

## The Approach of Parents to Fever of Children: A Survey Study

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### Abstract

**Objective:** The aim of this study was to evaluate the approach of parents to fever of children and related factors. **Methods:** In this survey study, A 26-question survey was conducted the parents whose children were under 15 years of age and admitted to the department of Emergency at Ministry of Health Okmeydanı Training and Research Hospital between November 2014 and April 2015 due to fever. The survey questions included the presence of a thermometer at home, their manner of taking temperature, mother's knowledge level about fever, methods applied for reducing fever, antipyretic use and their concerns as well as the demographic characteristics. **Results:** In the study, 250 parents who were parents of 132 boys and 128 girls enrolled and the mean age of mothers, fathers and children who participated in the study were 25, 29.3 and 3.6 years, respectively. Most of the families (81.2 %) were nuclear family which consists of mother, father and children. It was recorded that 3.2% of parents with the score 0; 19.2% of parents with the score 10; and 86.4% of parents with the score 5 according to fever concern scale rated from 0 to 10. **Conclusion:** Parents should be informed correctly about fever in children to prevent fever phobia that causes an excessive number of unnecessary applications to the emergency department, high health care cost, and labor loss at hospitals by physicians and public informative publications.

**Keywords:** Fever; Parent; Attitude; Phobia.



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### 1. Introduction

Fever is one of the common reasons for applying to the emergency department, as it is commonly seen as a symptom in childhood and makes parents worried [1]. Fever is a natural defense mechanism and only a few children with fever have a serious life-threatening infection, but that can affect their life quality [2, 3]. However, families can use wrong and/or harmful methods to reduce fever with unnecessary fear and panic [4]. The inadequate knowledge of parents about fever and its treatment, low education level of the mother, the number of children in the family, and the area of residence was reported to be factors that affect the approach of mother to the child with fever [3, 5]. The recommendations of physicians to parent about giving antipyretic to relieve child, even in normal or a low-grade fever lead improper beliefs and thoughts about fever in the parents [6]. Children have fever mostly during the first three ages and the fever was observed to be the first reason of the emergency service applications at these ages [2, 7, 8]. Fever was reported to be an important part of the emergency service applications, resulting in unnecessary occupations and labor loss. It was reported that the fever was not detected in most children who were admitted to emergency department due to fever [2, 9, 10]. On that ground, it was aimed to evaluate the approach of parents to fever of children and related factors.

### 2. Method

In this survey study, A 26-question survey was conducted the parents whose children were under 15 years of age and admitted to the department of Emergency at Ministry of Health Okmeydanı Training and Research Hospital between November 2014 and April 2015 due to fever. If body temperature is measured above 37.2 °C in the armpit, a measured temperature is defined as fever [11]. Fever is defined as a low-grade fever (37.2-38.4 °C), a mild fever

(38-38.5 ° C), a moderate fever (38.5-39 ° C), a high fever (39-40 ° C), and the hyperpirexia (40.5 ° C and above) [12]. The questionnaire used as a data collection tool was composed according to textbooks and published studies. In the questionnaire, a total of 15 questions about some descriptive characteristics of the parents and parents' knowledge and practice about fever management was evaluated. The survey questions included the presence of a thermometer at home, their manner of taking temperature, mother's knowledge level about fever, methods applied for reducing fever, antipyretic use and their concerns as well as the demographic characteristics. The body temperature of children measured at the admission. The written consent form was received from parents who participated in the study. Standard descriptive statistical methods were used. Patients' ages were described as range, median and mean  $\pm$  standard deviation. Calculated percentages of variables were described with decimals. Variables including such as washing the child with warm water and undressing the child were compared by Pearson  $\chi^2$ .

### 3. Results

In the study, 250 parents who were parents of 132 boys and 128 girls enrolled and the mean age of mothers, fathers and children who participated in the study were 25, 29.3 and 3.6 years, respectively. Most of the families (81.2 %) were a nuclear family, which consists of mother, father, and children. The mean number of children in the family was two; six mothers were uneducated. Normal body temperature between 35.5-36.4 ° C could be revealed by 58% of parents. Fever ( $> 37.2$  ° C) was defined correctly by 49% of parents. It was recorded that 3.2% of parents with the score 0; 19.2% of parents with the score 10; and 86.4% of parents with the score 5 according to fever concern scale rated from 0 to 10. Thermometer use was recorded in 52 % of them and 64 % of them measured in the armpit of the child. According to 78% of families fever was supposed to be a disease and 91.6 % of families thought that fever is harmful. Convulsion was defined to be damage related fever by 83.8%. Only 56% of them took into consideration the advice of the physician about reducing the fever. Undressing (52%), shower with warm water (32%), and antipyretic (62%) were revealed implementations against the fever. The mothers (88%) who failed to reduce fever at home took their children to physicians and 4 % of them revealed to wait without doing anything. The most preferred antipyretic was paracetamol with a percentage of 72%. The parents (56 %) adjusted the dose according to the physician's recommendation. They revealed to use antipyretic at an interval of 4-hour (52 %) and  $\geq 38$ ° C (56 %). Inaccurate applications for fever, such as scrubbing with alcohol or vinegar mixture, dressing with water were reported in 12% of them. The parents with higher education level had a more correct approach about fever of children, such as washing the child with warm water ( $p=0.027$ ) and undressing the child ( $p=0.025$ ), compared to parents with lower education level increase, respectively.

### 4. Discussion

The fever is a symptom and knowing the causes of fever leads to correct administration of fever. In the early and correct intervention to fever of children, parents should know the definition of fever and correct methods of reducing fever. The majority of the mothers in the study revealed the warm shower and taking off the clothes to reduce fever, but some parents described to apply wrong methods to reduce fever. Parents' concern about the fever of children frequently leads erroneous practices to reduce the fever. The attitudes of parents about fever management vary by country [8]. It was reported that half of parents check the body temperature of children without a thermometer and armpit is the most common site for measurement of fever [2, 4, 5, 9]. The knowledge and attitudes of parents about fever vary by socioeconomic status, education level, and parents' ages [3, 13]. The knowledge level of mothers decreases by older ages in the study of Taştan, *et al.* [3]. The approach of parents was reported to be more correct in related to socio-cultural level and younger age [4]. In our study, higher education level was related to the correct approach to fever. Inaccurate implementations were recorded in one tenth of parents in our study, as the rate of water and vinegar mixture use was reported to be 40.5%, and alcoholic water was 8.25% in another study from Turkey [14]. Crocetti and colleagues reported the rates of alcohol use as 18% to reduce fever [9]. It is obvious that parents should be informed about the approach to fever by family physicians and public informative publications, as there are still parents who implement inaccurate methods. Schmitt described the concerns of families about fever as "fever phobia" in his study in 1980 [10]. There are still studies indicating that fever phobia continues, as Crocetti *et al* and Nerkiz *et al* reported [9, 15]. Disinformation and insufficient knowledge about fever are important factors related to fever phobia. Concerns about the disinformation that fever is a serious disease and causes febrile convulsion lead to erroneous attitude to reduce the fever [9, 10, 16, 17].

### 5. Conclusion

Parents should be informed correctly about fever in children to prevent fever phobia that causes an excessive number of unnecessary applications to the emergency department, high health care cost, and labor loss at hospitals by physicians and public informative publications. Fever should be questioned whether it was measured with a thermometer, as some mothers define the fever without using a thermometer, just touch to the skin of the child. In addition, parents should be questioned about the method to reduce the fever to follow up children about the complications of the wrong methods and to educate the parents about how the fever should be reduced appropriately and correctly.

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