



CODEN [USA]: IAJ PBB

ISSN: 2349-7750

INDO AMERICAN JOURNAL OF PHARMACEUTICAL SCIENCES

<http://doi.org/10.5281/zenodo.2532145>

Available online at: <http://www.iajps.com>

Research Article

PARENTAL KNOWLEDGE ATTITUDES AND BELIEFS ABOUT FEVER IN CHILDREN

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Abstract:

Background: Fever is a widespread occurrence in child. Fever is a common sign associated with most childhood diseases. It represents 70% of complaints to the pediatric and general medicine outpatient departments. The parents have too many misunderstandings and misinformation about fever management. **objective:** This study aimed to improve parental knowledge, attitudes, and beliefs when managing fever in children. **Design:** cross sectional study **Setting:** online survey **Methodology:** A cross-sectional study using a previously validated questionnaire conducted from July to September 2018 among parents of the feverish child. Parents answered a survey about their concept of fever in children and their practices about the current fever episode. Data were analyzed using SPSS V.24.0. Descriptive statistics were used to describe the data; continuous data were presented as mean \pm standard deviation (SD), and categorical data was expressed as numbers with percentages. **Main Outcome Measures:** awareness and presence of misinformation regarding fever **Results:** a total of 450 completed questionnaires evaluated in the present study. 44.4% of parents believed that the temperature that representing fever is more than 38°C. Parents (86.8%) require evidence-based orally information from physicians about the care of feverish children. 60.2% of parents give their children medication when the fever is higher than 38°C. 60.2% parents prefer starting with administering antipyretics than the alternative methods. The majority of the studied parents (44.4%) favored suppositories antipyretics. Parents have similar concerns and fears about harmful outcomes from childhood fever. **Conclusion:** Lack of awareness and presence of misinformation regarding fever and febrile illness consider one of the most common public health problems experienced by parents of young children. The present research provides a spotlight on the knowledge, attitudes, and beliefs of feverish child parents to reduce the misuse of antibiotics and antipyretics. **Limitation:** small sample size

Keywords: Children, Fever management, Belief, Temperature

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Please cite this article in press Mohammad Ali Mahnashi et al., *Parental Knowledge Attitudes And Beliefs About Fever In Children.*, Indo Am. J. P. Sci, 2019; 06(01).

INTRODUCTION:

Fever is a common sign associated with most childhood diseases (1). It represents 70% of complaints to the pediatric and general medicine outpatient departments (2). Studies have revealed that parents have several misunderstandings and beliefs about fever, its role in illness, and its control (3). A fever may be a sign that the body is fighting an infection (4). Body temperatures may change during the day: It's a little higher in the evening and lower in the morning and can vary as children play, and exercise (1). Sometimes, the hypothalamus will "reset" the body to a higher temperature in response to an infection, illness, or some other cause (5). A few things can cause fevers;

Infection: Most fevers are caused by germ infection or other diseases. A fever is one of the natural defense mechanisms against any infection (6).

Overdressing: Infants, especially newborns, could not regulate their body temperature as well as older children. That is why they get fevers if they have heavy clothes or in a hot environment (7).

Immunizations: Some babies and children get a fever after have vaccinated. As for teething, it may cause a slight rise in body temperature not higher than 37.8°C (8). Fever symptoms may include: Sweating, Chills and shivering, Headache, Muscle aches, Loss of appetite, Irritability, Dehydration, General weakness (9). Researchers suggested that children whose temperatures are lower than 38.9°C don't need medicine unless they're uncomfortable. There's one notable exception: If an infant is three months or younger has a rectal temperature of 38°C or higher, it can be a sign of a potentially severe infection (5).

Fever diagnosis: By digital thermometer, measured **orally** (in the mouth): 37.8°C, measured **rectally** (in the bottom): 38°C, measured in an **axillary** position (under the arm): 37.2°C (10).

Most of the parents prefer the oral method for temperature diagnosis. The accuracy of oral temperature measurement is affected with the ability of the patient to pull together, recently ingested hot or cold liquid or food, and location and length of time of the thermometer in the mouth. The rectal method is considered more accurate and sensitive than the oral measurement; but, some parents did not prefer this method because of the risk of the rectal injury, thermometer breaking, and cross-infection (11).

