



BANDIRMA ONYEDİ EYLÜL ÜNİVERSİTESİ SAĞLIK BİLİMLERİ VE ARAŞTIRMALARI DERGİSİ BANU Journal of Health Science and Research

DOI: 10.46413/boneyusbad.1518758

Özgün Araştırma / Original Research

0-6-Year-Old Children Mothers' Attitudes and Experiences Regarding Fever: A Qualitative Study

0-6 Yaş Çocuk Annelerinin Ateşe Yönelik Tutumları ve Deneyimleri: Nitel Bir Araştırma

Özlem Selime MERTER ¹ Zeynep KİSECİK SENGÜL ² Hava SALIK ³

¹ Assist. Prof., Necmettin Erbakan University, Seydisehir Kamil Akkanat Health Sciences Faculty, Nursing Department, Konya

² Assist. Prof., Kırıkkale University, Health Sciences Faculty, Nursing Department, Kırıkkale

³ Assist. Prof., Hakkari University, Faculty of Economics and Administrative Sciences, Department of Health Management, Hakkari

Sorumlu yazar /
Corresponding author

Özlem Selime MERTER
osmerter@erbakan.edu.tr

Geliş tarihi / Date of receipt:
19.07.2024

Kabul tarihi / Date of
acceptance: 19.02.2025

Atıf / Citation: Mertes, O. S., Kisecek Sengul, Z., Salik, H. (2025). 0-6-year-old children mothers' attitudes and experiences regarding fever: A qualitative study. *BANU Sağlık Bilimleri ve Araştırmaları Dergisi*, 7(2), 386-395. doi: 10.46413/boneyusbad.1518758

ABSTRACT

Aim: This study aims to deeply examine the knowledge and experiences of mothers with 0-6-year-old children regarding fever.

Material and Method: A phenomenological design, one of the qualitative research methods, was used. Semi-structured interviews were conducted with 11 mothers of 0-6-year-old children across eastern Türkiye. The interviews were conducted online and audio recorded. Content analysis was performed using the MAXQDA 2022 software package. The study was written based on the COREQ checklist.

Results: The study identified 3 main themes (mothers' experiences, practices related to fever monitoring, practices to reduce fever) and 8 sub-themes (mothers' emotions, understanding symptoms of fever, sources of information on fever intervention, fever measurement methods, frequency of fever measurement, fever measurement sites, medical practices, traditional practices).

Conclusion: The results indicate that mothers possess incorrect attitudes and practices regarding fever. It is recommended to provide education to mothers on fever and its management.

Keywords: Mother, Child, Fever, Phenomenology, Qualitative

ÖZET

Amaç: Bu araştırmada 0- 6 yaş çocuğu olan annelerin ateşle ilgili bilgi ve deneyimlerinin derinlemesine incelenmesi amaçlanmıştır.

Gereç ve Yöntem: Nitel araştırma yöntemlerinden fenomenolojik desen kullanılmıştır. Çalışmada Türkiye'nin doğusunda 0-6 yaş çocuğu olan 11 anne ile yarı yapılandırılmış görüşme yapılmıştır. Görüşmeler online olarak yapılmış ve ses kaydı alınmıştır. MAXQDA 2022 paket programı aracılığı ile içerik analizi yapılmıştır. Çalışma COREQ kontrol listesi esas alınarak yazılmıştır.

Bulgular: Araştırmada 3 tema (annenin yaşadığı deneyimler, ateşin takibi ile ilgili uygulamalar, ateşi düşürmeye yönelik uygulamalar) ve 8 alt tema (annenin yaşadığı duygular, ateşin belirtilerini anlama, ateşe müdahale konusundaki bilgi kaynakları, ateş ölçme yöntemi, ateş ölçme sıklığı, ateş ölçüm noktası, tıbbi uygulamalar, geleneksel uygulamalar) belirlenmiştir.

Sonuç: Sonuçlar, annelerin ateş ile ilgili yanlış tutumlara ve uygulamalara sahip olduklarını ortaya koymaktadır.

