

A cross-sectional study of anxiety, knowledge and behavior in pediatric fever management amongst German parents

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Background

- Fever is a common symptom in children.
- Many parents have irrational fear regarding potential harms.
- Since 1980 this phenomenon is called “fever phobia” (1).
- High level of anxiety leads to overuse of antipyretics.
- A substantial lack of knowledge has been observed (2).

Aims

To assess:

- the level of confidence/anxiety in German parents,
- the level of knowledge about fever,
- use of antipyretics and further measures.

Methods

- A 25-item self-administered questionnaire was developed to study parents’ knowledge and behavior towards fever.
- “Knowledge”: questions about the basic knowledge about fever, such as fever temperature.
- “Behavior”: questions about administering antipyretics and non-medical behaviors such as calf wrap.
- The questionnaire was mostly multiple choice, with several open and 10-Likert-scale questions.
- Parents answered the questions during the pickup time from one of the 17th participating kindergartens in Saarland, Germany in 2017-2018.
- At the time of the study children were healthy.

Results

Participants:

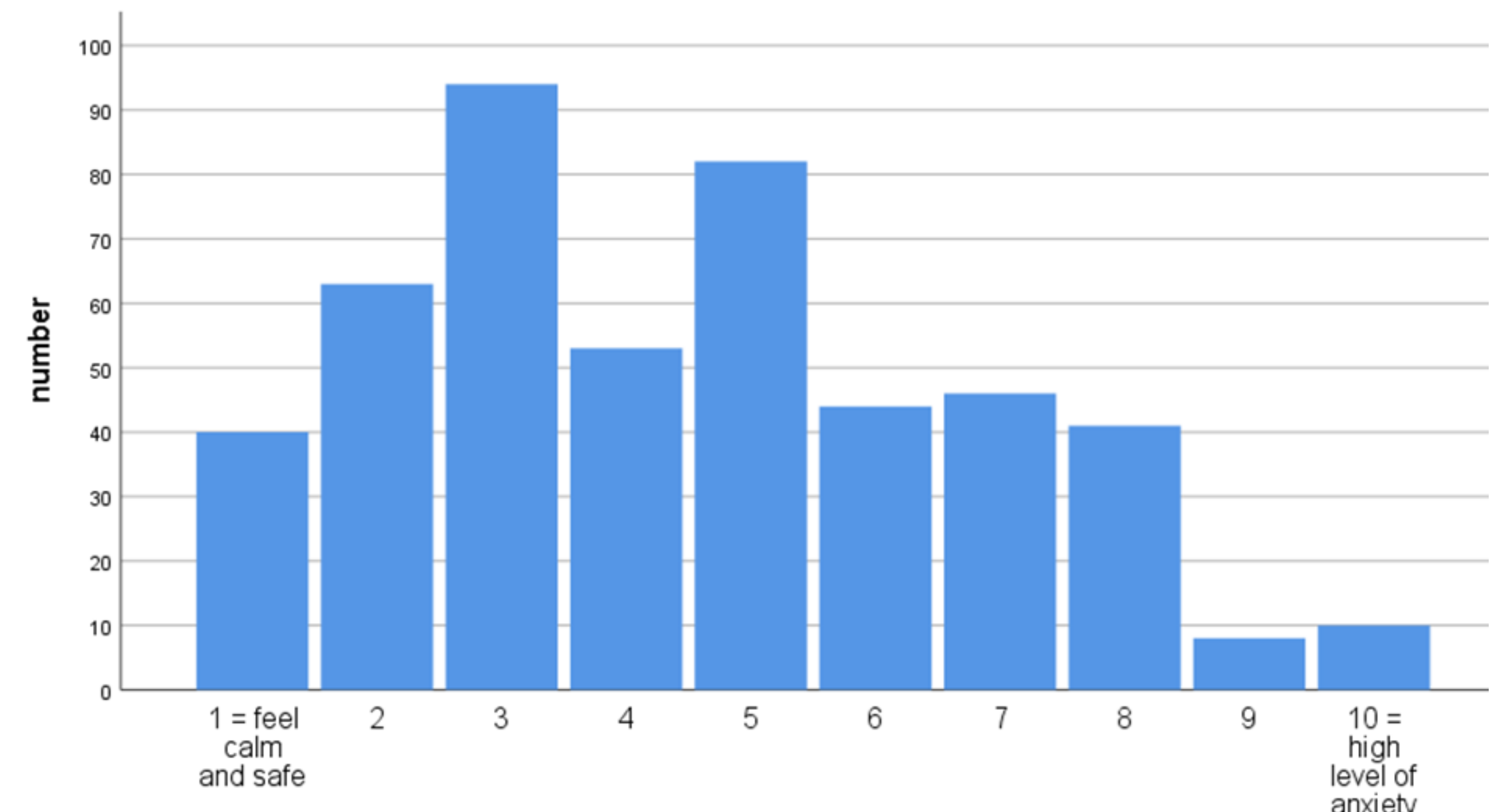
481 parents participated in the study, out of which 394 (82%) were female. The mean and median age of mothers (SD=5; range: 23-52) and fathers (SD=6; range: 28-64) in years were 37 years (IQR=33-41). The majority of participants had 2 children (52%).

