

# Handling Fever Seizure Emergencies at Home Based on Maternal Knowledge and Experience: A Review of Family Health Education

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**Abstract.** Febrile seizures are an emergency that can occur in toddlers and potentially followed by injury if the mother provides the wrong treatment. The lack of knowledge of mothers of toddlers about handling febrile seizures in children is caused by many factors, one of which is knowledge. This study aims to determine the level of knowledge of mothers about handling febrile seizures emergencies in children at home, in the Work Area of Kenali Besar Health Center, Jambi City. Method: This research is descriptive research. This study was conducted on 101 mothers of toddlers as a sample taken using the Proportionate Random Sampling technique. This research tool uses a questionnaire that has been tested for validity and reliability. The analysis is using descriptive analysis. Results: The results showed that most of the respondents' knowledge level as many as 57 people (56.4%) were moderately knowledgeable about handling febrile seizures. Conclusion: Most of the respondents in the Kenali Besar Health Center Working Area, Jambi City were knowledgeable enough..

**Keywords:** mothers knowledge, emergency, febrile seizures.

## 1 Introduction

Fever is one of the most common symptoms in children and infants. While fever is not a disease in itself, it is often the body's response to a possible infection. Naturally, the body temperature rises to fight off the onslaught of disease. In infants and toddlers, fever should not be ignored, especially since the child's brain at this phase is very vulnerable to sudden increases in body temperature. Fever is also a factor that can lead to febrile seizures." [1] Febrile seizures are one of the most common illnesses experienced by children, especially those under the age of five.

As many as 20% of children in the world are brought to the emergency room because they have fever and febrile seizures. [2] According to data from the World Health Organization (WHO), approximately 21.65 million people experience febrile seizures, and 216,000 of them end in death. [3] In Indonesia, in 2016, about 2-5% of children experienced febrile seizures, and 85% of them were caused by Acute Respiratory Infection (ARI). [4]

Febrile convulsions are an emergency condition that requires first treatment, followed by other emergencies in children, such as shortness of breath, persistent temperature rise, and physical injury. For children under five years old, febrile seizures are a serious health problem

if they do not receive proper initial treatment. Lack of proper initial treatment can lead to a worsening of the prognosis of febrile seizures, especially since children under 5 years old tend to be susceptible to various diseases due to the incomplete formation of the immune system at that age. [5]

The developmental process can be disrupted if the child has febrile seizures more than 4 times a year. Fever seizures suffered by children if more than 2-4 times will pose a risk of epilepsy.[6] Children who experience seizures for more than 15 minutes and occur more than once within 24 hours and do not get help immediately will have an impact on the onset of cerebral paralysis, growth delays (such as delays in motor or movement, speech delays and delays in thinking) and can even result in death.[7] Therefore, a good understanding of the first treatment is crucial to reduce the serious impact that can be caused by febrile seizures.

A mother's knowledge plays an important role in ensuring that the care she provides to her child with febrile seizures is appropriate. This allows the mother to provide the right help to the child and avoid worsening his/her health condition. For example, knowledge can influence a mother's decision on the steps to take when a child has a febrile seizure, including how to lower the child's temperature, and when to take the child to a health worker. [8]

The first treatment of febrile seizures carried out by the mother is expected to reduce the impact that may occur on the child. Maternal involvement in this situation not only helps to manage the condition more effectively but can also provide a sense of security and emotional support to the child experiencing febrile seizures. Therefore, parents' understanding of the first treatment steps is very important to minimize the risk and optimize the health of the child when experiencing febrile seizures.

## **2 Research Method**

This study used a descriptive research design, which is a study conducted to describe or describe a phenomenon that occurs in the community. This research was conducted by interviewing respondents using a questionnaire with the aim of knowing the mother's knowledge about handling febrile seizures in children at home. This study took place at the Kenali Besar Health Center with the highest number of toddler services out of 20 Puskesmas in Jambi City. The population in this study were all mothers who had children aged 0-59 months at the Kenali Besar Health Center recorded in 2023, totaling 1,982 people. The study sample size included 92 mothers, with researchers considering a dropout rate of 10%, so that the total sample size to be studied was 101. The validity test was conducted at the Kenali Besar Community Health Center in Jambi City on February 5, 2024 face-to-face with the number of participants used as many as 15 respondents. The reliability test in this study used the Alpha Cronbach reliability coefficient formula. To test the reliability of the research instrument, the researcher used a data processing program, namely SPSS. The data analysis used in this study is univariate analysis. This analysis only produces frequency distribution and percentage of each variable. For example, the frequency distribution of respondents based on age, education, occupation.