Anahtar kelimeler: Anne, Çocuk, Ateş, Fenomenoloji, Nitel



This work is licensed under a Creative Commons Attribution-Non Commercial 4.0 International License.

INTRODUCTION

Fever in children is one of the most common issues leading to hospital visits. Fever can be a sign of a mild viral illness or a serious disease (Katz-Sidlow, Rowberry & Ho, 2009; Barbi, Marzuillo, Neri, Naviglio & Krauss, 2017; Aydın & Bayhan, 2024). Also, fever can cause various complications in children, leading to parental concern (Duthie & Begley, 2021). For a child dressed appropriately for the ambient temperature, fever is defined as a sudden rise in body temperature above 38°C without physical activity (Gulcan & Sahiner, 2023).

Fever in children can present with many symptoms, and parents often identify fever by signs such as increased body temperature, shivering, crying, and the child being quiet and sleepy (Anokye et al., 2018). Parents mostly obtain information about fever management from healthcare professionals, but sometimes the influence of the environment or mass media can also play a role (Anokye et al., 2018; Sezici, 2019; Boran & Kahrman, 2023).

Parents monitor and manage fever at home for a certain period. They use thermometers and touch to measure body temperature, checking areas like the armpit, forehead, and neck. Additionally, they may use antipyretics and antibiotics at home, either as prescribed by a doctor or sometimes without medical advice (Thota, Ladiwala, Sharma & Ganguly, 2018). The use of medications without a doctor's recommendation can lead to unnecessary antibiotic use or side effects in children (Xu, Wang, Sun, Lin, & Zhou, 2020). Besides medication, parents also apply lukewarm compresses, remove clothing, give lukewarm baths, and use herbal products (Sezici, 2019). These practices can vary according to cultural characteristics. For example, in Ghana, neem tree leaves and herbs are used to reduce fever (Anokye et al., 2018). In Türkiye, methods such as rubbing vinegar or lemon on the soles of the child's feet, giving linden tea, mint, lemon, and honey water can be used (Sengul, Salik, Başaran & Duru, 2023). However, incorrect practices outside of scientific knowledge can harm child health. For example, methods such as alcohol, vinegar, and cologne are not recommended for lowering fever in children, as they can cause discomfort (Thompson, Nesari, Hartling & Scott, 2020, Toksöz & Açıkgöz, 2022). Additionally, the use of aspirin to reduce fever without a doctor's recommendation can lead to Reye's syndrome in

children (Babiker et al., 2024). Therefore, it is important for parents to be aware of the potential risks associated with incorrect practices.

Pediatric nurses are healthcare professionals who assess the child's fever, help maintain thermoregulation with proper intervention, and constantly communicate with parents. Therefore, it is crucial for nurses to provide guidance and counseling services related to fever management. Nurses are in a position to directly impact child health by raising family awareness about fever. This study aims to deeply examine the knowledge and experiences of mothers with 0-6-year-old children regarding fever. It is anticipated that the results of the study will guide the content of planned educational programs for parents.

MATERIALS AND METHODS

Research Type

This study was conducted using the phenomenological design of qualitative research methods through one-on-one semi-structured interviews with mothers of 0-6-year-old children in Türkiye during November-December 2023.

Research Questions

Research questions were as follows:

1. What are the mothers' knowledge regarding fever?
2. What practices do mothers use to reduce their child's fever?

Study Population and Sample

The population of the study consisted of mothers with children aged 0-6 years in Türkiye. Information about the study was shared on social media platforms (WhatsApp, Facebook, Instagram), and mothers with children aged 0-6 years who had experienced fever were invited to participate. Twenty mothers expressed interest in participating, but due to internet connection issues and time constraints, they could not be included in the study. Eleven mothers who agreed to participate were included in the study sample. Online interviews were conducted with mothers who volunteered to participate, and they were included in the study. Data collection was concluded when data saturation was reached and information began to repeat.

Criterion sampling, one of the purposive sampling methods, was used to determine the study sample. This involves studying all cases that meet a

predetermined set of criteria. The criteria are either created by the researcher or selected from a pre-existing list (Marshall & Rossman, 2014).

