Assessment of Parental Awareness, Perception, and Management of Febrile convulsions in Children in selected hospital, Chennai

Ariya S Kurup [1]*, Dr. Sathiyalatha Sarathi [2], Dr. V. Hemavathy [3]

[1] Ph.D Scholar, Department of Paediatric Nursing, Bharath Institute of Higher Education and Research, Chennai, Tamil Nadu, India.

[2] Supervisor, Vice Principal, Department of Obstetrics and Gynaecology Nursing, Sree Balaji college of Nursing, Bharath Institute of Higher Education and Research, Chennai, Tamil Nadu, India.

[3] Principal, Department of psychiatric Nursing, Sree Balaji college of Nursing, Bharath Institute of Higher Education and Research, Chennai, Tamil Nadu, India.

Corresponding Author: Ariya S Kurup

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ABSTRACT:

Febrile convulsions (FCs) are defined as seizures that occur in the context of fever in children aged 6 months to 5 years, without any underlying central nervous system infection or metabolic disturbance. The study aimed to assess the Parental Awareness, Perception, and Management of Febrile convulsions in Children in Sree Balaji medical college and hospital, Chennai. Descriptive Cross-sectional design was used for the study. The study was conducted among 132 parents of children in a Sree Balaji medical college and hospital at Chennai. The samples were selected using a convenient sampling technique who fulfils inclusion criteria. Parents of children aged 6 months to 5 years who have experienced febrile convulsions and Parents who are willing to participate in the study were included. Parents of children under 6 months, over 6 years, or with a history of febrile seizures or other causes of convulsions were excluded. The study shows that the most parents (90.91%) are aware of febrile convulsions, with high fever and infections as common causes, affecting children aged 1-3 years. While 64.39% know preventive measures and 71.97% monitor temperature, 83.33% seek more information. Although 45.45% are extremely concerned and 64.39% would seek immediate medical help, only 56.82% feel confident managing the condition. Parents commonly place the child in a safe position (90.91%), administer antipyretics (83.33%), and ensure hydration (71.97%). The study concluded that parents know what febrile convulsions are and comprehend them well but need training in using effective management techniques.

INTRODUCTION

The assessment of parental awareness, perception, and management of febrile convulsions in children is a critical area of research, particularly given the prevalence of this condition among young children. Febrile convulsions (FCs) are defined as seizures that occur in the context of fever in children aged 6 months to 5 years, without any underlying central nervous system infection or metabolic disturbance. The incidence of febrile seizures is estimated to be between 2% and 5% globally, making it one of the most common neurological disorders in this age group (Han et al., 2023; Mayan et al., 2020). Understanding how parents perceive and manage these events is essential for improving outcomes and reducing parental anxiety.

Parental knowledge regarding febrile convulsions is often inadequate, which can lead to increased anxiety and mismanagement during a seizure episode. Studies have shown that many parents lack a clear understanding of what constitutes a febrile seizure and the appropriate steps to take when one occurs. For instance, a study indicated that only one-third of parents recognized that their child was experiencing a febrile seizure during the event, highlighting a significant gap in awareness (Rice et al., 2021; Mir et al., 2021). This lack of knowledge can exacerbate parental anxiety, as many parents fear severe outcomes such as brain damage or death, despite the generally benign nature of febrile seizures (Alawwadh et al., 2024; Husodo et al., 2021).

The psychological impact of febrile convulsions on parents cannot be overstated. Many parents report heightened levels of anxiety and fear following their child's first seizure, which can persist even after receiving medical reassurance (Malcolm et al., 2024; Türe et al., 2020). This anxiety is often compounded by a lack of education regarding the condition and its management. For example, a qualitative study found that parents frequently sought emergency care due to their fears and misconceptions about the severity of febrile seizures, rather than due to the medical necessity of such actions (Malcolm et al., 2024; Han et al., 2024). This pattern underscores the need for effective educational interventions aimed at improving parental knowledge and reducing anxiety.

Educational programs have been shown to significantly improve parental knowledge and management practices regarding febrile convulsions. For instance, structured teaching programs have demonstrated effectiveness in enhancing mothers' understanding of febrile seizures, leading to better management practices during episodes (Naz, 2022; El-esrigy et al., 2021). Similarly, bite-sized teaching sessions

have been effective in increasing parents' knowledge, attitudes, and practices related to febrile seizures, indicating that targeted educational interventions can yield positive outcomes (Sayed et al., 2022). These findings suggest that healthcare providers should prioritize educational initiatives as a means of empowering parents and alleviating their concerns.

