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Assessment of Effectiveness of Different Modes of Health Education in Parents of Children with Febrile Convulsion in A Tertiary Care Hospital-A Prospective Comparative Study

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ABSTRACT

INTRODUCTION: Febrile seizure is a seizure that occurs in association with a febrile illness in the absence of a central nervous system infection or acute electrolyte imbalance in children older than 6 month of age without prior seizure episode. It is the commonest cause of seizure in early childhood. A relatively high prevalence of febrile seizures are due to high incidence of febrile illnesses in this age group. Education of the parents is an important intervention for acute and chronic management of children with febrile seizures.

AIMS AND OBJECTIVES: The aim of this study was to compare the effects of two educational strategies, verbal and written (pamphlets), on the knowledge, attitudes and practices of parents whose children have febrile seizures.

MATERIAL AND METHODS: Data collection was done with the help of a study proforma which included biodata, demographic variables, fever characteristics, relevant family history and knowledge, attitude and practices of parents before and after the relevant interventions. Intervention in the first group was verbal education and in the second group, it was pamphlet education. Grouping was based on random convenient method. Statistical analysis was done to compare the post test improvement in knowledge, attitude and practices in each intervention group.

RESULTS: Knowledge, attitude and practices among parents of children with febrile seizures improved after health education. It was found that verbal education is more effective than the pamphlet education method and this improvement was significantly more in the educated parents compared to the others.

CONCLUSION: This study suggests that different modes of health education about febrile convulsions and their interventions are effective in improving the knowledge, attitude and practices of parents. Verbal education is more efficacious compared to the pamphlet education method.

Keywords*: Effectiveness, Febrile Convulsion, Febrile seizure.*

INTRODUCTION

Febrile seizures are the most common form of childhood seizures, usually occurring between 6 months and 6 years of age, usually associated with a temperature of 38^0C (100.4^0F) or higher, without evidence of intracranial infection or a defined cause, occurring in a neurologically normal child[1, 2]. It occurs in 3 to 5% of children with a peak incidence in the 2nd year of life. [3] The incidence and prevalence of febrile seizure is similar across numerous studies. It is one of the most common causes of pediatric hospital admissions[4].A relatively high prevalence of febrile seizures are due to the simultaneous combination of two major phenomenon at a time, i.e. fever and seizure in children.

Febrile seizures occur in young children at a time in their development when the seizure threshold is low. This is a time when young children are susceptible to frequent childhood infections such as upper respiratory tract infection, otitis media, viral syndrome and they respond with comparably higher temperatures. Seizures of any type are usually a

manifestation of a number of underlying pathologic conditions. To differentiate between them requires careful history taking, physical examination, and necessary laboratory work up. EEG's and neuro imaging studies are not performed routinely in febrile seizures, but it may need to differentiate febrile seizures from other types of seizures.

Febrile seizures are divided into 2 types: simple and complex seizures. Complex seizures may indicate a more serious disease process, such as meningitis, abscess or encephalitis. Febrile status epilepticus is another from of severe type of complex febrile seizure. Febrile seizures do occur in families, although exact molecular mechanisms of febrile seizures are yet to be understood. These children do not have increased mortality risk, but those with complex seizures have slightly increased mortality risk. Antiepileptics are given for the cessation of seizures, but few needs prophylactic medicines later on.

For a health care worker, febrile convulsion may be a common experience devoid of worrisome implication, but for the uninformed and inexperienced parents witnessing their child throwing a fit may be a nightmare and frightening experience. This frightening event can be magnified by an incorrect parental belief that seizures will cause choking, brain damage, mental retardation, learning disorders or epilepsy. [5]

Knowledge about febrile seizure is important for parents of kids in this age group at risk. This includes precipitating factors for the seizure, characteristics of seizure, how to manage the seizure, and how such seizures can be prevented. Febrile seizures do not usually last long; however, correct management can prevent complications such as head injury, mouth and teeth injury, and suffocation. Parents also need to understand when to seek medical attention and the long term risks of such an event to the child. Many parents may even develop fever phobia and each febrile episode of the child can be a frightening event for the parents. Health care provider needs to assess parental reactions to the occurrence of febrile seizure and to determine the coping patterns utilized as well as to detect any disruptions in parent child interactions.[5]

Many studies have investigated the etiology and natural history of febrile seizures and evaluated various management strategies, but little information is available about the knowledge, attitude and practices of parents of children with febrile convulsions. Based on the literature, parent education and emotional support are important interventions in preventing complications. After management of the acute attack, the best intervention for febrile seizure is communication with the parents. Informing parents about the febrile seizures, and its preventive as well as therapeutic measures mitigates parental anxiety. Instructions and parental education should be specific, written in lay terms, tailored to their language and culture.