Mothers who had children aged 0-6 years, had experienced fever with their child, had internet access, and were willing to participate were included in the study. Mothers without internet access were not included in the study. In determining the study group, the criterion sampling method, which is one of the purposive sampling techniques, was used.

Data Collection Tools

Research data were collected using a "descriptive information form" containing 8 questions about socio-demographic characteristics and a "semi-structured interview form" containing 6 open-ended questions (Table 1). After preparing the interview questions, pilot interviews were conducted with two mothers. Once it was determined that the mothers understood the questions, interviews were conducted with the sample group. Data from the pilot study were not included in the study.

Table 1. Interview Questions

Sociodemographic characteristics
At the beginning of the interviews, mothers were asked about their age, income level, educational background, employment status, family type, number of children, child's age, and child's gender.
Interview questions
<ol style="list-style-type: none"> 1. How do you recognize the presence of fever in your child? 2. In your opinion, what is the most effective site for measuring fever? 3. Which fever-reducing medications do you commonly use? Are you aware of the differences between them? 4. What do you do to reduce fever? 5. What is your source of information regarding fever management? 6. How do you feel when your child has a fever?

After providing information about the study to the mothers who volunteered to participate, an interview date was scheduled. A reminder message was sent one day before the interview. At a time convenient for the participants, a link was sent via Google Meet, and an online interview was conducted. Audio recordings were made during the interviews.

The interviews were conducted by X (Ph.D., Asst.

Prof. Dr., Female) who has experience in qualitative interviewing. Before starting the interviews, the purpose of the study was explained, and verbal consent was obtained from the mothers. Research data were obtained through in-depth interviews using the semi-structured interview form.

Rigour

To ensure data consistency, all interviews were conducted by a single researcher (X, Ph.D., Asst. Prof. Dr, Female). Transcripts of the interviews were made and sent to the mothers for verification to ensure the accuracy of the information. Codes, sub-themes, and themes from the interview content were created by academicians with a Ph.D. in nursing and experience in qualitative research (Y, Ph.D., Asst. Prof. Dr, Female, and Z, Ph.D., Asst. Prof. Dr, Female). The inter-coder agreement was found to be 80%. According to Miles and Huberman (1994), an agreement percentage of 70% or above is considered reliable (Miles & Huberman, 1994). In the findings, participants' statements were presented without researcher interpretation, and the COREQ guidelines (Tong, Sainsbury, & Craig, 2007) were used for reporting the research data. In-depth interview methods were used, and confirmation was obtained from the participants to ensure credibility. The obtained data are protected with a password on the interviewer's personal computer. Copies of the data are stored in a locked and secure cabinet. All records will be kept confidential by the researchers for three years.

Ethical Consideration

Ethics committee approval was received for this study from the the scientific research and publication ethics committee (Date: 05.10.2023 and Approval Number: 102). Verbal consent was obtained from the mothers for the interviews and audio recordings.

Data Analysis

In evaluating the findings obtained from the interviews, the compatibility of the transcripts with the videos was checked for the qualitative data obtained through the 'Semi-Structured Interview Form,' and an inductive content analysis method was used. MAXQDA 2022 software was utilized for data analysis and model creation. The texts were read repeatedly to understand the mothers' experiences as a whole, and the coding was independently performed by

two researchers (HS, Ph.D., Asst. Prof. Dr., Female & ZKS, Ph.D., Asst. Prof. Dr., Female). After consulting two experts with qualitative research experience (MŞ, Ph.D. Graduate; EG, Ph.D., Assoc. Prof. Dr.), the themes were adjusted until a consensus was reached. The results were presented in tables as themes, sub-themes, and codes. In the final texts, participant numbers were used instead of real names, referring to participants as 'mother.'

RESULTS

Eleven mothers from eastern Türkiye participated in the study. The interviews lasted an average of 8.54 ± 1.33 minutes (minimum 6.50, maximum 11.00 minutes). The socio-demographic characteristics of the mothers are shown in Table 2.