### 3 Results and Discussion

#### 3.1 Overview of the Research Location

This research was conducted at the Kenai Besar Health Center in Jambi City, which is located on Jl. Lingkar Selatan Barat III Kel. Kenali Besar Kec. Kota Baru Jambi. The Kenali Besar Community Health Center is located on the border of Jambi City and Muaro Jambi Regency, and serves four villages namely Kenali Besar, Simpang Rimbo, Bagan Pete, and Pinang Merah villages. The center provides various public health services such as health promotion, maternal and child health services, family planning, treatment, and disease prevention. Immunization activities are also routinely held every Wednesday and Friday.

#### 3.2 Respondent Characteristic

**Table 1.** Frequency Distribution of Characteristics (n=101)

No	Category	Frequency	Percentage
1	Age		
	17-25 (Late Teens)	18	17.8%
	26-35 (Early Adulthood)	61	60.4%
	36-45 (Late adult)	20	19.8%
	46-55 ( Early Elderly)	2	2.0%
2.	Education		
	Not in School	1	1.0%
	Elementary School	6	5.9%
	Junior High School	15	14.9%
	Senior High School	46	45.5%
	Higher Education	33	32.7%
3.	Jobs		
	Not Working	84	83.2%
	Civil Servant	2	2.0%
	Labor	3	3.0%
	Employee	12	11.9%
4.	Fever Seizure Experience		
	Yes	15	14.9%
	No	86	85.1%
5.	Distribution of Work Areas by Fever Seizure Experience		
	Kenali Besar	4	26.7%
	Simpang Rimbo	9	60.0%
	Bagan Pete	2	13.3%

Table 1 shows the characteristics of respondents based on the highest age, namely 26-35 years old with 61 respondents (60.4%). The characteristics of the respondents studied based on education, almost half were in the high school category with 46 respondents (45.5%). The characteristics of respondents based on the highest employment category were not working with 84 respondents (83.2%), while the lowest employment category was civil servants with 2 respondents (2.0%). The table also shows the characteristics of respondents based on experience in handling febrile seizures, the results showed that the majority never had experience in handling febrile seizures with a total of 85 respondents (85.1%), and

respondents who had experience were 15 respondents (14.9%). The distribution of work area locations based on experience in handling febrile seizures, the location with the greatest experience of respondents experiencing febrile seizures was in Simpang Rimbo Village with 9 respondents (60.0%), and the location with the least experience of febrile seizures was in Bagan Pete Village with a total of 2 respondents (13.3%)

### 3.3 Respondents' Knowledge of Fever Seizure Management

**Table 2.** Frequency Distribution of Maternal Knowledge about Fever Seizure Management

Knowledge	f	%
Good	22	21.8%
Moderate	57	56.4%
Less	22	21.8%
Total	101	100%

In table 2 it can be seen that, based on knowledge, the majority of respondents have sufficient knowledge about handling febrile seizures emergencies in toddlers in the Kenali Besar Health Center Work Area, Jambi City in 2024, namely 57 respondents (56.4%).

### 3.4 Respondents' Knowledge Based on Education

**Table 3.** Distribution of Respondents' Knowledge About Fever Seizure Management

Based on Knowledge

Education	Knowledge						n
	Good		Moderate		Less		
	n	%	n	%	n	%	
Not in School	0	0%	1	2%	0	0%	1
Elementary School	2	3.9%	4	7.8%	0	0%	6
Junior High School	3	5.9%	6	11.8%	6	11.8%	15
Senior High School	11	21.6%	29	56.9%	11	21.6%	46
Higher Education	7	13.7%	21	41.2%	5	9.8%	33

In table 3 Above it can be seen that the level of knowledge of respondents based on education, out of school is in the sufficient range of 1 (2%), elementary school is mostly in the sufficient knowledge range with a total of 4 respondents (7.8%), junior high school is mostly in the sufficient and insufficient knowledge range with an equal number of 6 respondents (11.8%), high school is mostly in the sufficient knowledge range with a total of 29 respondents (56.9%), higher education is mostly in the sufficient knowledge range with a total of 21 respondents 41.2%

