

# Effectiveness of Video-assisted Teaching on Knowledge Regarding Management and Prevention of Febrile Seizure among Mothers of Children Aged under Five Years

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## ABSTRACT

**Background:** Febrile seizure is one of the cause for convulsion among children and is common in the age-groups of 1–5 years, with nearly 4% having minimum one episode of febrile convulsion. Educating mothers on the nature of the febrile seizure and home care is the most important aspect of the management. Video-assisted teaching is an awareness program for mothers of children aged under five on prevention and management of febrile seizure. Conceptual model used for the study was general system theory (Ludwig von Bertalanffy-1968).

**Objectives:** To assess the level of knowledge on management and prevention of febrile seizure among mothers of children aged under five and evaluate the effectiveness of video-assisted teaching on management and prevention of febrile seizure and associate the level of knowledge on management and prevention of febrile seizure with selected demographic variables of mothers with children aged under five.

**Materials and methods:** The research approach was quantitative, the research design was preexperimental, a one group pre- and posttest design was used for the study. A sample was 100 mothers with children aged under five were selected through nonprobability convenient sampling method on knowledge regarding management and prevention of febrile seizure. It was assessed by structured questionnaire, where during the pretest the mothers of children aged under five were attended the video-assisted teaching regarding management and prevention of febrile seizure. Posttest data were collected after 1 week of implementation of video-assisted teaching.

**Results:** The study results show that video-assisted teaching on febrile seizure among mothers of children aged under five was statistically highly significant at  $p$  value  $<0.001$  level.

**Conclusion:** The video-assisted teaching was effective and improved the knowledge regarding management and prevention of febrile seizure among mothers of children aged under five.

**Keywords:** Effectiveness, Febrile seizure, Mothers of under-five children, Video assisted teaching.

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## INTRODUCTION

Children are usually more prone to infection as their immunity is low when compared to adults. Children with fever account for as many as 20% of a emergency department visits.<sup>1</sup> Fever in the infant and toddler is one of the most common problem and greatest challenge faced by those caring for them. Fever is usually a sign of infection in the body and indicates body's natural response to help fight in infection. The body has to maintain normal body temperature in several ways, and the organs, brain, skin, muscles, and blood vessels, are involved in helping with regulation of the temperature.<sup>2</sup>

Febrile seizure is one of cause for convulsion in childhood, with nearly 4% of children aged 1–6 years having at least one episode of febrile convulsion. Febrile seizure is common in childhood, but when witnessed by parents they become agitated and emotional.<sup>3</sup> Children in the age-group of 3 months to 5 years are affected 2–5% by febrile seizure.<sup>4</sup> Most febrile convulsion occurs between 6 months and 36 months of age and is more severe at 18 months of age.<sup>5</sup>

Any febrile illness with temperature more than 38°C can precipitate a seizure. The quick of rise in temperature is an important factor. Certain fevers have greater prediction to precipitate a convulsion. Most febrile seizures occur within the 2–3 days of fever. Presence of abnormal neurodevelopment, family history of epilepsy, or persistent neuromuscular deficit should arouse a suspicion for more sinister process. Subsequent febrile seizures and epilepsy in later years are more common in this group, and

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continuous prophylaxis may become necessary.<sup>6</sup> In 2019 worldwide, 2–5% of children in Europe and United States experience one febrile seizure under 5 years of age and is more common in boys. The annual incidence of febrile seizure was 14 per 1,000 children in Finland.<sup>7</sup>

According to World Health Organization (2019), approximately 50 million people currently live with febrile seizure. Globally, an estimated 2.4 million people are diagnosed with febrile seizure. Recent studies show that in both low- and middle-income countries, 70% of the children are treated with seizure-free drugs. In India (2019), the prevalence rate of febrile seizure is 5.59 per 1,000 population. There are approximately 6–10 million people with

seizure in India. The incidence rate of febrile seizure in India is 10%. Indian studies suggested that up to 10% of children experience febrile seizure. In Uttarakhand (2011), a recent survey found a prevalence of 2.27 per 1000 population. In Tamil Nadu (2018), the overall statistics shows that children with febrile seizure is 8.9%. The Yelandur survey estimated the prevalence to be 3.28 per 1,000 population.<sup>8,9</sup>

Due to inadequate knowledge regarding management and prevention of febrile seizure and to manage the emergency situation among mothers of children aged under five, the investigator wanted to give awareness on management of febrile seizure through a video-assisted teaching.

