

# Mothers' Experience of Febrile Convulsions in Their Children

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## Citation

Prajapati R, Karki S, Shrestha B, Manandhar S. Mothers' Experience of Febrile Convulsions in Their Children. *Kathmandu Univ Med J*. **Online First**.

## ABSTRACT

### Background

Febrile convulsion is the most common convulsive disorder in under five children. About 1 in 25 children have suffered from febrile convulsion in at least one episode. It is a very difficult condition for parents to handle their children during convulsion and they worry about the future health of the child. It is one of the frightening, emotionally traumatic, and anxiety conditions experienced by parents.

### Objective

This study intended to explore the experience of mothers on febrile convulsion in their children.

### Method

The qualitative research design was used for the study. A purposive sampling technique was applied. An in-depth interview technique was used for data collection with in-depth interview guide. A total of ten mothers were included whose children were admitted with the diagnosis of febrile convulsion. Content analysis was done for the interpretation of the experience of mothers.

### Result

Mothers expressed febrile convulsion as a serious condition for the child which leads to developing stress, fear, and anxiety among them. The majority of the mothers worried about the child's condition and they found it difficult to control themselves. Five themes emerged such as perceived threat, loss of control, need for support, utilizing health seeking behavior, and preventive measure.

### Conclusion

Although the febrile convulsion is a life-threatening situation for children and parents. experience it as an extremely fearful and anxious condition health care professionals including nurses should be providing awareness program for preventing febrile convulsions and provide home management during that situation.

## KEY WORDS

Children, Febrile convulsion, Fever, Mothers

## INTRODUCTION

Febrile convulsion is the most common childhood convulsion disorder that occurs during a fever episode.<sup>1,2</sup> It is a leading cause of hospital admissions for children under five years old.<sup>3</sup> Febrile convulsions typically happen when body temperature exceeds 38°C (100.4°F). Prevalence is around 4-10% in children under six years, with 30% experiencing recurrent seizures. It is the most common between 6 and 60 months, peaking at 18 months.<sup>4-6</sup> Febrile convulsion occurs in approximately 2-5% of children under five globally, with regional variations: 3-5% in North America and Europe, 4.1% in China, and up to 14% in India and Asian children.<sup>7-10</sup> Febrile convulsions can be separated into two categories simple and complex based on duration which is associated with a viral infection, certain vaccinations, and genetic and environmental factors.<sup>11-12</sup>

Despite the febrile convulsion having a good prognosis, it poses challenges for parents, causing stress, anxiety, sleep disturbances, and disruptions to daily life and social activities.<sup>13</sup> Parents worry about their child's future health, the possibility of recurrence, mental and physical disabilities, and even death.<sup>7,14-16</sup> Inadequate knowledge about fever and seizures, as well as a lack of preparedness to provide first aid during a seizure, contribute to parental anxiety.<sup>8</sup>

Nurses play a crucial role in addressing the concerns of parents whose children experience febrile convulsions. The challenges faced by parents have far-reaching effects on the entire family.<sup>2,17</sup> Since researchers could not find the qualitative research regarding this disease in our context. To explore mothers' experience during seizures on their children can facilitate the planning of comprehensive health care. This study aimed to explore the mothers' experience of febrile convulsion in their children.

## METHODS

A qualitative descriptive study design was used to explore the mothers' experience with febrile convulsion in their children. The study was conducted in the Pediatric Department, both the pediatric ward and the pediatric high-dependency ward of Dhulikhel Hospital. The study included mothers whose children were between six months to under five years' age and had been admitted with a diagnosis of febrile convulsion. The mothers of children with first as well as recurrence convulsions were included. A purposive sampling technique was adopted. For the study, ethical approval was obtained from the institutional review committee (IRC) of Kathmandu University School of Medical Sciences (KUSMS). Data were collected from mothers till saturation of data. A total of ten mothers were included in the study. Mothers were interviewed after the child was stable usually on the second day of admission.

The face to face in-depth interviews were conducted by first author, who was expertise in area of Child Health and had received training on qualitative research. The interview was taken by using the interview guide after obtaining informed and written consent from the mothers. Prior data collection researcher introduced herself and engaged in informal conversation regarding present child condition to establish rapport with the family and create comfortable environment. The researcher then explained the purpose of the study to the mothers along with method of data collection including audio recording and note taking as necessary. The researcher assured participants of confidentiality and anonymity and explained that the information collected would be used for researcher purposes only. Participants were explained about their right to refuse participation in the study and withdraw at any time during the data collection period. Participants were encouraged to ask questions if they had any concerns during data collection period. Data were collected in a designated corner of the pediatric ward or the pediatric high dependency ward and try to maintain privacy. Actual during the data collection no one present beside the participant during the data collections. But sometime some of their husband came with children come to mother side for some time.