Moreover, the role of healthcare professionals in educating parents about febrile seizures is crucial. Studies indicate that healthcare providers often underestimate the importance of providing comprehensive education to parents, which can lead to poor management of febrile convulsions at home (Okike et al., 2020; Aneed et al., 2020). Effective communication and education can help parents feel more confident in managing their child's condition, thereby reducing unnecessary emergency visits and improving overall care (Han et al., 2024; Mir et al., 2021). Furthermore, healthcare professionals should be trained to recognize and address parental fears and misconceptions, which can significantly impact the management of febrile seizures (Türe et al., 2020).

In addition to education, the emotional support provided to parents during and after a febrile seizure is vital. Research has shown that comprehensive nursing interventions, which include psychological support, can enhance parental coping strategies and improve their overall experience during a child's seizure (Han et al., 2024; Chen et al., 2021). By addressing both the medical and emotional needs of families, healthcare providers can foster a more supportive environment that promotes better management of febrile convulsions.

The implications of parental awareness and management of febrile convulsions extend beyond immediate care. Studies have indicated that parents who are well-informed about febrile seizures are more likely to engage in preventive measures, such as effective fever management, which can reduce the incidence of recurrent seizures (Alawwadh et al., 2024; Sayed et al., 2022; Naz, 2022). Additionally, improved parental knowledge can lead to a decrease in the long-term psychological impact of febrile seizures, as parents become more adept at handling these situations without panic (Estiri et al., 2023; Said & El-Maghawry, 2020).

AIM OF THE STUDY

The study aimed to assess the Parental Awareness, Perception, and Management of Febrile convulsions in Children in Sree Balaji medical college and hospital, Chennai.

METHODOLOGY

Study Design and Settings

Descriptive Cross-sectional design was used for the study. The study was conducted among 132 parents of children in a Sree Balaji medical college and hospital at Chennai. The samples were selected using a convenient sampling technique who fulfils inclusion criteria.

Inclusion criteria:

- Parents of children aged 6 months to 5 years who have experienced febrile convulsions
- Parents who are willing to participate in the study

Exclusion criteria:

- Parents of children under 6 months, over 6 years, or with a history of febrile seizures or other causes of convulsions.

Data Collection

Informed consent was obtained from the mothers. Data was collected using a demographic information, structured knowledge questionnaire regarding Parental Awareness, Perception, and Management of Febrile convulsions in Children.

Statistical Analysis

Data was entered into Excel and analyzed using SPSS version 26. Frequency distributions and percentages were calculated to assess parental awareness, perceptions, and management practices related to febrile convulsions.

RESULTS

The table 1 showed that the demographic data from 132 respondents shows that the majority were 26-35 years old (41.67%), with 54.55% being female. Most respondents had Higher Secondary School education (37.88%) and were homemakers (37.88%). 49.24% had 2 children, and 45.45% had a youngest child aged 1-3 years. Family income for 37.88% was between ₹20,000 - ₹50,000, and most lived in urban areas (60.61%). A significant 68.18% had prior experience with febrile convulsions, with doctors and health professionals being the main source of information (37.88%).

Figure 1 showed that majority of parents are aware of febrile convulsions, with 90.91% having heard of them. Most parents identified high fever and infections as common causes, and the age group 1-3 years was most commonly associated with febrile convulsions. Symptoms such as high fever and

shaking were well recognized by parents. While there was some uncertainty about the long-term effects of febrile convulsions, a majority knew how to prevent and manage them, with 64.39% knowing preventive measures and 71.97% actively monitoring their child's temperature. Additionally, 83.33% of parents expressed a need for more information, indicating a desire for better education on the topic. Most parents were also prepared with an emergency contact, showing good readiness to handle such situations.

The table 2 showed the majority of parents expressed significant concern about febrile seizures, with 45.45% being extremely concerned and 64.39% very likely to seek medical help immediately. While 75.76% believe febrile seizures are common and serious, 56.82% feel confident in managing them, though only 41.67% think they can be prevented. A large proportion, 90.91%, are eager to learn more about the condition. Despite feeling confident, 75.76% perceive the seizures as serious, indicating a gap in sufficient knowledge, as only 56.82% feel fully equipped to handle them.