## STATEMENT OF THE PROBLEM

A study to assess the effectiveness of video-assisted teaching on knowledge regarding management and prevention of febrile seizure among mothers with children aged under five in Pillaiyarkuppam at Puducherry.

## OBJECTIVES

- To assess the level of knowledge on management and prevention of febrile seizure among the mothers with children aged under five.
- To evaluate the effectiveness of video-assisted teaching on knowledge regarding management and prevention of febrile seizure among the mothers with children aged under five.
- To associate the level of knowledge on management and prevention of febrile seizure with selected demographic variables of mothers with children aged under five.

## RESEARCH HYPOTHESES

H<sub>1</sub>: there is a difference between pre- and posttest level of knowledge regarding management and prevention of febrile seizure among mothers with children under five in Pillaiyarkuppam, Puducherry.

H<sub>2</sub>: there is an association between the knowledge regarding management and prevention of febrile seizure with the selected demographic variables among mothers with children aged under five.

The conceptual framework used for the study was "General system theory" [Ludwig von Bertalanffy (1968)].<sup>10,11</sup>

## RESEARCH METHODOLOGY

A quantitative research approach was used in this study. The purpose of this study was to assess the effectiveness of video-assisted teaching on knowledge regarding management and prevention of febrile seizure among mothers with children aged under five. The research design used for this study was preexperimental one-group pre- and posttest design.<sup>12</sup> The study was conducted among 100 mothers with children aged under five in Pillaiyarkuppam, Puducherry. Nonprobability convenient sampling technique was used to select the sample.<sup>13</sup>

The pretest was conducted by interview schedule using structured questionnaire, and the video-assisting teaching on management and prevention of febrile seizure was implemented to mothers with children aged under five. The posttest was conducted after 7 days of pretest. The pilot study was conducted among 10 mothers with children aged under five in Pillaiyarkuppam, Puducherry. The result of the pilot study gave evidence that the tool was found reliable and feasible.

## RESULTS

Table 1 represents the distribution of level of knowledge regarding management and prevention of febrile seizure among mothers with children aged under five during pre- and posttest. During the pretest, of 100 mothers, 35% (35) had moderately adequate knowledge, 44% (44) had inadequate knowledge, and 21% (21) had adequate knowledge, and in posttest, 100% (100) had adequate knowledge.

Table 2 represents the mean, standard deviation, standard error of the mean, and paired "t" value of the knowledge regarding management and prevention of febrile seizure among mothers with children aged under five during pretest and posttest. The findings revealed that the mean pretest knowledge score was 7.86, and the posttest knowledge score was 16.62, higher than the pretest. The standard deviation of the pretest knowledge score was 1.341 and the posttest knowledge score was 0.951. The obtained paired "t" value was -54.239, and it was highly significant at *p* value <0.001 level and also inferred that the video-assisted teaching on knowledge regarding management and prevention of febrile seizure was highly effective. Hence, in the stated hypothesis H<sub>1</sub>, it was accepted that there is a difference between pre- and posttest level of knowledge regarding management and prevention of febrile seizure among mothers with children aged under five was

**Table 1:** Distribution of level of knowledge regarding management and prevention of febrile seizure among mothers of under-five children during pretest and posttest (*N* = 100)

S. no.	Level of knowledge	Pretest		Posttest	
		No. of mothers	%	No. of mothers	%
1.	Adequate knowledge	21	21	100	100
2.	Moderately adequate knowledge	35	35	—	—
3.	Inadequate knowledge	44	44	—	—

**Table 2:** Mean, standard deviation, standard error of the mean, pretest and posttest comparison value of the knowledge regarding management and prevention of febrile seizure among mothers of under-five children (*N* = 100)

	Mean	SD	SEM	t test	p value
Pretest	7.86	1.341	0.134	-54.239	<0.001*
Posttest	16.62	0.951	0.095		

\*Significant at *p* value <0.001\* level

accepted, and there was no statistically significant association between knowledge with the selected demographic variables.

