



# EFFECTIVENESS OF A VIDEO-ASSISTED TEACHING MODULE ON KNOWLEDGE REGARDING FEBRILE CONVULSION AND ITS MANAGEMENT AMONG PRIMARY SCHOOL TEACHERS IN SELECTED SCHOOLS OF KOLAR

**Madhu MP**

Assistant Professor, Department Child Health Nursing, Shri GESS College of Nursing Ankali, Belagavi, Karnataka, India.

## Article Info

*Received 12/06/2026; Revised 15/07/2026;  
Accepted 01/08/2026*

## Corresponding Author

**Madhu MP**  
[madhump.chandu@gmail.com](mailto:madhump.chandu@gmail.com)

## Abstract

**BACKGROUND:** Febrile convulsion is a common neurological event among young children and may occur unexpectedly in school settings. Primary school teachers may be among the first adults to observe a child experiencing a seizure; therefore, adequate knowledge regarding recognition and immediate management is important. Video-assisted teaching may provide an effective and structured method for improving teachers' knowledge. **OBJECTIVES:** To assess the existing knowledge of primary school teachers regarding febrile convulsion and its management and to evaluate the effectiveness of a video-assisted teaching module. **METHODS:** A quantitative evaluative approach with a one-group pretest–posttest design was used. The study was conducted among 60 primary school teachers selected from schools in Kolar. A structured knowledge questionnaire consisting of 30 multiple-choice questions was used to assess knowledge regarding febrile convulsion and its management. The video-assisted teaching module was administered after the pretest, and the posttest was conducted seven days later. Descriptive and inferential statistics, including frequency, percentage, mean, standard deviation, paired t-test, and Extended McNemar's test, were used for data analysis. **RESULTS:** Before the intervention, 46 (76.7%) participants had inadequate knowledge, 14 (23.3%) had moderately adequate knowledge, and none had adequate knowledge. Following the video-assisted teaching module, no participant had inadequate knowledge, 11 (18.3%) had moderately adequate knowledge, and 49 (81.7%) had adequate knowledge. The mean knowledge score increased from  $12.70 \pm 2.80$  in the pretest to  $24.42 \pm 2.94$  in the posttest, with a mean difference of 11.72. The improvement was statistically significant ( $t = 20.24$ ,  $p = 0.001$ ). **Conclusion:** The video-assisted teaching module significantly improved primary school teachers' knowledge regarding febrile convulsion and its management. Video-based educational interventions may be incorporated into school health education and teacher-training programmes to strengthen preparedness for febrile convulsion emergencies among school children.

**Keywords:** Febrile Convulsion; Video-Assisted Teaching; Primary School Teachers; Knowledge; School Children; Seizure Management.

## INTRODUCTION

Febrile convulsion, also known as febrile seizure, is a seizure associated with fever in children without evidence of central nervous system infection, acute metabolic disturbance, or a previous history of afebrile seizures. It is one of the most common neurological events during early childhood

and generally occurs between 6 months and 5 years of age.<sup>1</sup>

Febrile convulsions are commonly classified as simple or complex. A simple febrile convulsion is usually generalized, lasts for less than 15 minutes, and does not recur within 24 hours. In contrast, a complex febrile convulsion may be



prolonged, focal, or recurrent within the same febrile illness.<sup>2</sup> Although most febrile convulsions are self-limiting and have a favourable prognosis, the sudden onset of a seizure may cause considerable fear and anxiety among caregivers and teachers.<sup>3</sup>

Children spend a substantial part of their day in schools, where teachers may be the first adults to witness a seizure episode. During a convulsion, appropriate first-aid measures are important to protect the child from injury and ensure timely medical assistance. The child should be placed in a safe position, harmful objects should be removed from the surrounding area, and the duration of the seizure should be observed. Nothing should be placed in the child's mouth, and the child should not be forcibly restrained.<sup>4</sup>