MATERIAL AND METHODS

The study aimed to assess parents' knowledge, beliefs, and practices regarding febrile convulsions and to compare the effectiveness of verbal and pamphlet-based health education programs among parents of affected children. It evaluated parents' baseline knowledge, attitudes, and practices, determined the improvement in knowledge after each educational method, compared the pre-test and post-test scores within the two groups, and examined the association between post-test knowledge and selected demographic variables.

This was a hospital-based, unicentric, prospective comparative study conducted in the paediatric ward of Lakeshore Hospital and Research Centre, Nettoor, Kochi, Kerala, over a period of one year from September 2017 to September 2018. The study population consisted of parents of children admitted with febrile seizures during the study period. The sample included parents who satisfied the inclusion and exclusion criteria and provided informed consent, and participants were selected using a convenient sampling method. A minimum sample size was 54 for the study.

Children were included if they had a history of convulsion associated with fever, were neurologically and developmentally healthy before and after the seizure, had no seizures in the absence of fever, and presented with generalized clonic, generalized tonic–clonic, or focal seizures. Children were excluded if the convulsion was not associated with fever, if they were younger than six months or older than six years, or if they had mental retardation or any other neurological abnormality.

Fifty-four parents of children admitted with febrile convulsions were enrolled after obtaining informed consent, and their personal and clinical details were recorded. A structured questionnaire translated into Malayalam was used to assess pre-test and post-test knowledge, attitudes, and practices. After the pre-test, parents received either pamphlet education on odd calendar days or verbal education on even days, with 27 participants in each group. The post-test was conducted after one day or at discharge, whichever was later, and each interview lasted approximately one hour. Data were entered into Microsoft Excel and analysed using SPSS version 20, with categorical variables expressed as frequency and percentage and continuous variables as mean and standard deviation. Binary logistic regression and ANCOVA were used to compare changes between groups, and a p-value of less than 0.05 was considered statistically significant. The null hypothesis assumed no significant improvement or difference between methods, while the alternative hypothesis assumed significant improvement and difference. The study was approved by the institutional ethics committee, and written informed consent was obtained from all participants.

RESULTS

Table 1: Comparison of Change in Knowledge between Verbal and Pamphlet

Group	Pre-test	Post-test	% Change	p – value
Verbal	14.04 ± 3.927	24.96 ± 0.898	77.8	0.000
Pamphlet	13.74 ± 4.082	19.44 ± 3.309	41.5	

The difference in change in knowledge between verbal and pamphlet was significant.

Table 2: Comparison of Change in Attitude between Verbal and Pamphlet

Group	Pre-test	Post-test	% Change	p – value
Verbal	5.556 ± 1.987	8.667 ± 1.301	56.0	0.000
Pamphlet	5.556 ± 1.476	6.852 ± 1.460	23.3	

The difference in change in attitude between verbal and pamphlet was significant.

Table 3: Comparison of Change in Practice between Verbal and Pamphlet

Group	Pre-test	Post-test	% Change	p – value
Verbal	5.259 ± 3.889	11.07 ± 0.675	110.6	0.000
Pamphlet	4.778 ± 3.434	8.444 ± 1.450	76.7	

Here the p-value is less than the significance level 0.05; the difference in change in practice between verbal and pamphlet is significant.

DISCUSSION

Although the occurrence of febrile seizure in childhood is quite common, they can be extremely frightening, emotionally traumatic and anxiety provoking when witnessed by parents. Emotional trauma set by an episode of febrile seizures may cause dramatic reactions to ensue, but fortunately the vast majority of febrile seizures are benign. Appropriate action through knowledge about febrile seizures can help parents get through this ordeal and give them the needed reassurance. Attitude and proper care assist in avoiding complications, and this can only be achieved through awareness, whether through the public or private health sectors.

There were a lot of studies conducted about the knowledge, attitude and practices of parents of febrile children. Comparison studies before and after different modes of health education were also studies in different areas.

The present study was undertaken to assess the knowledge, attitudes, and practices of parents of children with febrile seizures and to compare the effectiveness of verbal and pamphlet-based health education methods. The demographic profile of the participants showed that most mothers were below 30 years of age and were better educated than fathers, a pattern similar to observations in earlier studies. Male predominance among affected children and the occurrence of the first febrile seizure mainly between one and two years of age were also consistent with established epidemiological trends. The common clinical manifestations reported by parents—such as up-rolling of eyes, loss of consciousness, and body stiffness—correspond with descriptions in the literature, confirming that the study population was comparable to those in previous research.