The interview was recorded on an Android mobile with a voice recorder. Initially, socio-demographic information's were collected. The interview was focused on the mothers' experiences of convulsion in their children. We started with general questions followed by more specific inquiries such as "Tell me about your child's condition." this was followed by probing questions such as "How did you feel when your child had a convulsion?" Or "What happened to you when your child had developed a convulsion?", "What did you do, when your child had a convulsion?" etc. The duration of the data collection was about one hour.

Data collection reached saturation after interviewing eight mothers, as no new information emerged from their responses. To ensure completeness, two additional mothers were interviewed, bringing the total number of mothers to ten. None of the mothers refused to participate in the study. Each mother was interviewed once.

Content analysis was done following method described by Graneheim and Lundman. After each interview the recorded interview was carefully listened to and manually transcribed verbatim.<sup>18</sup> The transcriptions were then verified against the audio recordings to ensure accuracy. Each transcription was read for several times and reviewed with peers to identify underlying meanings. Then the meaning units were translated from Nepali into English. From meaning units, condensed meaning was developed and the theme was developed after categorization. The data coding was done manually.

The trustworthiness of the data was ensured. Credibility was maintained by quality checking of the transcriptions against the audio record by the authors. Further, initial coding was done by two authors (RP and SM) and further analysis was discussed among all co-authors. The findings were also validated with the field notes. For dependability, the process involved in data collection and analysis are thoroughly described in the paper. A full description of the study context was described in detail for readers to judge the extent of transferability to their context. For confirmability, the interviewer summarized the main points of the respondents to confirm what they said during the interviews. Further, confirmability was established by trying to be as objective as possible in reporting of analysis by the use of respondents' quotes wherever applicable.

## RESULTS

Overall, ten mothers were included in the study, whose children had febrile convulsion. The mother's age range from 21 to 30 years and the mean age of the mothers is 26.4 years. The majority of mothers were housewives. Most of the mothers had completed secondary-level education. More than three fourth of the children were toddlers (1-3 years). The majority of the children were male and had the first episode of the convulsion (Table 1 and 2).

**Table 1. Socio demographic information of the mothers and children (n=10)**

Mothers' characteristic	Frequency
<b>Educational status</b>	
Secondary Level	8
Higher Secondary and above	2
<b>Occupation</b>	
Housewife	7
Self-Employment	2
Service	1
<b>Age of mothers' (Mean <math>\pm</math>SD): 25.6years <math>\pm</math> 3.06</b>	
<b>D (n=10)</b>	
<b>Characteristics of Children</b>	
<b>Age of the children</b>	
Infant (6 months to 1 years)	2
Toddler	8
<b>Sex of the children</b>	
Male	7
Female	3
<b>Birth Order</b>	
First	7
Second	2
Third or more	1
<b>Disease stage</b>	
First convulsion	5
Relapsing convulsion	5

**Table 2. Categories and Theme of the Mothers' Experience on Febrile Convulsion**

Meaning Unit	Condensed Meaning	Categories	Theme
"My child had suddenly convulsion that time I felt extremely fear about the child condition."	Unexpected condition of the child	Fear about child's condition	Perceive Threat
"I felt like I would faint. My limbs shivered, headache, dizziness, body going to fall."	How this condition happened and what to do?	Loss of self-control	Loss of control
"I called people for help who were present near to me."	Supporting from others	Seeking the support	Need for support
"We went to a traditional healer first, then to medical and then hospital"	Searching for different seeking behavior for curing.	Different options for treatment	Utilizing health seeking behavior
"If fever occurs immediately, medicine should be provided to prevent recurrent convulsion."	Awareness of to prevent recurrent convulsion	Awareness of fever management	Preventive measures

### Perceived threat

When mothers faced febrile convulsion in their children, they had experienced extreme threat, and fear about the child's condition. Some of the mothers faced hopelessness, impatience, and worry about the child's future health such as the child might not be going to recover. This was support with one mother stated, "I felt anxiety. Till now I had not seen anybody with this type of condition, except in film. I felt the child might not be going to recover." P-5, age 26 years, housewife, secondary level education )

Some of the mothers were afraid something worse would happen, whether the child's life would exist or not. They did not know what happened and what activities should be carried out at the time. One of the mothers was afraid to sleep with the child and afraid to see the child's face even after the convulsion stopped. The verbatim given by the participants were presented as follows. "I was afraid something worse would happen, whether child life would exist or not." (P-8, 21 years, housewife, secondary level education). "I was extremely afraid. Child body became stiff which I had never experienced before. I felt the child was no more." (P-9, 24 years, housewife, secondary level education).

