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# Effectiveness of Educational Intervention Regarding Prevention of Febrile Convulsion on Knowledge among Care Givers of Children with Fever

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**Abstract:** ***Background of the study: Fever is commonest complaints in pediatric patients after different kind of organism invasion. When the body fails to regulate temperature, and the body temperature rises above 100 ° F, fever can cause convulsions. Mostly febrile convulsion strikes within two to three days of fever. This can be riskier in those children who are already affected by the seizures. By providing information, caregivers can prevent fever and fever convulsions in children. Method: Quantitative research approach was adopted. Total 80 caregivers of the children with fever were selected from of pediatric through purposive sampling technique. The data were collected on the basis of structured knowledge questionnaires. Result: Study finding shows that the post-test mean score (23.55± 0.7) of knowledge of caregivers was higher than the pretest mean score (19.02±1.83) in the experimental group whereas in the control group the posttest mean score (20.17 ± 2.37) was similar to that of pretest score (19.95± 2.46). Conclusion: Study was concluded that there was a significant improvement in knowledge of caregivers in posttest among the experimental group after the administration of educational intervention.***

**Keywords:** Febrile Seizure, Caregiver, Educational intervention, Prevention

## 1. Introduction

Children are at a higher risk of infection because they are not capable to fight against diseases than adults. Fever is commonest complaints in pediatric patients after different kind of organism invasion. [1] By the many ways body maintains normal physical temperatures with the help of brain, dermis, muscles, and blood vessels. When the body fails to regulate temperature, and the body temperature rises above 100 ° F, fever can cause convulsions. The Febrile convulsion phase is an attack due to the fever that has come without any nervous system involvement. [2] Study shows that seizures occur more frequently after the first seizures in the life of a 1-year-old child. 38.9% of recurrence rates show inconsistency with a past family history of febrile seizures. [3] Many family member place unnecessary restrictions on their child's activities which is a loss to the child. In this stage, the nurse can consult the parents or caregiver and protect the children from this attitude. A study showed that febrile convulsion occurs in 13.8% of children due to fever, which was previously due to high-grade fever. They concluded that the child's age, recurrent episodes with the child's gender, family history of seizure disorder, consanguinity under city stunting, and significant anemia were seen. [4] As. stated by WHO (2018) an approximate of 6.2 million youngsters and teenager below the age of fifteen died, or suffered another physical serious illness, due to a halt during the shock. Fever is almost the first sign of sickness [5] Many family member place unnecessary restrictions on their child's activities which is a loss to the child. In this stage, the nurse can consult the parents or caregiver and protect the children from this attitude. The condition of the jerk is frightening, but it is important that the parents or caregiver are aware of it and they know about take care of the children. [6] **Srinivasa S. et.al. 2018** conducted a study which concluded that we can make parents aware of febrile seizure by providing adequate knowledge. Parents have many doubts and questions related to pediatrics, which can be subsided by giving education [7]

It is very important to give information related to febrile convulsion to their parents. Even today the mortality and morbidity children in high and it is mainly due to the causes that can be prevented. [8] By taking information, caregivers can handle their children well and protect them from future complications. Parental education, particularly the mothers are strongly responsible to improve the healthcare of children.

**Objectives**

1) To assess the effectiveness of educational intervention regarding prevention of febrile convulsion on knowledge of caregivers in control group and experimental group.
2) To find the association between pretest level of knowledge of caregivers regarding the prevention of febrile convulsion with their selected socio- demographic variables.

## 2. Material & method

In this study researcher adopted the pre-test post-test quasi experimental design. The study was conducted in Himalayan hospital, Jollygrant, Dehradun. 80 caregivers of the children with fever was selected for the study who met the inclusion criteria of the study. All participants divided into 2 groups control & experimental. First 40 was in control group & next 40 was in experimental group.

## 3. Result

**Demographic Data**: It showed that 82. 5% in control and 77.5% in the experimental group care givers were age between 20-30 years of age. The majority of caregivers were a mother in the control group 87.5% & in the experimental group 90%. The Control group (90%) & experimental group 80% shows that majority of participants belong to the nuclear family. The majority of the participants lived in the rural area.

Less than half (40%) of caregivers had higher secondary education in the control group and more than half (62.5%) caregivers had higher secondary education in the experimental group. Participants more than one third in control (35%) had family income between Rs. 16,000 to 25,000& near to half of in experimental (47.5%) had the family income between Rs. 26,000 – 35,000. Most of participates both the groups did not have previous knowledge related to febrile convulsions.