| Demographics | N (%) |
|---------------------------|----------------------|
| Gender | |
| Female | 394 (82) |
| Age | |
| Mothers | Mean 37 years (SD=5) |
| Fathers | Mean 37 years (SD=6) |
| Education level | |
| No education | 5 (1) |
| High school | 43 (8.9) |
| College | 265 (55) |
| University degree | 153 (31.8) |
| No answer/missing | 14 (2.9) |
| Occupation | |
| Without a job | 83 (17.3) |
| Part-time | 234 (48.6) |
| Full-time | 130 (27) |
| Retired | 10 (2.1) |
| Student | 2 (0.6) |
| No answer/missing | 21 (4.4) |
| Number of children | |
| 1 | 163 (33.9) |
| 2 | 252 (52.4) |
| 3+ | 66 (13.8) |

Conclusions

Despite a better level of knowledge in comparison with other studies, German parents still express a notable level of anxiety regarding pediatric fever, leading to unnecessary measures. Educating parents about fever, its benefits and the ways to manage it, seems important and necessary.

Figure 1: Parental confidence/anxiety when child has fever



Confidence/anxiety:

- Mean 4.47 (SD= 2.27)
- The answers were dichotomized (1-5) and 69% of participants reported they feel calm when their child is feverish.

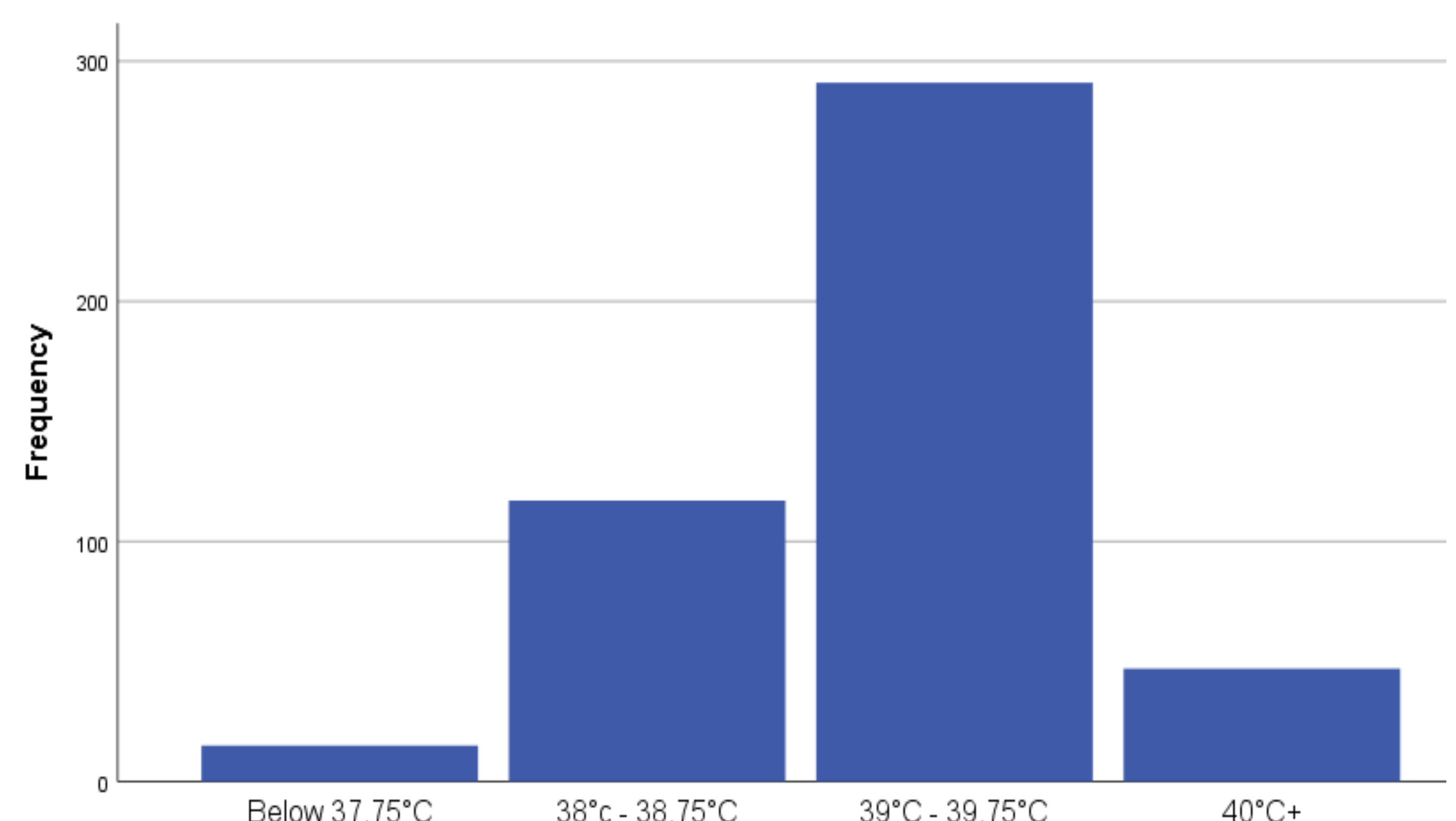
Knowledge:

- On a 10-point Likert Scale (1 being useful and 10 being harmful) mean of 3.05 (SD=2.03) was achieved; binary (1-5) 89.6% of parents found fever useful.
- Fever was defined between 30 to 40.1°C (mean 38.5, SD=.7).
- Frequent location of measurement were rectum (69%) and ear (47%).
- 95% (n=216) of parents use calf wrap to reduce temperature.

Behavior (Medication):

- Reasons to administer antipyretics were:
 - to improve the physical wellbeing of their child (75%),
 - to reduce child’s stress (burden) (60%),
 - to prevent febrile seizures (56%),
 - to prevent possible damage caused by high temperature (43.5%).
- Ibuprofen (72%) is preferred, compared to Paracetamol (56%).
- 66.5% of parents would not alternate the both antipyretics.

Figure 2: Temperature parents administer antipyretics



1. Schmitt BD. Fever phobia: misconceptions of parents about fevers. Am J Dis Child. 1980;134(2):176-81.

2. Bong WT, Tan CE. Knowledge and Concerns of Parents Regarding Childhood Fever at a Public Health Clinic in Kuching, East Malaysia. Open Access Maced J Med Sci. 2018;6(10):1928-33.