### Loss of control

While the child had sudden febrile convulsion, mothers were unaware of the situation and were confused about what activities to carry out. Some of the mothers were feeling self-unconsciousness and cold bodies. The supportive verbatim was "I felt self-nervousness, like unstable woman (in Nepali Ma aaphai bahula jastai bhayo) and confused about where to take the child for consultation." (P-4, age 30 years, housewife, secondary level education) Other

verbatim was "I felt like myself would faint, my limbs shivered, I had a headache, dizziness and felt like my body would fall down." (P-8, 21 years, housewife, secondary level education)

### Need for support

Most of the mothers felt that it was important to have support from another person during a convulsion. The mother who had faced febrile convulsion for the first time she expected support from others. The supported vibrations were: "I called people for help who were present near to me. Some people prayed for my child who was Christian, then sprinkled water on my child. After that child became slightly conscious and we brought the child to the nearest hospital." (P-1, age 26yrs, service holder, higher education). Similarly "I hurried to my uncle's house with the child to ask him what to do. Someone called an ambulance for going to the hospital." (P-5, age 26 years, housewife, secondary level education)

### Utilizing health seeking behavior

Mothers whose children had a febrile convulsion, they went to seek health care in different people and place such as traditional healers, private medical shop and nearest hospital. This was supported the verbatim as 'When child had increased fever, we went first traditional healer, then medical shop and came to hospital for further treatment.' (P-9, age 24 years, house wife, secondary level education) Similarly, "My child had a fever four to five days before, we consulted in one dispensary and treated as advised. Initially, the fever decreased slightly, but the fever relapsed again and a convulsion occurred. We all were afraid, so immediately brought the child to the hospital without any intervention." (P-9, age 30 years, housewife, higher level education).

Some of the mothers brought their children to the hospital directly for the best care., "After the occurrence of convulsion, we carried the baby and instantly came to the hospital directly." (P-2, age 25 years, self-employment, higher level education).

### Preventive measures

Most of the mothers got information about the febrile convulsion that it may reoccur till 5 to 6 years' age of children. So, they should properly manage the fever to prevent the recurrence of the convulsion as well as manage convulsion as advice. Such as "Especially I had no idea. As per health person's advice, turned the child to myself and during this stage I did not feed anything to the child, even water. during convulsion, I did not give anything and we brought the child to hospital as advised." (P-3, age 28 years, housewife, secondary level educational)

Mothers are aware, if the child's temperature increased 100° F, they will give paracetamol and sponging to prevent convulsion. One mother said, "This condition may be relapsed until the child is five years. If possible, fever should

be controlled. If fever occurs medicine should be provided immediately, then carry the child to the hospital for further management." (P-2, age 25 years, self-employment, higher level education)

Other verbatim was "If the child has raised fever, a sponge with water, paracetamol should be kept in home and given to a child to control fever. If fever is not controlled child should be brought to medical for checkup." (P-8 age 21 years, housewife, secondary level education)

Even though the mother got the information, some of the mothers believe that the febrile convulsion may be prevented by avoiding cold food for children and preventing of pneumonia. The main thing is they were concerned about the child's diet for the prevention of the condition.

Although all mothers were voluntary, there were a risk that the mothers would not feel that they could be completely open and honest in the interview because of the authors' work place. We could not take data collection in separate room which may difficult to concentration of participant. We could not share transcriptions with participants.

## DISCUSSIONS

The objective of the study was to explore the mothers' experience of their children suffering from the febrile convulsion. In this study, five themes were emerged regarding the mothers' experiences about febrile convulsion on their children. They experienced from perceived threat to adaptation and preventive measures for recurrence and complication. One of the themes reflected 'perceived threat' this showed mothers experienced fearful situations during their children faced febrile convulsion. This is also an unexpected situation that results in the development of fear and anxiety in mothers. They worry about the condition of the child because they were not aware about the convulsion; they even do not know what has happened to their child and what needs to be done in that situation. They felt that the child's condition was life-threatening, hopeless, and it would not recover. They even thought that child would be no more after facing the convulsion.

