiting.

Table 2. Beliefs about fever and its treatment as reported by parents (N=419)

Variable	Frequency N=419	Percentages
Beliefs about the best place where temperature is taken		
The rectum (bottom)	155	36.99
The mouth	068	16.23
The armpit (axilla)	181	43.20
I do not know	015	03.58
Beliefs about the normal body temperature		
36℃	071	16.95
37℃	298	71.12
38℃	032	07.64
39℃	009	02.15
40℃	003	00.72
I do not know	006	01.43
Beliefs about the fever temperature		
36℃	004	00.95
37℃	053	12.65
38℃	200	47.73
39℃	128	30.55
40℃	026	06.21
41℃	008	01.91
Beliefs about the usefulness of alternating drugs		
Yes	195	46.65
No	223	53.35
Beliefs about the reasons for preferring to administer the medication rectally, if so		
More useful	101	35.31
More practical	066	23.08
Unable to give it orally because of vomiting	057	19.93
Unable to give it orally because of child's refusal	045	15.73
The doctor told me to give it rectally	017	05.94
Beliefs about the side effects of fever		
Seizure	085	20.43
Brain damage	241	57.93
Death	011	02.64
Dehydration	043	10.34
Coma	025	06.01
Nothing will happen	011	02.64

Parents' Methods in Managing Fever

As shown in Table 3, parents' most frequently reported measure of child's temperature was by using their hand (36%), then by using the mercury-in-glass thermometer (32%). When asked about the drug usually used to reduce the child's fever, 14% of parents reported using antibiotics where 4% reported using Aspirin. We also found that more than 98% of parents use physical methods and remedies in addition to medication to treat fever.

In order to determine the right dose of antipyretic drug administered to the feverish child, 38% of parents use the regular teaspoon or tablespoon or measuring spoon or syringes of other drugs.

Table 3. Parent's methods in managing childhood fever (N=419)

Variable	**Frequency (%) N=419**	**Percentages**
Methods to measure the temperature		
Hand	152	36.28
Electronic thermometer	082	19.57
Tympanic (Ear) thermometer	037	08.83
Skin infrared thermometer	002	00.48
Mercury-in-glass thermometer	135	32.22
Plastic strip placed on forehead	009	02.15
I do not check my child's temperature	001	00.24
I do not know	001	00.24
Frequency of measuring the temperature, every:		
Less than 15 minutes	098	23.39
From 15 to 30 minutes	146	34.84
From 30 minutes to 1 hour	117	27.92
From 1 to 2 hours	045	10.74
More than 2 hours	013	03.10

Drug administered for fever		
Acetaminophen	273	65.16
Ibuprofen	068	16.23
Aspirin	016	03.82
Antibiotics	060	14.32
Other	002	00.48
Remedies used in addition to drugs		
Cold sponging	198	47.26
Ice pack	094	22.43
Tepid sponging	120	28.64
I use drugs only	007	01.67
Site of medication administration		
Orally	210	50.12
Rectally	209	49.88
Instrument used to administer the medication		
Regular tablespoon or teaspoon	107	25.54
Specific measuring spoon or syringe of the drug	260	62.05
Measuring spoon or syringe of other drug	052	12.41