Table 3 showed the majority of parents take proactive steps during febrile convulsions, with 90.91% placing their child in a safe position and 83.33% administering antipyretic medication. Most parents (75.76%) call for medical help immediately, and 53.03% always use antipyretics to reduce fever. When a seizure occurs, 83.33% seek medical assistance right away, and 68.18% know how to respond if the seizure lasts for more than 5 minutes. A large percentage (71.97%) ensure hydration during the seizure, and 75.76% regularly check their child's temperature. Additionally, 64.39% feel the need for medical follow-up after a febrile convulsion.

Table:1 Demographic Variables of Participants

Demographic Variable	Response Options	Frequency (n = 132)	Percentage (%)
1. Age of Respondent	18-25 years	30	22.73
	26-35 years	55	41.67
	36-45 years	35	26.52
	46+ years	12	9.09
2. Gender	Male	60	45.45
	Female	72	54.55
3. Education Level	Primary School	15	11.36
	Secondary School	40	30.30

	Higher Secondary School	50	37.88
	Graduate or above	27	20.45
4. Occupation	Homemaker	50	37.88
	Private sector	45	34.09
	Government sector	20	15.15
	Self-employed	17	12.88
5. Number of Children	1	45	34.09
	2	65	49.24
	3	12	9.09
	4 or more	10	7.58
6. Age of Youngest Child	Less than 1 year	25	18.94
	1-3 years	60	45.45
	4-6 years	30	22.73
	7 years and above	17	12.88
7. Family Income (per month)	Less than ₹20,000	30	22.73
	₹20,000 - ₹50,000	50	37.88
	₹50,000 - ₹1,00,000	35	26.52
	More than ₹1,00,000	17	12.88
8. Type of Residence	Urban	80	60.61
	Suburban	40	30.30
	Rural	12	9.09
9. Previous Experience with Febrile Convulsions	Yes	90	68.18
	No	42	31.82
10. Source of Information on Febrile Seizures	Doctor/Health Professional	50	37.88
	Family/Friends	40	30.30
	Internet	20	15.15
	Books or Articles	15	11.36
	Other	7	5.30