Fever-induced convulsions (febrile seizures) may be experienced in children between the ages of six

months and five years, which always include loss of consciousness and shaking of limbs on both sides of the body (12).

Aim of work

Researches on parents' knowledge and beliefs around fever are limited. We aimed to study parents' understanding and practices and their determinants in managing fever symptoms in children.

Methodology

The present study was a cross-sectional study that conducted from July to September 2018 among parents of the the feverish child. We used validated survey that previously used by different researchers (10, 1). Parents answered a questionnaire about their concept of fever in children and their practices about the current fever episode. Data were analyzed using SPSS V.24.0. Descriptive statistics were used to describe the data; continuous data were presented as mean \pm standard deviation (SD), and categorical data were expressed as numbers with percentages.

RESULTS:

A total of 450 completed questionnaires evaluated in the present study. Table 1 shows the demographic information of the participated parents in the current study. The mean age (\pm SD) of the parents was 30.9 \pm 2.8 years. Most of the participants were fathers (66.7%), and 44.4% of them educated in high school. 88.9% of children were lower than three years, while 6.7% of them were between four and six years. Only 4.4% of the studied children were higher than six years.

As shown in Table (2), 44.4% of parents believed that the temperature that representing fever is more than 38°C. Parental expectations when they consult a physician due to fever in a child were; Obtain a physical examination (44.4%), Get advice on alarm symptoms (28.9%), Reassurance (20%), To obtain antibiotics (2.2%), To obtain paracetamol (4.5%). Parents take the information about fever from; Doctor (86.8%) and from Pharmacist (10.9%). 66.2% of parents prefer to obtain this information orally. 60.2% of parents give their children medication when the fever higher than 38°C.

Table 3 shows that the majority of the studied parents (44.4%) preferred suppositories fever medication, 36.9% of them preferred syrup, while 18.5% only used suspension fever medication. The most common fever management practice (60.2%) shown in the present study was administering antipyretics while a small percentage of parents (39.8%) preferred to start with alternative methods.

As shown in table 4, the majority of parents (93.3%) concerned about the harmful effects of high temperature. Only 4.4% believe that fever may be useful for children's health. 64.4% stated that fever causes discomfort to the child to them also. As for the fears generated by fever, 44.4% of parents afraid of dehydration, 27.1% afraid from febrile convulsions often 61.1% afraid of brain damage.

DISCUSSION:

Parental knowledge regarding the accurate information of febrile temperature is deficient, with many parents identifying fever when temperatures are either above or below the accepted level. The present study found that the majority of fever in children occurred in kids lower than three years. Almost half of the participant's parents believed that the temperature that representing fever is more than 38°C. They also expected that it is required a physical examination. Pediatric management for a feverish child involves the use of antipyretics for a temperature higher than 38.5°C (13).

Our survey showed that the majority of parents take their source of information about fever from the doctor. They also prefer to obtain this information orally. Providing parents with evidence-based information in a form which is accessible, understandable and concise should increase awareness and thus decrease overuse of antipyretics where administration disagrees with guidelines (14)

In the current study, more than one-half of the participant parents give their children antipyretics when the fever higher than 38.5°C. Almost half of the studied parents preferred suppositories antipyretic, more than one-third of them that favored syrup, while 18.5% only used Suspension antipyretics.

The present survey found that the most common fever management practice was administering antipyretics while a small percentage of them preferred to start with alternative methods. The most commonly reported alternative way in previous studies to treat the feverish child is sponging and giving antipyretic medication. Previous literature suggested that sponge bathing is inappropriate and results in shivering, which increases the body's temperature, as the hypothalamus tries to offset the

CONCLUSION:

Lack of awareness and presence of misinformation regarding fever and febrile illness consider one of the most common public health problem experienced by parents of young children. However, increased efforts by guideline and national organizations, regular fever

decrease in body temperature produced by sponging (13). However, sponging is useful in the short term, but increases the child's discomfort and stimulate temperature conserving behavior and as a result, cannot be recommended for feverish children (15). Additionally, current pediatric management for a feverish child involves the antipyretics use for a temperature higher than 38.5°C. The main aim for prescribing antipyretics is not to inhibit the temperature, but to relieve the parents' anxiety and thereby the child's discomfort (12). In the present questionnaire, more than one-half of parents stated that fever causes discomfort to the child and them also.