In child's profile (90%)in control &(80%) of children in experimental were from 5 to 10 years of age. More than half (72.5%) in control group & 60%children in experimental group were 2nd child in the family.

The Majority of the children were males. The Majority of children in the control group (80%) had no recent history of fever & more than half (57.5 %) of children in the experimental group had a recent history of fever. The Majority of children (90%) in control & 72 % in experimental had a present history of fever between 1 to 5 days in with temperature more than 101°F but at the during the collection of information half or more than half of children had a temperature of less than 99°F.

**Table 1:** Comparison of Mean Knowledge scores of Caregivers in both groups, N = 80

| S. No. | Groups | Max score | Range | | Mean± SD | | t value | df | P value |
|---|---|---|---|---|---|---|---|---|---|
| | | | Pre-test | Post-test | Pre-test | Post-test | | | |
| 1. | Control | 24 | 11 – 22 | 14 – 22 | 19.95 ± 2.46 | 20.17 ± 2.37 | 0.41 | 39 | 0.40 |
| 2. | Experimental | | 16 – 22 | 22 – 24 | 19.02 ± 1.83 | 23.55 ± 0.7 | 15.01 | 39 | <0.01* |

t value =2.02, df= 39, * Significant at p<0.05

Table No. 1. Showed the mean post-test knowledge score (20.17 ± 2.37) of intervention group was slightly higher than the pretest (23.55± 0.7). The obtained 't' test were 0.41 and 15.01 in control and experimental group respectively. There was significant difference found in experimental group at p<0.01.

**Table 2:** Comparison of pre-test mean knowledge scores of caregivers in Control and Experimental group, (N=80)

| S. No. | Knowledge score | Mean ± SD | Mean Difference | t value | P Value |
|---|---|---|---|---|---|
| 1. | Control (n=40) | 20.17± 2.37 | 3.375 | 8.505 | <0.0001* |
| 2. | Experimental (n=40) | 23.55 ±0.71 | | | |

t value=1.98 df =78, * Significant at p<0.05

Table 2 Reveals that there was no significant difference in the pre-test knowledge score of caregivers in the both groups

**Table 3:** Comparison of post-test mean knowledge scores of Experimental and Control groups, (N=80)

| S. No. | Group | Knowledge Mean ± SD | Mean Difference | t value | P Value |
|---|---|---|---|---|---|
| 1. | Control (n=40) | 19.95± 2.46 | 0.93 | 1.876 | 0.321 |
| 2. | Experimental (n=40) | 19.02±1.83 | | | |

t value=1.98, df =78, * Significant at p<0.05

Table 3: Depicts that there was highly significant difference found in post-test knowledge score of caregivers. There was no evidence to accept the null hypothesis. Hence the alternate hypothesis was accepted.

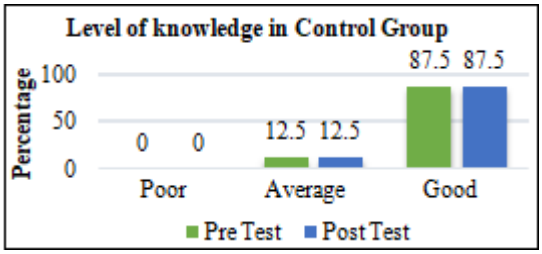


**Figure 1:** Pretest and Posttest Levels of knowledge of Caregivers on Control group, (n=40)

**Figure No. 1** Illustrated that 12.5% of participants had average knowledge regarding the prevention of febrile convulsion while 87.5% had good knowledge. None had poor knowledge in the pre-test & post-test in the control group.

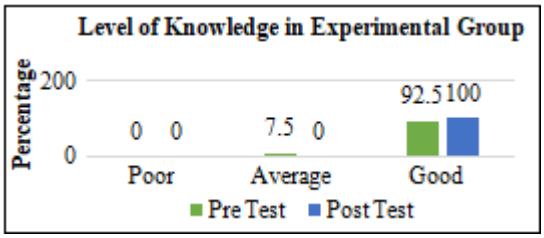


**Figure 2:** Levels of knowledge of Caregivers in Experimental group, (n=40)

**Figure No. 2.**Illustrated that in the pre-test 7.5% of participants had average knowledge while more than half of the participants had good knowledge. In post-test, all participants in experimental group had good knowledge.