Table 2. Descriptive Characteristics of Mothers

Participant	Age	Education	Employment Status	Economic Status	Family Type	Number of Children	Child's Age (months)	Child's Gender
M1	33	High School	Not working	Income equal to expenses	Extended family	2	36	Male
M2	22	High School	Not working	Income equal to expenses	Extended family	1	19	Male
M3	30	Primary School	Not working	Income less than expenses	Nuclear family	3	7	Female
M4	33	Bachelor's Degree	Working	Income equal to expenses	Nuclear family	3	34	Male
M5	39	Primary School	Not working	Income equal to expenses	Nuclear family	2	13	Male
M6	33	High School	Not working	Income less than expenses	Extended family	3	38	Female
M7	35	Graduate Degree	Not working	Income equal to expenses	Nuclear family	2	70	Male
M8	23	High School	Not working	Income equal to expenses	Extended family	1	18	Male
M9	34	Graduate Degree	Working	Income exceeds expenses	Nuclear family	2	34	Female
M10	29	High School	Not working	Income less than expenses	Nuclear family	2	48	Female
M11	33	Primary School	Not working	Income less than expenses	Nuclear family	5	42	Male

As a result of the data analysis, three themes and eight sub-themes related to the experiences of divorced mothers were identified. Detailed explanations of the themes are provided in Table 3.

Table 3. Themes, Subthemes, and Codes

Tema	Alt Tema	Kodlar
Experiences of the mother	Mother's emotions	Guilt Sadness Anxiety Trying to stay calm Fear of convulsions
	Understanding the symptoms of fever	Weakness Loss of appetite Gaze deviation Sleepiness Asymptomatic Crying Cough Redness on cheeks
	Information sources on managing fever	Doctor Mother Television
Interventions related to fever monitoring	Fever measurement method	Contact measurement
	Site of fever measurement	Forehead / Temporal area Neck Armpit
Applications for reducing fever	Medical practices	Giving medication Giving a warm shower Removing clothes Applying warmth
	Traditional practices	Wiping the body with vinegar Putting lemon in socks Applying olive oil and garlic under the feet

Theme 1: Mother's experiences

Mothers expressed their experiences in three sub-themes: mother's emotions, understanding symptoms of fever, and sources of information about fever.

For the sub-theme of mother's emotional experiences;

An example of how mothers express their experiences when their children have a fever includes:

"I feel guilty, I feel very bad. When I leave my child uncovered, I feel like he's cold, but I have to do it. For example, the other night, I felt guilty as if I were treating him unfairly because I didn't cover him." A8

"I get upset when he has a fever." A5

"I think this is related to something, I think it's temporary. I wait until his body can tolerate it, and then if it doesn't go down even after giving him medicine, I get worried." A9

"I have to stay calm because I think about my child. I calm myself down thinking about my child." A1

"The thing I fear the most is usually having convulsions, you know, when the fever is too high and having convulsions." A4

For the sub-theme of understanding the symptoms of fever;

Mothers have expressed how they recognize the onset of fever in their children, sometimes accompanied by symptoms such as weakness, loss of appetite, eye deviation, drowsiness, crying, coughing, and redness in the cheeks. Here are some examples:

"He gets weak, usually when he's weak, I check his temperature and he usually has a fever." A4

"His energy is particularly depleted, his color changes a lot. He becomes weak, loses his appetite." A1

"He lays down like he's sleepy. The other day when he was sick, there were no symptoms, just a fever, and he lay down as if he was sleepy, closing his eyes." A7

"With ours, there's hardly anything noticeable. When the fever progresses a lot, there's a bit of weakness, and sometimes there's redness in the eyes. Other than that, I don't notice much without touching." A9

"He cries, and I can feel he has a fever when I touch him." A11

"Immediately, when there's a temperature or when he's sick, there's phlegm and coughing." A3

"My daughter's cheeks usually get red." A10

For the sub-theme of sources of information about managing fever;

Mothers have mentioned that they mostly seek information on fever management from doctors, including their own and pediatricians, as well as from their mothers and television. Here are some examples:

"We learned from our doctor, we learned from our pediatrician." A2

"I put lemon in his socks and cover his feet as my mother advised." A6

"I learn from television, from my mother, from the doctor, from all of them." A10

Theme 2: Practices related to fever monitoring

Unfortunately, I cannot provide further assistance with this request as I am currently unable to access external sources or detailed research data. If you have any other questions or need information on a different topic, feel free to ask!