Majority of parents in the present study concerned about the harmful effects of high temperature. Only 4.4% believe that fever may be useful for children's health. Previous studies suggested that parents probably not know that many physicians had agreed to fever reduction measures because the child and the parents were uncomfortable and anxious not because of potential complications (16). These beliefs indicate a critical need for health care organizations to educate parents about the antipyretics effect. The magical qualities of antipyretics that parents believe increase their use increases the probability of overdosing and increases fever phobia (15). There is a need for parents awareness with alternative fever management strategies, such as giving their feverish children more fluids, rest and comfort, as well as accurate information of when to use medications to reduce fever phobias and the probability of overdosing (17).

Our survey stated that parents suppose that fever probably leads to severe complications and this may lead to an increased probability of antipyretic misuse and an increase in fever phobia. Almost one-half of parents afraid from dehydration, about one-third of them afraid from febrile convulsions often the majority of them afraid from brain damage caused by fever. Previous surveys suggested that the most potentially harmful complications for fever stated by feverish child parents are brain damage, dehydration, and convulsion. These parents, similar to their international counterparts, believe fever to be harmful and to cause brain damage, febrile seizures, and dehydration (16).

control practices continue to be misinterpreted by many parents. These levels of inappropriate management remain a primary concern to those trying to improve child health. The present research provides a spotlight on the knowledge, attitudes, and beliefs of feverish child parents.

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Table (1): Demographic information.

| demographics | N= 450 (%) |
|------------------------------|------------|
| Gender | |
| Male | 300(66.7%) |
| Female | 150(33.3%) |
| Age of parents | 30.9±2.8 |
| Number of children | |
| 1-3 | 400(88.9%) |
| 4-6 | 30(6.7%) |
| >6 | 20(4.4%) |
| Educational level of parents | |
| Illiterate | 10(2.2%) |
| Primary | 70(15.6%) |
| Middle | 170(37.8%) |
| High school | 200(44.4%) |

Table (2): Parents' knowledge and understanding about the fever.

| Questions | N=450 (%) |
|--|------------|
| What is body temp that considered fever in children? | |
| <36 | 70(15.6%) |
| 38 | 180(40%) |
| >38 | 200(44.4%) |
| Parental expectations when they consult a general practitioner due to fever in a child | |
| Obtain a physical examination | 200(44.4%) |
| Get advice on alarm symptoms | 130(28.9%) |
| Reassurance | 90(20%) |
| To obtain antibiotics | 10(2.2%) |
| To obtain paracetamol | 20(4.5%) |
| Source of information about fever | |
| Doctor | 390(86.7%) |
| Nurse | 10(2.2%) |
| Pharmacist | 49(10.9%) |
| Internet | 1(0.2%) |
| Prefer to obtain information | |
| Orally | 298(66.2%) |
| Writing | 142(31.6%) |
| Via the internet | 10(2.2%) |

Table (3): Parents' methods of self-management of a feverish child

| Questions | N(%) |
|--|------------|
| Do you give your children medication when his fever higher than 38 | |
| Yes | 271(60.2%) |
| No | 179(39.8%) |
| What is the type of fever medication | |
| Syrup | 100(36.9%) |
| Suspension | 50(18.5%) |
| Suppositories | 121(44.6%) |
| When your child has a fever, you started with | |
| Giving medication | 271(60.2%) |
| Use alternative methods | 179(39.8%) |

Table (4): Parents' concerns, attitudes, and beliefs of fever.

| Concerns, attitudes, and beliefs | N(%) |
|--|------------|
| I am concerned about the effects of high temperature | 420(93.3%) |
| fever may be useful for children's health | 20(4.4%) |
| The fever causes discomfort to the child and the parents | 290(64.4%) |
| I am afraid of fever because it causes dehydration | 200(44.4%) |
| I am afraid of febrile convulsions | 122(27.1%) |
| I am afraid of fever because it leads to brain damage | 278(61.7%) |