### 3.5 Respondents' Knowledge Based on Fever Seizure Experience

**Table 4.** Distribution of Respondents' Knowledge about Fever Seizure Management Based on Experience

Experience Fever Seizures	Knowledge						n
	Good		Moderate		Less		
	n	%	n	%	n	%	
Yes	7	46.7%	7	46.7%	1	6.7%	15
No	15	17.4%	50	58.1%	21	24.4%	86

In table 4 above, it can be seen that the level of knowledge of respondents based on experience in handling febrile seizures, with the results of respondents who have experience as many as 15 respondents are in the good and sufficient range which is balanced by the number 7 (46.7%), the range of knowledge is less as many as 1 respondent (6.7%), and in the group of respondents who do not have experience of febrile seizures most of them are in the range of sufficient knowledge as many as 50 respondents (58.1%), less knowledge as many as 21 Respondents (24.4%), good knowledge as many as 15 respondents (17.4%).

### 3.6 Knowledge Level Based on Working Area of Kenali Besar Health Center, Jambi City

**Table 5.** Distribution of Knowledge about Fever Seizure Management by Working Area

Working Area	Knowledge						n
	Good		Moderate		Less		
	n	%	n	%	n	%	
Kenali Besar	10	22.7%	18	40.9%	6	13.6%	34
Simpang Rimbo	9	20.5%	23	52.3%	12	27.3%	44
Bagan Pete	1	2.3%	7	15.9%	3	6.8%	11
Pinang Merah	2	4.5%	9	20.5%	1	2.3%	12

In table 5 above, it can be seen that the level of knowledge of respondents is divided based on the working area, the results obtained in Kenali Besar Village are mostly knowledgeable with 18 respondents (40.9%), Simpang Rimbo Village is mostly knowledgeable with 23 respondents (52.3%), Bagan Pete Village is mostly knowledgeable with 7 respondents (15.9%), and Pinang Merah Village is mostly knowledgeable with 9 respondents (20.5%).

### 3.7 Discussion of Knowledge of Handling Fever Seizure Emergencies at Home

The results of research conducted by researchers in the Kenali Besar Health Center Work Area, Jambi City regarding maternal knowledge about handling febrile seizures emergencies in children were conducted using a questionnaire, the results of this study were obtained from 101 respondents. The results showed that 22 (21.8%) respondents had good knowledge, 57 (56.4%) respondents had sufficient knowledge, and 22 (21.8%) respondents had a poor level

of knowledge, so from these results it can be concluded that the majority of respondents had sufficient knowledge.

Knowledge can be influenced by several internal and external factors. Internal factors consist of education, age, and occupation while external factors consist of environmental and socio-cultural factors.<sup>18</sup> In addition, the level of knowledge can be influenced by the respondent's education, where some respondents have the last education, namely high school as many as 46 (45.5%) respondents, the results will be different if the majority of respondents have a higher education. From this description, the higher the level of education, the better the individual digests the information obtained and describes new problems.

In addition, knowledge of handling febrile seizures is also influenced by the age of the respondents. Most respondents were in the age range of 26-35 as many as 61 (60.4%) respondents. The older a person is, the better the level of maturity in thinking. Almost all respondents did not work or become housewives, namely 84 (83.2%) respondents. According to Notoatmodjo in Lubis (2019) the longer a person works, the higher the individual's level of knowledge will be. In this study, the majority of respondents had sufficient knowledge, this cannot be separated from the source of knowledge and interest in developing information about children's health including handling febrile seizures. The results showed that the majority of respondents had never experienced febrile seizures in their children as many as 86 (85.1%) respondents, so the respondents said they did not know how to handle febrile seizures.

#### 4 Conclusion

From the results of research obtained and data processing carried out by researchers with the title Analysis of Maternal Knowledge About Handling Fever Seizure Emergencies at Home, it can be concluded as follows:

- a. The majority of respondents are mothers of toddlers who are in the age range of 26-35 years 61 (60.4%), almost half are mothers of toddlers with high school / equivalent education 46 (45.5%), the majority of respondents do not work or are housewives 84 (83.2%), almost all respondents have no previous experience in handling febrile seizures in children, namely 86 (85.1%) respondents..
- b. The level of maternal knowledge about handling febrile seizures emergencies in children at home in the Kenali Besar Health Center Working Area, Jambi City from 101 respondents, obtained the results that the majority of respondents had sufficient knowledge as many as 57 people (56.4%).

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