Parents' Practices in Managing Fever

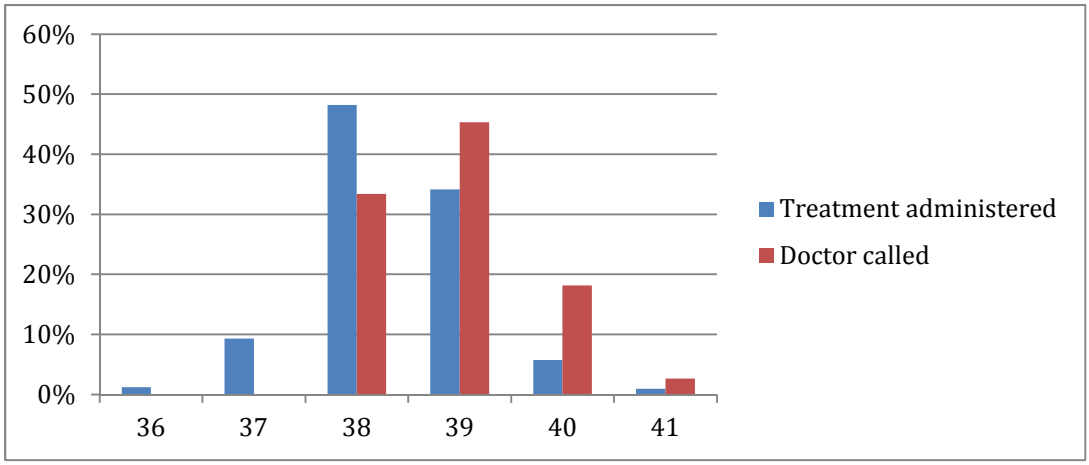
Half the parents would use either pharmacological and/or non-pharmacological methods to reduce a temperature of 38°C; some would act to reduce temperatures of less than 38°C. See Table 4 and Figure 1 for parents' reports. Nearly half the parents reported that they would wait until the child's temperature reached 39°C before calling the doctor; however, one third would call the doctor for temperature of 38°C (Figure 1). When asked how the right fever lowering drugs and doses were decided, only 18% of parents indicated that they would call or visit the pediatrician for advice on the medication while only 10% would seek a pediatrician's recommendation on the dose to administer.

The most frequent factor considered by parents when deciding the dose of a fever-lowering drug was age (44%) followed by the severity of fever (38%), while 10% only considered weight as an important factor to take into consideration before choosing the dose of fever lowering medications.

Table 4. Parent's practices in managing childhood fever (N=419)

Variable	Frequency (%) N=419	Percentages
The right fever lowering drug would be decided by		
Previous advice from the pediatrician	249	59.43
Consulting the pharmacist	055	13.13
Consulting other persons	011	02.63
Information gathered by media	005	01.19
I decide by myself what I think is right	019	04.53
I call my pediatrician	078	18.62
Other	002	00.48
The right dose of fever lowering drug would be decided by		
Previous advice from the pediatrician	200	47.73
Reading the package leaflet	110	26.25
Consulting the pharmacist	037	08.83
Consulting other persons	009	02.15
Information gathered by media	004	00.95
I decide by myself what I think is right	013	03.10
I call my pediatrician	044	10.50
Other	002	00.48
To give a fever lowering drug, you consider		
Age	185	44.15
Sex	002	00.48
Weight	042	10.02
Height	002	00.48
Severity of fever	161	38.42
Severity of illness	021	05.01
Nothing	006	01.43

Figure 1. Distribution of temperatures according to when treatment is administered and when doctor is called in a sample of 419 Jordanian parents.



Predictors of Some Practices of Fever Management

In this study, we could not find any significant difference between the parents' beliefs about alternating drugs and any of the demographics we included in the questionnaire (results not shown).

Overall, the prevalence of administering fever-lowering medications orally among this study sample of parents was 50.12% (Table 5). The route used to administer fever-lowering medications was found to be significantly associated with age, gender, and number of children. T-test results indicated that the mean age of parents who administer medication orally (mean age=35.6) is significantly higher (p=0.019) than the mean

age of those who administer the medication rectally (mean age=33.8). Administering fever-lowering medications orally as self-reported by the respondents, was significantly higher among men and families of 3 children or more. Other variables did not show significant differences.