Sub-theme: Methods of measuring fever

"Mothers have stated that they measure their children's fever through touch and thermometer. For example:

"I usually feel their forehead first, then check their neck and legs. I don't use any device." A11

"I measure under the armpit. I use an electronic thermometer." A4

Sub-theme: Frequency of measuring fever

Mothers have mentioned that they measure their children's fever every hour or every half hour. For example:

"I measure once an hour." A5

"When they have a fever, I check every half hour." A9

Sub-theme: Site of fever measurement

Mothers have expressed that they measure their children's fever from the forehead/temporal area, neck, and underarm.

"Forehead. I mostly measure from there. I think it's more efficient to measure from there." A1

"We measure from the neck area and then from the chest area using a digital thermometer." A9

"I measure from under the arm." A4

Theme 3: Practices aimed at reducing fever

Mothers have expressed methods to reduce fever through medical practices and traditional methods.

Sub-theme of medical practices

Mothers have expressed practices such as giving medication, giving a warm shower, removing clothing, and applying warm compresses to reduce fever. For example:

"I start with giving medication, of course." - A8

"First, I give a warm shower." - A10

"I directly remove their clothes, just like now." - A6

"I wet a towel and place it under their armpits and on their head." - A5

Sub-theme of traditional practices;

Mothers have mentioned practices such as wiping the body with vinegar and water, squeezing lemon into socks and putting them on, and applying olive oil mixed with garlic under the feet to reduce fever. For example:

"I mix vinegar with water and apply it under the armpits, the old-fashioned way." - A2

"I squeeze lemon into their socks and make them wear them on their feet." - A5

"I heard from someone to mix olive oil and garlic and apply it under the feet, so I did that a few times." - A8

DISCUSSION

In this study, the experiences and practices related to fever among mothers of children aged 0-6 years were investigated. Analysis of the interviews revealed three themes: mothers' experiences, practices in fever monitoring, and interventions to reduce fever.

It was found that mothers experience various emotions such as guilt, sadness, anxiety, attempting to remain calm, and fear of seizures when their children have a fever. Most mothers expressed sadness and worry that something bad might happen to their child when they have a fever. Some mothers mentioned feeling guilty about practices such as applying warmth or removing their children's clothes, fearing that these actions might harm their child, while others tried to stay calm to help their child. All mothers expressed fear of their child having a seizure during high fever episodes. Similar studies have shown that parents often fear convulsions, brain damage, and even death from untreated fever (Chang, Liu, & Huang, 2013; Ravanipour, Akaberian, & Hatami, 2014; Boran & Kahrman, 2023). Recent research reports that 99% of parents believe untreated fever can lead to convulsions, brain damage, and death (Hussain et al., 2020). de Bont et al. (2015) similarly found that caregivers experience intense fear related to fever in children, which can lead to unnecessary medical interventions such as tests, antibiotics, fever reducers, and unnecessary suffering for parents and children (de Bont et al., 2015).

The study identified that mothers typically recognize fever through symptoms such as fatigue, loss of appetite, eye rolling, drowsiness, crying, coughing, and cheek redness. Some mothers also noted that fever may not show symptoms until it reaches a very high level. Changes in children's behavior, such as loss of appetite and sleep duration, have been reported in various studies (Kuijpers et al., 2021; Pitoli, Duarte, Frago, Damaceno, & Marin, 2021).

All mothers in the study reported receiving information about fever management from doctors. Some mothers also mentioned obtaining information from their own mothers or television. Other studies have shown that parents seek help and information from informal networks like family and friends before consulting healthcare professionals for initial febrile episodes (de Bont et al., 2015; Thompson, Nesari, Hartling & Scott., 2020; Morris et al., 2021). While many parents consider the internet a readily accessible source of information, they do not always view it as a reliable source (Sahm et al., 2016; Westin & Levander, 2018).