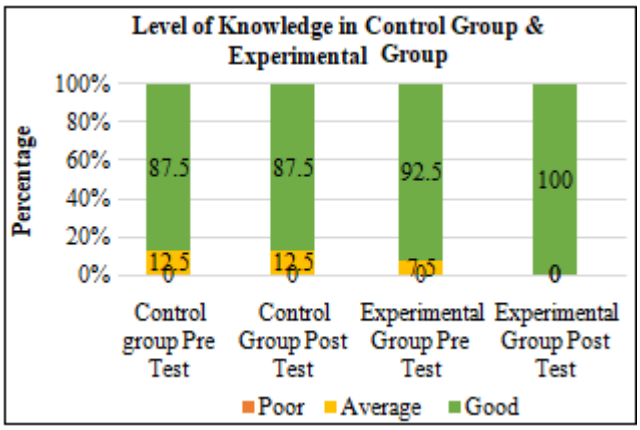


**Figure 3:** Percentage distribution of level of knowledge of Caregivers in control & experimental group. (N=80)

**Figure No.3:** Illustrated that knowledge scores of the studied subjects were the same in the control group. In the experimental group, 7.5% of participants had average knowledge while 92.5% of participants had good knowledge before intervention. All the studied subjects had good knowledge regarding febrile convulsion after intervention.

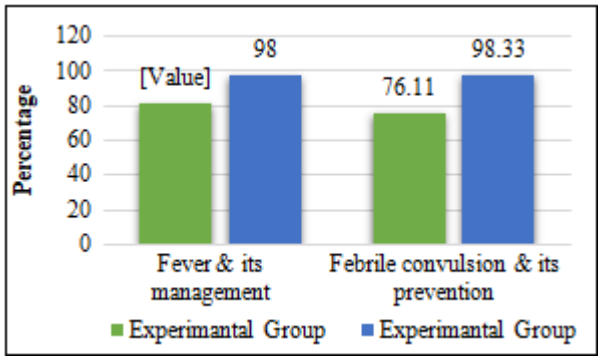


**Figure 4:** Domains wise distribution of mean percentage knowledge score in pre-test and post-test among the experimental group, n=40

**Figure 4** Shows that the mean percentage of pre-test knowledge score was higher in the domain of fever & its management (81.33%) in comparison to the mean percentage of the domain febrile convulsion & its prevention. While in the post-test of the experimental group mean percentage of domain febrile convulsion & its prevention (98%) was higher than fever & its management (98.33%).

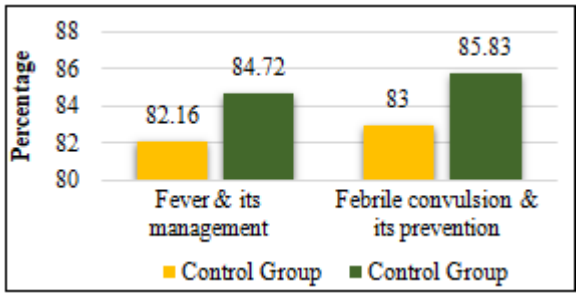


**Figure 5:** Domains wise mean percentage knowledge score of caregivers in control group. N=40

**Figure 5.** Showed that there was a slight difference in the mean percentage knowledge score of control group in both the domains were 82.16 to 84.72 and 83 to 85.83%

**Association between pre-test levels of knowledge of with selected demographical variable of caregiver profile**

The caregiver profile & occupation of the caregiver had a significant association with the pre-test knowledge score at the level $p<0.05$. It was not found association with occupation, educational status & age of the caregivers.

The duration of the fever having a significant association with the pretest knowledge score at the level $p<0.05$. No significant association was found with age of the child, gender & diagnosis of the child.

## 4. Discussion

In the present study, the post-test mean score (23.55± 0.7) of knowledge of caregivers was higher than the pretest mean score (19.02±1.83) in the experimental group whereas in the control group the posttest mean score (20.17 ± 2.37) was similar to that of pretest score (19.95± 2.46). Related findings were seen in **Najimi A.et al. (2013)** on knowledge score of the posttest (66.78 ±9.9) in the experimental group was higher than pretest score (52.48 ±10.8). [9] The study further supported by **Onankpa. B.O.G et.al. (2011)** revealed that the baseline means score (35.3 ±9.48) was improved in the posttest mean score (77.69 ±10.75) after the intervention. [10]

## 5. Conclusion

Based on the study results, it was concluded that there was a significant improvement in knowledge of caregivers in posttest among the experimental group after the administration of educational intervention. Such intervention should be steered to increase the knowledge of the caregiver which can provide optimum preventive measures related to febrile children.

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