Table 5. Demographic of parents by route of administering fever lowering medications (N= 419)

Variable	Total N = 419 (%)	Administer orally n=210 (50.12%) (Row %)	Administer rectally n=209 (49.88%) (Row %)	Chi-square P value
Sex				0.0033*
Male	073 (17.42)	048 (65.75)	025 (34.25)	
Female	346 (82.58)	162 (46.82)	184 (53.18)	
Number of children				0.0297*
1	40 (09.55)	19 (47.50)	21 (52.50)	
2	96 (22.91)	36 (37.50)	60 (62.50)	
3	91 (21.72)	44 (48.35)	47 (51.65)	
4	81 (19.33)	44 (54.32)	37 (45.68)	
5	57 (13.60)	32 (56.14)	25 (43.86)	
6+	54 (12.89)	35 (64.81)	19 (35.19)	

*Statistically significant

Discussion

In this study we investigated knowledge, beliefs and attitudes in managing childhood fever among 419 Jordanian parents from the Irbid governorate and compared findings to the current management guidelines.[20,34,39]

Most of the parents in our study considered 36.0–37.9℃ as a normal temperature and 38.0 and 39.0℃ as fever. These findings are

consistent with the commonly reported levels of temperatures used for fever determination.[2,19,24,40] Our results indicated that more than 53% of parents use rectal or oral measurements of body temperature, which should be avoided according to the guidelines,[20,34,39,41] and parents should be encouraged to measure the temperature from the axilla instead.

Less than 20% of respondents use a digital or electronic thermometer, which is the best way to measure the temperature at home by parents.[20,34,39] More than 68% used their hands or a mercury thermometer, which is not recommended because measuring by hand has been shown to be inaccurate by falsely identifying children as feverish[34] and there is a risk of metal toxicity with mercury thermometer use.[34]

Studies found that physical methods used to reduce fever such as bathing, cold sponging, application of ice bags, and rubbing the body with alcohol might have adverse effects. These methods may paradoxically increase fever, shaking, shivering, severe hypoglycemia, or lead to coma.[42] Consequently, physical methods to reduce fever are not recommended except in cases of hyperthermia.[20,34] However, more than 98% of parents in our study reported that they use physical methods to reduce their child's fever.

The guidelines for the World Health Organization (WHO) recommend using treatment when temperature is above 38.5℃,[43] but almost half the parents in our study administer treatment when temperature is above 38℃ which indicates an overuse of antipyretics drugs in this sample population. Although acetaminophen and ibuprofen are the only antipyretic drugs recommended for use in children,[34] in our study 18% of parents used Aspirin or antibiotics to reduce the temperature of their feverish child. Also, approximately half the parents believed that combining two medications is more beneficial which is inconsistent with current guidelines that clearly recommend not combining or alternating the use of ibuprofen and acetaminophen. [20,34,39]

Studies found that rectal administration of acetaminophen is associated with a greater risk of overdose, and suggest that rectal dosing be based on the child's body weight in order to keep the child safe.[13] Since it is hard to achieve a precise dose by dividing suppositories, the guidelines recommend oral administration of acetaminophen when compared to rectal administration, except in the presence of any conditions that prevent oral administration such as vomiting or refusal.[34] Our study found that almost half the parents prefer to administer antipyretic drugs rectally, and when asked the reason most reported that it is more useful. On the other hand, approximately 41% of parents reported

they would give the medication rectally only if they were not able to give it orally, in accordance to current recommendations.

Parents in this study based their calculation of dose on age (44%) and on the severity of illness (38.4%) at a greater rate than the 10% who determined dose based on weight. This is reflective of poor knowledge regarding the recommendations that endorse basing the antipyretic dose on the child's weight rather than age or other reasons.[34]

Even though most of the parents in our study (62%) use the measuring device provided with the drug package to measure the dose, which is recommended according to the current guidelines,[34] approximately 26% of parents use the regular home teaspoons or tablespoons to measure and administer the dose. Teaspoons and tablespoons were found to be poor measuring and administering devices that lead to dosing errors. [44]

The most frequent harmful effect of fever reported by parents is brain damage, followed by seizures and dehydration. These results are similar to study findings in other countries such as Kuwait, Australia, Palestine and Israel.[19,24,37,45]

Alarmingly, we found a poor awareness of the risks associated with misusing antipyretics. Our findings indicate that about half of parents based decides on medication or dose on prior advice from the

pediatrician, which might not be safe given the fever causes and fluctuations in weight over time.