Baseline assessment revealed substantial deficiencies in parental knowledge and practices related to febrile seizures. Although many parents had heard about the condition, understanding of its benign nature, correct temperature monitoring, and appropriate first-aid measures was inadequate. A large proportion believed that febrile seizure was equivalent to epilepsy and required routine anticonvulsant therapy, reflecting persistent misconceptions. Fear of brain damage, death, and future intellectual impairment was widespread, and several parents believed that investigations such as EEG or CT scan were mandatory for all children. Inappropriate home practices—including shaking the child, attempting to open the mouth forcibly, or using traditional remedies—were also reported. These findings emphasize the high level of anxiety and misinformation that still exist among caregivers.[6,7]

Both modes of health education implemented in the study resulted in significant improvement in parental knowledge, attitudes, and practices. However, verbal education was found to be more effective than pamphlet-based instruction. This supports the view that direct interaction allows parents to clarify doubts, express fears, and receive individualized guidance, which may not be possible through written materials alone. Similar results have been reported by Kayser et al.[8], Huang et al.[9], and other investigators, who demonstrated better outcomes with interactive educational sessions compared with pamphlets alone. The evidence therefore supports incorporating structured verbal counselling as a routine component of paediatric care.

Evaluation of demographic variables showed that higher maternal education was significantly associated with better improvement in knowledge and practices, which is in agreement with several national and international studies. Educated mothers may have better ability to understand health information and apply it during emergencies. In contrast, maternal age and occupation did not show a significant influence on outcomes in this study, though some earlier studies have reported associations with advancing age. Comparison between rural and urban parents revealed improvement mainly in practices rather than knowledge or attitude, suggesting that access to information alone may not translate into correct behaviour without guided training.[10]

Overall, the study highlights that parents of children with febrile seizures possess inadequate baseline knowledge and many misconceptions that can lead to inappropriate management and unnecessary anxiety. Structured health education, particularly through verbal and interactive methods, significantly enhances parental competence and confidence in handling febrile seizures at home. These findings underline the need for regular educational programs in pediatric wards and community settings, involvement of nurses and primary health workers, and development of culturally appropriate teaching materials to ensure safe and effective care for children with febrile seizures.

CONCLUSION

The study concluded that parents' knowledge, attitudes, and practices regarding febrile seizures improved after health education, with verbal education being more effective than pamphlet-based education. Improvement was not influenced by the age group of parents, whereas educated parents showed significantly better gains in knowledge and practices. No significant difference was observed in improvement among working mothers compared with non-working mothers.

RECOMMENDATIONS

The study should be repeated in a larger population for better generalization of results. Training programs need to be organized for mothers, nursing staff, and Anganwadi workers to improve community awareness. Health education units should be established in all paediatric wards, and its importance should be emphasized among all health workers, especially doctors. Future studies should include various health education methods tailored to differences in age, education, occupation, and geographic background.

LIMITATIONS OF THE STUDY

The study was conducted within a limited time period, which restricted the assessment of long-term effectiveness of health education. Lack of prolonged follow-up limited the evaluation of the true outcome and retention of knowledge and practices. In addition, participants were recruited from a single medical centre, and therefore the findings can be generalized only to settings with similar characteristics.

REFERENCES

1. Patterson JL, Carapetian SA, Hageman JR, Kelley KR. Febrile seizures. Pediatric annals. 2013 Dec 1;42(12):e258-63.
2. Kanemura H, Sano F, Ohyama T, Sugita K, Aihara M. Seizure severity in children with epilepsy is associated with their parents' perception of stigma. Epilepsy & Behavior. 2016 Oct 1;63:42-5.
3. Shinnar S. Febrile seizures and mesial temporal sclerosis. Epilepsy currents. 2003 Jul;3(4):115-8.
4. Jamal MM, Ahmed W. TO IDENTIFY THE FACTORS AFFECTING THE RISK OF RECURRENT FEBRILE SEIZURES IN SAUDI CHILDREN. Pakistan Armed Forces Medical Journal. 2015 Aug 31;65(4).
5. Bajaj N. Febrile Convulsions. Journal of Nepal Paediatric Society. 2008;28(1):23-6.
6. Abeysekara MS, Weerasekara MP, Wijesena BV, Perera RA, Kuruppu NR, Sriyani KA.). Mothers' knowledge believes and practices regarding febrile convulsions and home management.
7. Srinivasa S, Anjum SK, Patel S, Harish S, Bhavya G, Srinivasa S. Parental knowledge, attitude and practices regarding febrile convulsion. Int J Contemp Pediatr. 2018 Mar;5(2):515-9.
8. Kayserili E, Uenalp A, Apa H, Asilsoy S, Hizarcioğlu M, Guelez P, Agin H. Parental knowledge and practices regarding febrile convulsions in Turkish children. Turkish Journal of Medical Sciences. 2008;38(4):343-50.
9. Huang MC, Liu CC, Chi YC, Huang CC, Cain K. Parental concerns for the child with febrile convulsion: long-term effects of educational interventions. Acta neurologica scandinavica. 2001 May;103(5):288-93.
10. Barzegar M, Valizadeh S, Gojazadeh M, Jafarabadi MA, Zamanzadeh V, Shahbazi S. The effects of two educational strategies on knowledge, attitude, concerns, and practices of mothers with febrile convulsive children. Thrita. 2016 Jun 1;5(2):e3341.