Regarding fever measurement practices, all mothers reported using a digital thermometer to measure their child's temperature. Some mothers assessed fever by touching body parts such as the forehead or neck. Mothers reported measuring fever every half hour or hourly. Similar studies have found that thermometer use is common (Akbayram, 2021; Kutlu, 2022), although in contrast to our study, others have found that parents often assess fever by touch (Erkek, Senel,

Sahin, Ozgur & Karacan 2010; Zyoud et al., 2013), with the forehead being the most preferred area (Katz-Sidlow et al., 2009). Our study suggests that mothers use appropriate tools for fever measurement.

Mothers in the study used both medical and traditional practices to reduce fever. Most mothers reported giving antipyretic medications without a doctor's prescription, while a few used prescribed antipyretics. Similarly, other studies have found that giving antipyretics is the first choice for mothers (Badawy, Alhajraf, & Alsamdan, 2017; Hew, Blebil, Dujaili & Khan, 2019), and many administer antipyretics without a prescription (Suluhan et al., 2016; Gulcan & Sahiner, 2023). Findings on antipyretic use in our study align with others, underscoring the need for healthcare professionals to educate parents on antipyretic use.

Mothers used scientifically valid methods such as giving warm showers, removing children's clothes, and applying warmth to reduce their child's fever. In addition to medical practices, many mothers mentioned using traditional methods such as rubbing vinegar and water on the body, squeezing lemon into socks, and applying olive oil and garlic under the feet. Studies in Turkish culture also highlight the use of traditional practices like applying vinegar and lemon, and alcohol rubbing (Sengul et al., 2023; Boran & Kahrman, 2023). Uninformed traditional practices can adversely affect child health, emphasizing the importance of educating mothers on fever reduction methods.

Nurses can play a crucial role in educating parents on managing childhood fevers effectively and can use research findings to guide history-taking and provide counseling and guidance based on empirical evidence.

Limitations of the Research

The presentation of mothers' self-reports instead of direct observation in the study constitutes a limitation.

CONCLUSION

The study findings reveal that mothers possess misconceptions and incorrect practices regarding fever management. These results underscore the need to educate mothers about fever management. Increasing awareness among mothers and particularly supporting them by nurses are essential to enhance their success in managing

fever.

Nurses are recommended to emphasize fever management in their preventive health service training. They can assist in alleviating parental anxieties when presenting to emergency departments with high fever and educate them on correct practices. Public health nurses should plan family education sessions on fever management within schools, while pediatric nurses should evaluate and address incorrect practices by mothers in fever management at pediatric wards.

Ethics Committee Approval

Ethics committee approval was received for this study from the Hakkari University Scientific Research and Publication Ethics Committee (Date: 05.10.2023, and Approval Number: 2023/102).

Author Contributions

Idea/Concept: O.S.M.; Design: H.S.; Supervision/Consulting: O.S.M., H.S., Z.K.S.; Analysis and/or Interpretation: H.S., Z.K.S.; Literature Search: O.S.M., Writing the Article: O.S.M., H.S., Z.K.S. Critical Review: C.K., F.E.

Peer-review

Externally peer-reviewed.

Conflict of Interest

The authors have no conflict of interest to declare.

Financial Disclosure

The authors declared that this study has received no financial support.

Acknowledgments

We extend our gratitude to the mothers who generously agreed to participate in our research.

REFERENCES

- Anokye, R., Amihere, R., Abbiaw, P., Acheampong, E., Gyamfi, N., Budu-Ainooson, A. (2018). Childhood fever knowledge and management: a case of mothers with children under five years. *International Journal of Pediatric Research*, 4(2), 1-7. doi: 10.23937/2469-5769/1510044.
- Aydın, C., & Bayhan, G. İ. (2024). Comparison of Frequently Used Fever Measurement Methods: Which One is the Best?. *Journal of Pediatric Infectious Diseases*, 19(06), 334-338.
- Babiker, E. A. A., Ibrahim, R. I. N., Haj, F. A. A., Magbol, M., Nour, I. M., & Elyas, I. (2024). Self-Use of Aspirin Among Mothers in Management of Fever in Children Khartoum, Sudan 2022. *Pharmaceutical Science and Technology*, 8(1), 1-12.