While previous studies indicated that income, age, and education predict antipyretic knowledge,[46] other studies reported that none of the parent or child variables have been found to predict accurate antipyretic usage[47] or parental antipyretic knowledge.[48] In this study neither child nor parent variables have been found to predict parental beliefs on combining medications to treat fever, which is consistent with previous studies.[47,48] Sex, age, and number of children were associated with parent knowledge and choice of routes to administer fever-lowering medications with a significant increase in using the oral route to administer drugs among men, older parents and those who have more than 3 children. This increase in knowledge might be related to experience.

Limitations

Our research has potential limitations. Our study findings may not be generalized to all the Jordanian population since the study was conducted in one of the 13 governorates in Jordan whose population numbers and therefore resources may differ from the other governorates. The replication of the study in additional governorates would improve the generalizability of the findings.

We relied on self-reported data, which might contain potential sources of bias, such as selective memory (to remember or not remember experiences or events that occurred at some point in the past) and it might contain a social desirability bias (the tendency to answer based on what they think is theoretically right rather than actual practice).

Conclusion

Our results indicate that parents often misuse the antipyretics medications, incorrectly manage their child's fever, follow inappropriate practices to reduce fever, and generally have poor knowledge of basic information regarding fever. As the data suggest that a high proportion of parents use the rectal route for temperature measurement and medication administration, educational programs may be necessary to ensure the process of taking rectal temperature readings is safe and sanitary, especially among female parents, younger age groups and those with three kids or fewer. Findings from this study underscore the need to develop and evaluate programs that educate parents and provide them with the knowledge base required to better manage their children's fevers.

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CHILDHOOD FEVER MANAGEMENT QUESTIONNAIRE

Instructions: This questionnaire assesses your knowledge, attitudes and beliefs in childhood fever management. Please answer the following questions to the best of your knowledge. If you are unsure about how to answer, please give the best answer you can by writing or checking/circling the options.

1. **Please indicate your answer for the following questions. (select one)**

   a. In your home, you measure your unwell child's temperature by using:

   ☐ Your hand ☐ Mercury-in-glass thermometer
   ☐ Electronic thermometer ☐ Plastic strip placed on forehead
   ☐ Tympanic (Ear) thermometer ☐ I don't check my child's temperature
   ☐ Skin infrared thermometer ☐ I don't know

   b. When you take a temperature of a child under six, which is the best place?

   ☐ The rectum (bottom) ☐ The mouth ☐ The armpit (axilla) ☐ I do not know

   c. Please circle what you think is a normal body temperature of a small child:

   ☐36°C ☐37°C ☐38°C ☐39°C ☐40°C ☐ 41°C ☐I do not know

   d. Above what temperature would you consider your child to have a fever?

   ☐36°C ☐37°C ☐38°C ☐39°C ☐40°C ☐ 41°C ☐I do not know

   e. Above what temperature would you give your child a treatment?

   ☐36°C ☐37°C ☐38°C ☐39°C ☐40°C ☐ 41°C ☐Treatment never given

   f. If your child has a fever how high could it go before you call the doctor?

   ☐38°C ☐39°C ☐40°C ☐41°C ☐42°C ☐ 43°C

   g. If your child has a fever, you take his temperature every:

   ☐ Less than 15 minutes ☐From 15 minutes to half an hour ☐ From half to one hour
   ☐ From one to two hours ☐More than 2 hours

   h. What side effects may a fever cause if you don't treat it?

   ☐ Seizure ☐ Brain damage ☐ Death ☐ Dehydration ☐ Coma ☐Nothing will happen

2. **Please indicate your answer for the following questions about your fever management medication use.**

   a. Which drugs do you give to your unwell child for fever?