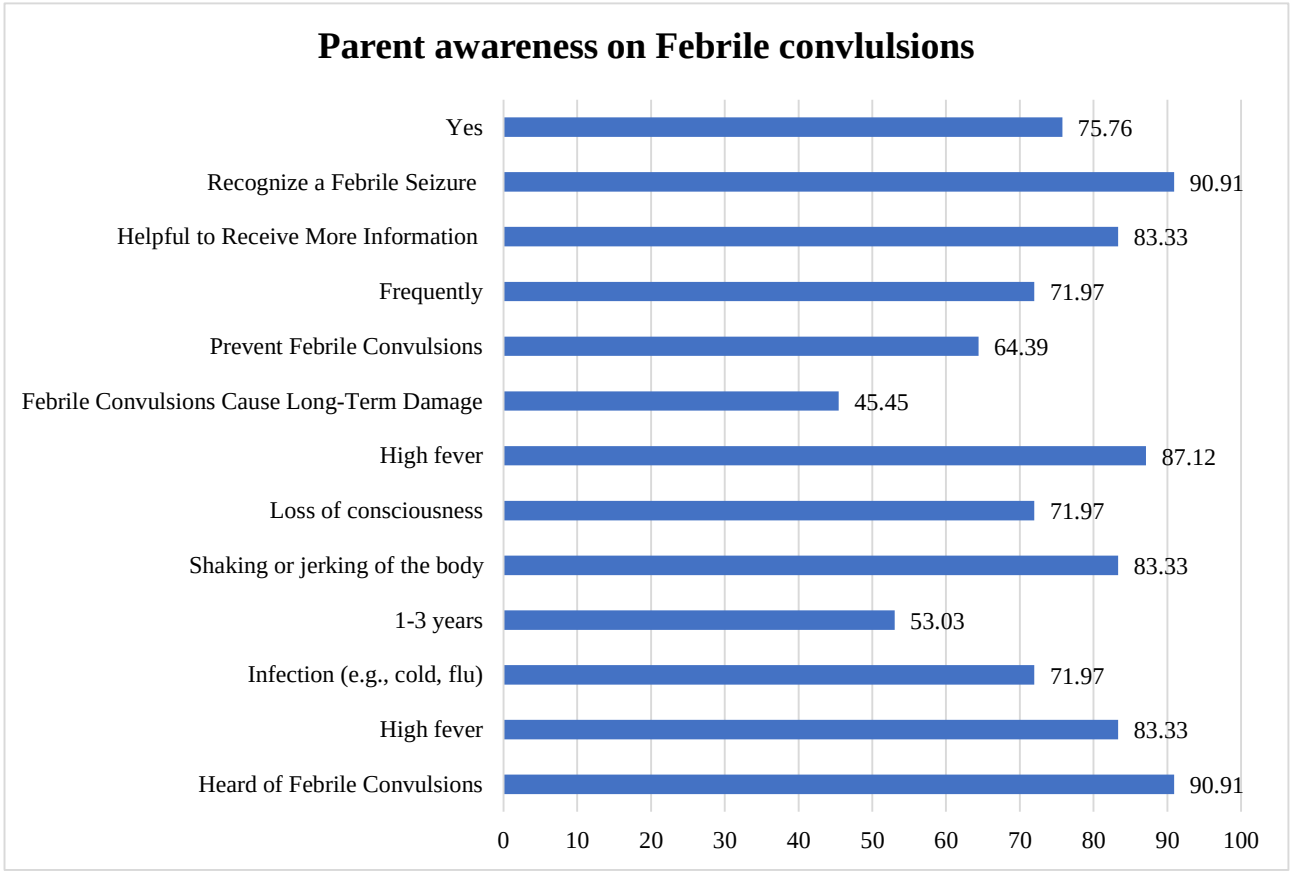

Figure 1: Parental Awareness of Febrile Convulsions.

Table 2: Parental Perception of Febrile Convulsions

Question	Response Options	Frequency (n = 132)	Percentage (%)
1. How concerned are you when your child has a febrile seizure?	Extremely concerned	60	45.45
	Moderately concerned	50	37.88
	Slightly concerned	15	11.36
	Not concerned at all	7	5.30
2. How confident do you feel about managing a febrile seizure?	Very confident	45	34.09
	Confident	65	49.24

	Somewhat confident	15	11.36
	Not confident	7	5.30
3. Do you think febrile seizures are common in children?	Yes	100	75.76
	No	32	24.24
4. How likely are you to seek medical help immediately when your child has a febrile seizure?	Very likely	85	64.39
	Likely	30	22.73
	Unlikely	10	7.58
	Very unlikely	7	5.30
5. Do you believe febrile seizures are a serious condition?	Yes	100	75.76
	No	32	24.24
6. How do you feel when your child experiences a febrile seizure?	Extremely anxious	60	45.45
	Slightly anxious	50	37.88
	Neutral	15	11.36
	Not anxious at all	7	5.30
7. Do you think febrile seizures can be prevented?	Yes	55	41.67
	No	60	45.45
	Not sure	17	12.88
8. Would you be willing to learn more about febrile convulsions?	Yes	120	90.91
	No	12	9.09
9. How often do you talk to other parents about febrile convulsions?	Frequently	40	30.30
	Occasionally	50	37.88
	Never	42	31.82

10. Do you think you have sufficient knowledge to manage febrile seizures?	Yes	75	56.82
	No	40	30.30
	Not sure	17	12.88

Table 3: Parental Management of Febrile Convulsions

Question	Response Options	Frequency (n = 132)	Percentage (%)
1. What do you do when your child has a febrile convulsion? (Select all that apply)	Place the child in a safe position	120	90.91
	Administer antipyretic medication	110	83.33
	Use physical cooling methods	60	45.45
	Call for medical help	100	75.76
	Wait for the seizure to stop	30	22.73
2. Do you administer antipyretics to your child to reduce fever?	Yes, always	70	53.03
	Yes, sometimes	45	34.09
	No, never	12	9.09
	I'm not sure	5	3.79
3. When do you seek medical help during a febrile convulsion?	Immediately	110	83.33
	After 5 minutes	10	7.58
	After 10 minutes	5	3.79
	Only if the seizure lasts for a long time	7	5.30
4. Have you ever used emergency medications during a seizure?	Yes	30	22.73
	No	102	77.27