Inadequate knowledge and misconceptions regarding febrile convulsions may lead to inappropriate practices, unnecessary panic, or delays in seeking appropriate medical care. Teachers who are not adequately prepared may experience difficulty in recognizing a febrile convulsion and providing appropriate first aid. Therefore, improving teachers' knowledge regarding the causes, signs and symptoms, immediate management, and safety measures associated with febrile convulsions is an important component of school health preparedness.<sup>5</sup>

Health education is an effective strategy for improving knowledge and strengthening preparedness for emergency situations. Video-assisted teaching combines visual and auditory learning and can present clinical information in a clear, structured, and understandable manner. Educational videos may improve attention, promote retention, and help learners understand the sequence of actions required during an emergency.<sup>6</sup>

The use of video-assisted teaching may be particularly useful for primary school teachers because it can demonstrate the recognition and management of febrile convulsions through visual examples. Such teaching may improve understanding of appropriate first-aid measures and reduce harmful practices during a seizure episode. The present study was therefore undertaken to evaluate the effectiveness of a video-assisted teaching module on knowledge regarding febrile convulsion and its management among primary school teachers in selected schools of Kolar.

## OBJECTIVES OF THE STUDY

1. To assess the pretest knowledge of primary school teachers regarding febrile convulsion and its management among school children.
2. To evaluate the effectiveness of a video-assisted teaching module on knowledge regarding febrile convulsion and its management among primary school teachers.

3. To determine the association between pretest knowledge scores and selected demographic variables among primary school teachers.

## MATERIALS AND METHODS

### Research Approach and Design

A quantitative evaluative research approach was adopted for the study. A one-group pretest–posttest research design was used to assess the effectiveness of the video-assisted teaching module. The participants' knowledge regarding febrile convulsion and its management was assessed before the intervention, followed by the administration of the video-assisted teaching module. A posttest was conducted seven days after the intervention to evaluate the change in knowledge.

### Study Setting

The study was conducted among primary school teachers working in selected schools in Kolar, Karnataka.

### Population and Sample

The target population comprised primary school teachers working in selected schools in Kolar. A total of 60 primary school teachers participated in the study.

### Sampling Technique

Participants were selected according to the sampling procedure described in the thesis. Teachers who met the inclusion criteria and were willing to participate were included in the study.

### Inclusion Criteria

Primary school teachers who:

- Had completed D.Ed. or B.Ed.
- Were willing to participate in the study

### Exclusion Criteria

Primary school teachers who had previously received teaching or formal education regarding febrile convulsion and its management were excluded from the study.

### Description of the Tool

Data were collected using a structured knowledge questionnaire consisting of 30 multiple-choice questions related to febrile convulsion and its management. Each correct answer was assigned a score of one, while each incorrect answer was assigned a score of zero. The maximum attainable score was 30.

The knowledge scores were categorized as follows:

- **Adequate knowledge:** More than 75%
- **Moderately adequate knowledge:** 50%–75%
- **Inadequate knowledge:** Less than 50%



The content validity of the tool was established through expert review. The reliability of the structured knowledge questionnaire was assessed using the test-retest method, and the reported reliability coefficient was  $r = 0.96$ , indicating high reliability.

### Intervention

The video-assisted teaching module was developed to provide information regarding febrile convulsion, including its meaning, causes, signs and symptoms, types, immediate management, safety measures during a convulsion, and care following a convulsive episode. The module was presented in a structured and sequential manner to improve teachers' understanding and preparedness.

### Data Collection Procedure

Permission was obtained from the relevant authorities before data collection. The purpose and nature of the study were explained to the participants, and informed consent was obtained. A pretest was conducted using the structured knowledge questionnaire. The video-assisted teaching module was then administered to the participants. The posttest was conducted seven days after the intervention using the same knowledge questionnaire.