   ☐ Acetaminophen (Panadol or Revanin) ☐ Ibuprofen (Brufen) ☐ Aspirin
   ☐ Antibiotic ☐ Other _____

   b. How do you decide the right fever lowering drugs to give to your child?

   ☐ According to the drug that my pediatrician had advised me previously
   ☐ Consulting the pharmacist
   ☐ Consulting other persons
   ☐ According to information gathered by Internet, TV, papers
   ☐ I decide by my self what I think is right
   ☐ I call my pediatrician and ask.
   ☐ Other _____

   c. How do you calculate the right dose of fever lowering drugs to give to your child?

   ☐ According to the dose that my pediatrician had advised me previously
   ☐ Reading the package leaflet of medicinal/advice line
   ☐ Consulting the pharmacist
   ☐ Consulting other persons
   ☐ According to information gathered by Internet, TV, papers
   ☐ I decide by my self what I think is right
   ☐ I call my pediatrician and ask.
   ☐ Other _____

d. When the temperature is not going down, do you believe it is useful to associate two or more drugs? ☐Yes ☐No

e. Which other remedies for body temperature control do you use in addition to drugs to reduce fever in your child?

☐ Cold sponging ☐ Ice pack ☐ Tepid sponging ☐Other _____ ☐ I use drugs only

f. How do you give your child fever lowering drugs? ☐ Orally ☐Rectally

g. If you answered rectally, why do you give your unwell child fever lowering drug rectally?

☐ It's more useful ☐ It's more practical ☐ If I'm unable to give it orally because of vomiting

☐ If I am not able to give it orally because of child's refusal ☐Because the doctor told me to do so

h. To give an fever lowering drug to your child you consider:

☐ Age ☐ Sex ☐Weight ☐Height ☐ Severity of fever ☐Severity of illness

☐ Nothing

i. Which instrument do you use to determine the right dose of fever lowering drug?

☐ Tablespoons or teaspoons ☐ Specific measuring spoon or syringe of the fever lowering drug ☐ Measuring spoon or syringe of other drugs

3. Please indicate your answer for the following questions about your antibiotics use. (Select one)

a. **You give an antibiotic drug for your child, if:**

☐ He/she has a fever ☐ You suspect an infection ☐ The physician said to give him/her

☐ Found information on the Internet, TV, or papers about it's benefits ☐ In all the cases above

b. **When you go to the pharmacy to get an antibiotic drug for your child, you usually:**

☐ Have a prescription for an antibiotic drug from your pediatrician

☐ Decide by yourself that your child needs an antibiotic from your previous experience

☐ Decide to use it according to someone else's experience

☐ Decide to use it according to information gathered by Internet, TV, papers

☐ Other _____

c. **in general, would you give antibiotics to your unwell child without consulting a physician?**

☐ Yes ☐ No

d. **In general, would you be insistent in prescribing some antibiotics to your child even though the physician did not consider it necessary for the moment?** ☐ Yes ☐ No

e. **In general, would you use antibiotics based on a pharmacist's consultation?** ☐ Yes ☐ No

f. **Do you think antibiotics should be prescribed to all children who develop fever?** ☐ Yes ☐ No

4. Please indicate your socio-demographic information below:

a. Sex: ☐ Male ☐ Female

b. Age: _____ years old

c. Number of children: _____

d. Age of the youngest child: _____

e. Please indicate your current marital status. (Select one)

☐ Single ☐ Married ☐ Divorced ☐ Widowed

f. Employment status: ☐ Employed ☐ Not Employed

g. What is your education level? (Choose one)

☐ Did not complete high school ☐ High school degree ☐ College or University Degree

☐ Graduate degree (Masters or PhD)

h. What is your insurance type? (Choose one)

☐ Public ☐ Private ☐ Both ☐ None

i. Would you describe your family income level as: :

☐ Very high ☐High ☐ Moderate ☐ Low ☐ Very low

Thank you for your cooperation in this study. Your help is greatly appreciated.