5. Do you know how to respond if the seizure lasts for more than 5 minutes?	Yes	90	68.18
	No	42	31.82
6. Do you use physical cooling methods such as cool baths or cold compresses?	Yes	75	56.82
	No	45	34.09
	Sometimes	12	9.09
7. Do you try to keep your child hydrated during a febrile seizure?	Yes	95	71.97
	No	30	22.73
	Sometimes	7	5.30
8. When should you stop administering antipyretics?	Once fever is below 38°C	70	53.03
	After 5 hours of fever	45	34.09
	Only after seeing a doctor	12	9.09
	I don’t know	5	3.79
9. Do you check your child’s temperature during or after a febrile seizure?	Yes, regularly	100	75.76
	Occasionally	20	15.15
	Never	12	9.09
10. Do you feel the need for medical follow-up after your child experiences a febrile seizure?	Yes	85	64.39
	No	40	30.30
	Not sure	7	5.30

DISCUSSION

The findings regarding parental awareness, perception, and management of febrile convulsions (FCs) in children reveal a significant level of understanding among parents, with 90.91% reporting awareness of the condition. This high level of awareness is crucial, as it indicates that parents are generally

informed about febrile convulsions, which are prevalent in children aged 6 months to 5 years. The identification of high fever and infections as common causes aligns with existing literature that emphasizes the role of fever in precipitating seizures in this demographic (Alawwadh et al., 2024; Han et al., 2023). Furthermore, the data indicating that the 1-3 years age group is most commonly affected is consistent with previous studies that have identified this age range as particularly vulnerable to febrile seizures (Alawwadh et al., 2024; Han et al., 2023).

Despite the high awareness levels, the study highlights a notable gap in parental confidence regarding the management of febrile convulsions. While 71.97% of parents monitor their child's temperature and 64.39% are aware of preventive measures, only 56.82% feel confident in managing a seizure episode. This discrepancy suggests that while parents may understand the condition conceptually, they may lack practical skills or reassurance needed to effectively manage febrile convulsions when they occur (Alawwadh et al., 2024; Malcolm et al., 2024). This finding underscores the importance of targeted educational interventions that not only inform parents about the nature of febrile seizures but also equip them with practical skills to manage such episodes confidently (Chockalingam, 2020; Sayed et al., 2022).

The concern expressed by 45.45% of parents regarding febrile convulsions is indicative of the emotional impact that these events can have on families. The fear of serious outcomes, such as neurological damage or death, often looms large in the minds of parents, despite the generally benign nature of simple febrile seizures (Alawwadh et al., 2024; Oh et al., 2021). This anxiety can lead to increased healthcare utilization, as evidenced by the 64.39% of parents who indicated they would seek immediate medical help during a seizure episode. This behavior reflects a common parental instinct to err on the side of caution, which can sometimes result in unnecessary emergency department visits (Malcolm et al., 2024; Oh et al., 2021).

The management practices reported by parents are largely in line with recommended guidelines. For instance, 90.91% of parents place their child in a safe position during a seizure, and 83.33% administer antipyretics to manage fever. These practices are essential for ensuring the safety of the child during a seizure episode and for mitigating the risk of further complications (Alawwadh et al., 2024; Tan et al., 2022). Additionally, the emphasis on hydration and regular temperature checks by 71.97% and 75.76% of parents, respectively, reflects an understanding of the importance of maintaining the child's overall health during febrile episodes (Alawwadh et al., 2024; Tan et al., 2022).

However, the study also reveals that while many parents recognize the need for follow-up care, with 64.39% feeling that it is necessary, there remains a lack of clarity regarding the long-term implications of febrile seizures. The uncertainty expressed by parents about potential long-term effects may contribute to their anxiety and highlights the need for healthcare providers to offer clear, evidence-based information about the benign nature of simple febrile seizures and the low risk of developing epilepsy later in life (Alawwadh et al., 2024; Oh et al., 2021; Thadchanamoorthy & Dayasiri, 2020).

Moreover, the desire for more information, as indicated by 83.33% of parents, suggests that there is a significant opportunity for healthcare providers to engage with families through educational programs that address both the medical and emotional aspects of febrile seizures. Such programs could help demystify the condition, reduce anxiety, and empower parents with the knowledge and skills necessary to manage their child's health effectively (Sayed et al., 2022; Alawwadh et al., 2024; Thadchanamoorthy & Dayasiri, 2020).

CONCLUSION

The study reveals that parents know what febrile convulsions are and comprehend them well but need training in using effective management techniques. Support programs focused on education help parents become more confident while offering better seizure care for their children. Our results show that children need continuous parent education plus healthcare provider support to help parents handle febrile convulsions better.

CONFLITS OF INTEREST:

No conflicts of Interest.

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