### Statistical Analysis

The collected data were organized, coded, and analyzed according to the study objectives. Descriptive statistics, including frequency, percentage, mean, and standard deviation, were used to summarize the findings. Inferential statistics, including the paired  $t$ -test, chi-square test, and Extended McNemar's test, were used to assess the effectiveness of the intervention and determine associations between knowledge scores and selected demographic variables. Statistical significance was considered at the 0.05 level.

## RESULTS

A total of 60 primary school teachers participated in the study. The findings are presented according to the study objectives.

### Distribution of Participants According to Selected Demographic Variables

Among the 60 primary school teachers, 30 (50.0%) were male and 30 (50.0%) were female. Regarding educational qualification, 26 (43.3%) had completed D.Ed., 20 (33.3%) had completed B.Ed., and 14 (23.4%) had postgraduate qualifications. Most participants, 50 (83.3%), were class teachers, while 10 (16.7%) were head teachers.

With regard to teaching experience, 8 (13.3%) participants had approximately 3 years of experience, 13 (21.7%) had approximately 6 years of experience, 23 (38.3%) had approximately 10 years of experience, and 16 (26.7%) had more than 10 years of experience.

### Pretest and Posttest Levels of Knowledge

Before the administration of the video-assisted teaching module, 46 (76.7%) participants had inadequate knowledge, while 14 (23.3%) had moderately adequate knowledge. None of the participants had adequate knowledge.

Following the intervention, no participant had inadequate knowledge. A total of 11 (18.3%) participants had moderately adequate knowledge, whereas 49 (81.7%) had adequate knowledge. The change in knowledge level from pretest to posttest was statistically significant.

The mean pretest knowledge score was  $12.70 \pm 2.80$ , whereas the mean posttest knowledge score was  $24.42 \pm 2.94$ . The mean difference was 11.72. The paired  $t$ -test showed a statistically significant improvement in knowledge following the administration of the video-assisted teaching module ( $t = 20.24, p = 0.001$ ).

### Summary of Findings

The findings demonstrated a substantial improvement in knowledge after the administration of the video-assisted teaching module. The proportion of participants with adequate knowledge increased from 0% during the pretest to 81.7% during the posttest. The significant increase in the mean knowledge score indicated that the video-assisted teaching module was effective in improving primary school teachers' knowledge regarding febrile convulsion and its management.

**Table 1: Distribution of Participants According to Educational Qualification and Designation**

| Variable                         | Frequency (n) | Percentage (%) |
|----------------------------------|---------------|----------------|
| <b>Educational qualification</b> |               |                |
| D.Ed.                            | 26            | 43.3           |
| B.Ed.                            | 20            | 33.3           |
| Postgraduate qualification       | 14            | 23.4           |
| <b>Designation</b>               |               |                |
| Class teacher                    | 50            | 83.3           |
| Head teacher                     | 10            | 16.7           |

**Table 2: Comparison of Pretest and Posttest Levels of Knowledge (N = 60)**



| Level of knowledge  | Pretest n (%)     | Posttest n (%)    |
|---------------------|-------------------|-------------------|
| Inadequate          | 46 (76.7)         | 0 (0.0)           |
| Moderately adequate | 14 (23.3)         | 11 (18.3)         |
| Adequate            | 0 (0.0)           | 49 (81.7)         |
| <b>Total</b>        | <b>60 (100.0)</b> | <b>60 (100.0)</b> |