## DISCUSSION

The first objective of the present study was to assess the knowledge regarding management and prevention of febrile seizure among mothers with children aged under five in Pillaiyarkuppam, Puducherry.

Table 1 shows the frequency and percentage distribution of knowledge regarding management and prevention of febrile seizure among mothers with children aged under five during pretest. It explained that 35% (35) had moderately adequate knowledge, 44% (44) had inadequate knowledge, and 21% (21) had adequate knowledge in selected areas. The findings were supported by a cross-sectional study conducted by Maysaloun Muhammed Abdullah and Feras Sadi Abdulhadi (2014) on knowledge, attitudes, and practices on febrile convulsions among 233 mothers with children aged under five. The study results show that 84.5% of the mothers knew that fever can cause convulsions, 25.9% of the mothers were able to differentiate between a febrile convulsion and epilepsy, 12% of the mothers knew febrile convulsion was not fatal, and 22.8% knew febrile convulsion cannot lead to brain damage and they may have good prognosis.<sup>14</sup>

The second objective of the study was to evaluate the effectiveness of video-assisted teaching on knowledge regarding management and prevention of febrile seizure among mothers with children aged under five in Pillaiyarkuppam, Puducherry.

The posttest assessment of video-assisted teaching outcome was assessed by structured questionnaire. The result (Table 2) shows that the mean pretest knowledge score was 7.86, and the posttest knowledge score was 16.62, higher than the pretest. The standard deviation of the pretest knowledge score was 1.341 and the posttest knowledge was 0.951. The obtained paired "t" value was -54.239 and was highly significant at *p* value <0.001 level. Thus, the abovementioned data justify video-assisted teaching was effective in improving the level of knowledge among mothers with children aged under five.

Hence, in the stated hypothesis  $H_1$ , it was accepted that there is a difference between pre- and posttest level of knowledge regarding management and prevention of febrile seizure among mothers with children aged under five. The study findings were supported by Jyothy George (2013) who evaluated the effectiveness of structured teaching program on knowledge regarding management regarding febrile convulsion among 60 mothers with children aged under five. Preexperimental research design was used and samples selected through nonprobability convenient sampling technique. The study results shown that the structured teaching program was effective, and the mothers with children aged under five improved their knowledge on febrile convulsion.<sup>15</sup>

The third objective of present study was to determine the association between knowledge regarding management and prevention of febrile seizure with the selected demographic variables among mothers with children aged under five in Pillaiyarkuppam, Puducherry.

The study findings show that there was no statistically significant association between knowledge with the selected demographic variables. The stated hypothesis  $H_2$  was not accepted.

## RECOMMENDATIONS

- The study can be conducted with larger sample for better generalization.
- The study can be done by comparison to other video-assisted teaching for management and prevention of febrile seizure.
- The study can be done with the booklet that contains information on home management and prevention of febrile seizure.
- The study can be conducted in rural and urban areas to compare the knowledge regarding management and prevention of febrile seizures.
- The study can be conducted to assess attitude and practice regarding management and prevention of febrile seizures.

## CONCLUSION

Febrile seizure among children aged under five is a common problem and usually causes anxiety and fear among parents, especially mothers. Febrile seizure can be managed by health education and training to improve the mother knowledge regarding febrile seizure and reduce the frequency of symptoms among children aged under five.<sup>16</sup>

The result of the study proves that video-assisted teaching was effective and improved knowledge regarding management and prevention of febrile seizure among mothers with children aged under five.

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