The previous study showed that in terms of perceived threat mothers believed that although febrile convulsion often had good prognosis and had no serious complications, the condition of the children is still a threat. Observing children during convulsion was a scary event for mothers. They are concerned about their children's growth and development interference in the future life of the children. They experienced feelings of disbelief, anxiety, sadness, and fear due to the probable loss of their children.<sup>7,16</sup>

Another study showed that mothers felt febrile seizure is one of the unpleasant experiences that developed fear and anxiety due to being unaware of this condition and seriousness of the seizure in the children. Many of the parents imagined that their child was dying even though

they identified it as a febrile. Parents developed a fever phobia when their children had an illness. Other studies, showed that the feeling of parental anxiety could last for some days to several years peaking at night especially when the baby feels hot.<sup>19</sup> When a child has febrile seizure, parents may experience severe anxiety and varieties of believes such as their child is going to be death.<sup>20,21</sup> The adverse outcome of febrile seizure can be frightening for parents and families although is seen by professionals as it is not serious. Parents have reacted to febrile seizure physical, psychological and behavioral responses as well as disruptions in the family's quality of life.<sup>22</sup> Similar findings in different studies showed that mothers were likely concerned about their children, and the situation is an exception for the mothers involved.

Regarding "loss of control" theme, mothers could not decide properly in this situation. Present study showed that mothers felt afraid and they could not think properly about what to do in that situation. Mothers could not cope the situation and unaware of this condition, and some felt self-nervousness. This finding is similar with the study conducted at a hospital in Iran, which showed that the mothers whose children faced febrile convulsion experienced hopelessness, disappointment and impatience.<sup>7</sup> The similar finding may be mothers were not prepared for proper management of the situation.

Another theme, the need for support was revealed in the present study. Mothers felt support from nearby persons during convulsion of their children. Some mothers called relatives and some called neighbors for help to care for children. One previous study showed that mothers tried to stop this threat in some way and maintain their children's wellbeing.<sup>7</sup>

Utilizing health seeking behavior for best care was another theme found in the study. After facing febrile convulsion on their children, mother searched the varies of possible methods such as traditional healers to hospital. Regarding the utilizing health-seeking behavior, mothers were searching for different alternatives and looking at healthcare organizations for the best care. They were searching for support from nearby people and health professionals. Even though some children were admitted to one hospital, the mother or family member requested to refer them to a better hospital. Though the children had relapsed from the convulsion they brought the children to the emergency for detailed investigation as well as for the best care. Previous studies showed that parents felt support was needed from other parents including healthcare professionals. After receiving the information about febrile seizures, they were better prepared to deal with recurrent seizures.<sup>19</sup>

Mothers whose children had recurrent febrile convulsion and got the health information about management during convulsion they could manage and show the adaptive behavior in their children.

It was found that the majority of the mothers had got information regarding the disease condition. Most of the mothers had understood that febrile convulsion may reoccur till 5 years of the children's age and some last for more age groups or lifelong. They were aware to control the fever with home management e.g., by providing a sponge with water. Similarly, they realized keeping antipyretic at home and providing the antipyretic medicine (paracetamol) to control the fever and prevent convulsions. Some mothers developed false perceptions such as giving cold food and frequent bath in the winter season which is the probable cause of fever even though they have already got information about the condition. One previous study has shown that adequate health education and counseling could increase parental knowledge on first aid as home management, to reduce their fear.<sup>6</sup>

Although all mothers were voluntary, there were a risk that the mothers would not feel that they could be completely open and honest in the interview because of the authors' work place. We could not take data collection in separate room which may difficult to concentration of participant. We could not share transcriptions with participants.

## CONCLUSION

Mothers experience intense fear and helplessness when their children suffer from febrile convulsions, often feeling overwhelmed and uncertain about how to act. They actively seek support and explore various treatment options, ranging from traditional remedies to immediate medical intervention, to ensure the best care for their child. Additionally, they adapt by implementing preventive measures, such as fever management and medication, to reduce the risk of recurrences.

Healthcare professional including nurses are primary caretakers for the children as well as advisors for parents. So, nurses are to provide immediate care for those children and should provide detailed information to the parents regarding the development of this condition and management which help to reduce perceived threat, loss of control and proper utilization of health care.

## ACKNOWLEDGMENT AND RECOMMENDATION

We would like to acknowledge the participants for providing their views on the study and all people who had helped directly and indirectly support to complete the study.

As per the findings of this study, information should be provided on the causes and triggers of febrile convulsions, as well as the signs and symptoms to watch out for. Mothers should be advised on how to respond to and handle the emergency.



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