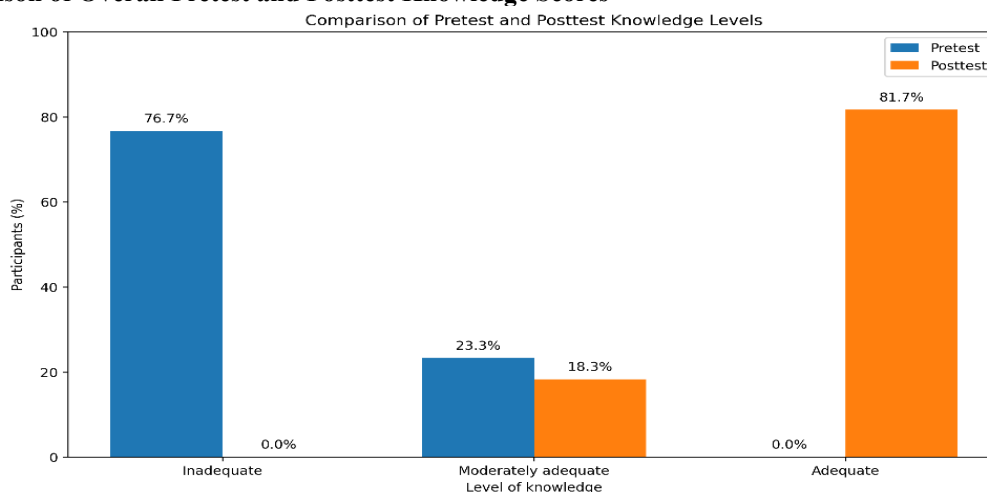
**Table 3: Comparison of Overall Pretest and Posttest Knowledge Scores (N = 60)**

| Assessment | Mean $\pm$ SD    | Mean difference | Paired <i>t</i> -value | <i>p</i> -value |
|------------|------------------|-----------------|------------------------|-----------------|
| Pretest    | 12.70 $\pm$ 2.80 | 11.72           | 20.24                  | 0.001           |
| Posttest   | 24.42 $\pm$ 2.94 | —               | —                      | —               |

Statistically significant at  $p < 0.05$ .

**Extended McNemar's test:  $\chi^2 = 52.87$ ,  $df = 2$ ,  $p = 0.001$ ; statistically significant.**

#### Comparison of Overall Pretest and Posttest Knowledge Scores



## DISCUSSION

The present study assessed the effectiveness of a video-assisted teaching module on knowledge regarding febrile convulsion and its management among primary school teachers in selected schools of Kolar. The findings demonstrated a substantial improvement in knowledge following the educational intervention.

In the present study, 76.7% of the participants had inadequate knowledge and 23.3% had moderately adequate knowledge during the pretest, whereas none had adequate knowledge. This finding indicates an important knowledge gap regarding the recognition and immediate management of febrile convulsions. Previous studies have also reported inadequate knowledge and misconceptions among school teachers regarding seizures and appropriate first-aid measures.<sup>1-3</sup>

Teachers are often among the first adults to witness a seizure occurring during school hours. Their knowledge of appropriate first-aid measures is therefore important for preventing injury, reducing unnecessary fear, and ensuring timely referral when required. Studies conducted in different countries have shown that many teachers lack adequate knowledge and practical preparedness for seizure management.<sup>4-6</sup>

Following the administration of the video-assisted teaching module, a marked improvement in

knowledge was observed. In the posttest, none of the participants had inadequate knowledge, 18.3% had moderately adequate knowledge, and 81.7% had adequate knowledge. The change in knowledge level was statistically significant. The findings indicate that the video-assisted teaching module was effective in improving teachers' understanding of febrile convulsion and its management.

The mean knowledge score increased from  $12.70 \pm 2.80$  during the pretest to  $24.42 \pm 2.94$  during the posttest. The mean difference was 11.72, and the improvement was statistically significant ( $t = 20.24$ ,  $p = 0.001$ ). Therefore, the research hypothesis that the mean posttest knowledge score would be significantly higher than the mean pretest knowledge score was supported.

The findings are consistent with an interventional study conducted among trainee teachers in Nigeria. The study reported significant improvements in knowledge, attitudes, and seizure first-aid management following health education.<sup>1</sup> Similarly, a comprehensive epilepsy education programme conducted among school teachers in Chandigarh demonstrated significant improvements in teachers' knowledge, attitudes, and first-aid skills after the educational intervention.<sup>2</sup>

An interventional study among female primary school teachers in Makkah also found that health education improved awareness and



knowledge regarding seizure first aid.<sup>3</sup> These findings support the use of structured educational interventions for improving teachers' preparedness to respond to seizure-related emergencies in school settings.