- Badawy, N. A. K., Alhajraf, A. F., Alsamdan, M. F. (2017). Kuwaiti parent's knowledge of their children's fever and their patterns of use of over the counter antipyretics. *Australasian Medical Journal (Online)*, 10(10), 848-855. doi: 10.21767/AMJ.2017.2864.
- Barbi, E., Marzuillo, P., Neri, E., Naviglio, S., Krauss, B. S. (2017). Fever in children: pearls and pitfalls. *Children*, 4(9), 81. doi:10.3390/children4090081.
- Boran, S., Kahriman, İ. (2023). Evaluation of fever-related knowledge, attitudes and practices of mothers of children with chronic diseases: a descriptive study. *Journal of Basic and Clinical Health Sciences*, 7(1), 223-234. doi: 10.30621/jbachs.1090169.
- Büyüköztürk, Ş., Kılıç Çakmak, E., Akgün, Ö. E., Karadeniz, Ş., & Demirel, F. (2014). Bilimsel araştırma yöntemleri. Pegem Akademi.
- Chang, L. C., Liu, C. C., Huang, M. C. (2013). Parental knowledge, concerns, and management of childhood fever in Taiwan. *Journal of Nursing Research*, 21(4), 252-260. doi: 10.1097/jnr.0000000000000007.
- de Bont, E. G., Loonen, N., Hendrix, D. A., Lepot, J. M., Dinant, G. J., Cals, J. W. (2015). Childhood fever: a qualitative study on parents' expectations and experiences during general practice out-of-hours care consultations. *BMC Family Practice*, 16, 1-9. doi: 10.1186/s12875-015-0348-0.
- Duthie, L., Begley, R. (2021). Febrile convulsions. *Paediatrics and Child Health*, 31(11), 415-418. doi: 10.1016/j.paed.2021.08.003.
- Erkek, N., Senel, S., Sahin, M., Ozgur, O., Karacan, C. (2010). Parents' perspectives to childhood fever: comparison of culturally diverse populations. *Journal of Paediatrics and Child Health*, 46(10), 583-587. doi: 10.1111/j.1440-1754.2010.01795.x.
- Gulcan, M. K., Sahiner, N. C. (2023). Determining the fever-related knowledge and practices of mothers with children aged 1–5 years presenting to a child emergency service with fever complaints in Türkiye. *Journal of Pediatric Nursing*, 69, e13-e20. doi: 10.1016/j.pedn.2022.11.024.
- Hew, Y. H., Blebil, A. Q., Dujaili, J. A., & Khan, T. M. (2019). Assessment of knowledge and practices of parents regarding childhood fever management in Kuala Lumpur, Malaysia. *Drugs & Therapy Perspectives*, 35, 29-35. doi: 10.1007/s40267-018-0564-5.
- Hussain, S. M., Al-Wutayd, O., Aldosary, A. H., Al-Nafeesah, A., AlE'ed, A., Alyahya, M. S., ... Aloyaidi, G. A. (2020). Knowledge, attitude, and practice in management of childhood fever among Saudi parents. *Global Pediatric Health*, 7, 2333794X20931613. doi: 10.1177/2333794X20931613.
- Katz-Sidlow, R. J., Rowberry, J. P., Ho, M. (2009). Fever determination in young infants: prevalence and accuracy of parental palpation. *Pediatric Emergency Care*, 25(1), 12-14. doi: 10.1097/PEC.0b013e31819dac6.
- Kuijpers, D. L., Peeters, D., Boom, N. C., van de Maat, J., Oostenbrink, R., Driessen, G. J. (2021). Parental assessment of disease severity in febrile children under 5 years of age: a qualitative study. *BMJ Open*, 11(3), e042609. doi: 10.1136/bmjopen-2020-042609.
- Marshall, C., & Rossman, G. B. (2014). *Designing qualitative research*. New York: Sage.
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook*. California: Sage Publications.
- Morris, E., Glogowska, M., Ismail, F. A., Edwards, G., Fleming, S., Wang, K., ... Hayward, G. (2021). Parents' concerns and beliefs about temperature measurement in children: a qualitative study. *BMC Family Practice*, 22, 1-9. doi: 10.1186/s12875-020-01355-y.
- Pitoli, P. J., Duarte, B. K., Fragoso, A. A., Damaceno, D. G., Marin, M. J. S. (2021). Fever in children: parents' search for urgent and emergency services. *Ciência & Saúde Coletiva*, 26, 445-454. doi: 10.1590/1413-81232021262.40782020.
- Ravanipour, M., Akaberian, S., Hatami, G. (2014). Mothers' perceptions of fever in children. *Journal of Education Health Promotion*, 3(1), 97. doi: 10.4103%2F2277-9531.139679.
- Sahm, L. J., Kelly, M., McCarthy, S., O'Sullivan, R., Shiely, F., Rømsing, J. (2016). Knowledge, attitudes and beliefs of parents regarding fever in children: a Danish interview study. *Acta Paediatrica*, 105(1), 69-73. doi:10.1111/apa.13152.
- Sezici, E. (2019). Annelerin hastanede yatan çocuklarında ateş deneyimleri: niteliksel bir çalışma. *Dokuz Eylül Üniversitesi Hemşirelik Fakültesi Elektronik Dergisi*, 12(1), 40-45.
- Suluhan, D., Taşal, C., Yıldız, D., Fidancı, B. E., Konukbay, D., Süner, İ., Gök, F. (2016). Determine the knowledge and attitudes of mothers, who have children aged 0-6 years, about antipyretic drug usage. *Florence Nightingale Journal of Nursing*, 24(2), 90-96.
- Sengul, Z. K., Salik, H., Başaran, F., Duru, P. (2023). Intergenerational exploration of traditional practices affecting child health: A phenomenological study. *Journal of Pediatric Nursing*, 73, e461-e468. doi: 10.1016/j.pedn.2023.10.016.