The improvement observed in the present study may be related to the use of video-assisted teaching. Video-based education provides both visual and auditory information and can demonstrate the correct sequence of actions during an emergency. Visual learning may help participants understand and remember important safety measures, including protecting the child from injury, observing the duration of the seizure, avoiding the insertion of objects into the child's mouth, and seeking medical assistance when necessary. Educational programmes that include audiovisual materials, demonstrations, role plays, and interactive learning have been reported to improve teachers' knowledge and first-aid practices.<sup>2,7,8</sup>

The findings of the present study are also supported by recent school-based educational research. An educational intervention involving school teachers in India demonstrated improvements in knowledge, attitudes, and practices related to epilepsy after structured training.<sup>7</sup> The study emphasized that educational programme can

correct misconceptions and improve teachers' ability to provide appropriate seizure first aid. However, it also suggested that a single educational session may not be sufficient to maintain knowledge over time and that regular reinforcement may be required.<sup>7</sup>

Studies conducted in Ethiopia and other settings have reported gaps in teachers' knowledge and practice regarding seizure first aid.<sup>5,6</sup> These findings indicate the need to include seizure awareness and emergency management training in teacher education programmes and regular school health activities.<sup>9</sup> The availability of clear educational materials may improve teachers' confidence and support a safer response when a child experiences a seizure.<sup>10</sup>

The present findings suggest that video-assisted teaching is a practical and effective method for improving primary school teachers' knowledge regarding febrile convulsion and its management. Video-based teaching can be used during teacher orientation programmes, school health education sessions, and periodic refresher training. Regular educational interventions may help maintain knowledge, strengthen emergency preparedness, and promote safer school environments for children.

## REFERENCES

1. Igwe, S. C., & Brigo, F. (2015). Effect of health education on trainee teachers' knowledge, attitudes, and first aid management of epilepsy: An interventional study. *Seizure*, 33, 46–53.
2. Pandey, S., et al. (2014). Evaluating the impact of comprehensive epilepsy education programme for school teachers in Chandigarh City, India. *Seizure*, 23(1), 41–46.
3. Alkhotani, A., & Alkhotani, A. (2022). Effect of health education on female primary school teachers' knowledge of seizure first aid: An interventional study. *Epilepsy & Behavior*, 127, 108523.
4. Bishop, M., & Boag, E. M. (2006). Teachers' knowledge about epilepsy and attitudes toward students with epilepsy: Results of a national survey. *Epilepsy & Behavior*, 8(2), 397–405.
5. Mamo, A., et al. (2022). First aid knowledge and practice toward students with epileptic seizure among governmental high school teachers in Addis Ababa, Ethiopia: A cross-sectional study. *Epilepsy & Behavior*, 132, 108752.
6. Kankirawatana, P. (1999). Epilepsy awareness among school teachers and the need for educational interventions. *Epilepsy & Behavior*, 1, 123–129.
7. Sharma, S., et al. (2023). Epilepsy Smart Schools: Educational intervention improves knowledge, attitude, and practices regarding epilepsy among school teachers. *Epilepsy & Behavior*, 143, 109138.
8. Kartini, D. G. K. A., Prihatini, S., Yusuf, S., & Subaedah. (2024). Educational intervention on first aid management for children with epilepsy and its impact on teachers' knowledge. *Omni Nursing Journal*, 1(3).
9. World Health Organization. (2016). *mhGAP intervention guide for mental, neurological and substance use disorders in non-specialized health settings* (Version 2.0). World Health Organization.
10. Centers for Disease Control and Prevention. (2024). *Guidance for schools: Supporting students with epilepsy*. Centers for Disease Control and Prevention.