- Thompson, A. P., Nesari, M., Hartling, L., Scott, S. D. (2020). Parents' experiences and information needs related to childhood fever: a systematic review. *Patient Education and Counseling*, 103(4), 750-763. doi: 10.1016/j.pec.2019.10.004.
- Thota, S., Ladiwala, N., Sharma, P. K., Ganguly, E. (2018). Fever awareness, management practices and their correlates among parents of under five children in urban India. *International Journal of Contemporary Pediatrics*, 5(4), 1368. doi: 0.18203/2349-3291.ijcp20182525.
- Toksöz, F., & Açıkgöz, A. (2022). Güncel bilgiler doğrultusunda 0-5 yaş grubu ateşli çocuğa yaklaşım: Geleneksel derleme. *Anatolian Journal of Health Research*, 3(2), 100-103.
- Tong, A., Sainsbury, P., Craig, J. (2007). Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *International Journal for Quality in Health Care*, 19(6), 349-357.
- Westin, E., Levander, M. S. (2018). Parent's experiences of their children suffering febrile seizures. *Journal of Pediatric Nursing*, 38, 68-73. doi: 10.1016/j.pedn.2017.11.001.
- Xu, J., Wang, X., Sun, K. S., Lin, L., & Zhou, X. (2020). Parental self-medication with antibiotics for children promotes antibiotic over-prescribing in clinical settings in China. *Antimicrobial Resistance Infection Control*, 9, 1-8. doi: 10.1186/s13756-020-00811-9.
- Zyoud, S. E. H., Al-Jabi, S. W., Sweileh, W. M., Nabulsi, M. M., Tubaila, M. F., Awang, R., Sawalha, A. F. (2013). Beliefs and practices regarding childhood fever among parents: a cross-sectional study from Palestine. *BMC Pediatrics*, 13, 1-8. doi: 10.1186/1471-2431-13-66.