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Effectiveness Of Self-Instructional Module On Knowledge Regarding Prevention Of Febrile Convulsions Among Mothers Of Under Five Children In Selected Areas: A Quasi-Experimental Study.

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Abstract:

Background: The term "febrile convulsions" was first used to describe a syndrome distinct from epilepsy, despite the fact that the ancient Greeks had already described it. "An event in infancy or childhood usually occurring between three months and five years of age, associated with fever, but without evidence of intracranial infection or defined cause, "was how the National Institutes of Health defined a febrile convulsion in 1980.[1] **Objectives:** To assess the effectiveness of self-instructional module on knowledge regarding prevention of febrile convulsions among mothers of under five children in selected areas. **Methodology:** The Quasi -experimental pre-test post- test design used for the study. It was conducted on 90 mothers of under five children by using non probability convenient sampling technique. **Results:** The result revealed that Assessment of mothers of under five children with regards to level of pre-test knowledge regarding prevention of febrile convulsion ,52.22% of the mothers of under five children had average level of knowledge score, 27.78 % had poor level of knowledge , 14.44% had good level of knowledge , 4.44 % had very good level of knowledge ,1.11 % of mothers of under five children had excellent level of knowledge score & post-test knowledge score , 22.22 % of the mothers of under five children had good level of knowledge score and 1.11% had average level of knowledge , 57.78 % had very good level of knowledge ,18.89 % had excellent level of knowledge score. The study reveals mean pre-test knowledge score 9.51 ± 4.40 and the mean post -test knowledge score was 21.45 ± 3.28. The calculated value 19.96 is greater than tabulated value 1.98 at 0.05 level of significance. **Conclusion:** It was concluded that self-instructional module on knowledge regarding prevention of febrile convulsion among mothers of under five children in selected urban areas of the city was found to be effective as a teaching strategy. Hence, it was concluded undoubtedly that the educational intervention self-instructional module helped the mothers of under five children to increase knowledge regarding prevention of febrile convulsion.

Index Terms – "Effectiveness, Self-instructional module, Febrile convulsions, Mother of under five children"

I. INTRODUCTION

Under five children are defined as those between the ages of 0 and 5. Children in this age range are susceptible to contracting any kind of infection. Children under the age of five are still developing, and all of their body systems are still immature. They also frequently contract various infections, such as respiratory tract infections, otitis media, diarrhea, gastroenteritis, etc., as a result of their play activities, inadequate nutrition, and immature immune systems. A common symptom of the infections is fever. Convulsions may occur in some children with high grade fever. Infection-fighting activity is indicated by a fever. "A body temperature increase in response to a pathological stimulus is referred to as fever." A child is only deemed febrile according to a clinical guideline published by the American College of Emergency Physicians (ACEP) when his rectal temperature exceeds 380C (100.40F). Organ damage is required for fevers above 41.50°C (106.70°F). The term febrile seizure refers to a febrile convulsion. Any condition that increases body temperature can cause a febrile seizure. The most prevalent form of convulsive disorder and one of the leading reasons for children under the age of five to be admitted to the emergency department of a hospital is febrile seizure. There are simple and complex types: A simple febrile convulsion is a seizure that happens between the ages of 6 months and 5 years with a temperature of 38°C, without complex features and without intracranial pathology. A complex febrile convulsion is one that has one or more of the following additional characteristics: the seizures lasts longer than 15 minutes, child only has symptoms in one part of their body.

II. BACKGROUND

The most typical type of seizures seen in children under the age of 18 are febrile seizures. The term "febrile seizures" was first used to describe a syndrome distinct from epilepsy, despite the fact that the ancient Greeks had already described it. "An event in infancy or childhood usually occurring between three months and five years of age, associated with fever, but without evidence of intracranial infection or defined cause," was how the National Institutes of Health defined a febrile seizure in 1980. It neither specifies temperature requirements nor what constitutes a "seizure," and it does not exclude children who have previously suffered from neurological impairment. One in twenty-five kids will experience at least one febrile convulsion, and more than a third of these kids will experience further convulsions. Before kids outgrow their propensity to have them, febrile seizures. The ratio of men to women is roughly 1.6 to 1. Children from poorer socioeconomic backgrounds are more likely to have the illness, probably because they have less access to medical care.

III. NEED OF THE STUDY

The most frequent type of seizure in children is called a febrile convulsion. Within the first five years of life, between 1 and 4% of children experience febrile convulsion. The complications of febrile seizures in children include psychosocial effects, cognitive impairments, hospital bed occupancy, prolonged hospitalization, and increased healthcare costs. Additionally, 15% of cases involving multiple recurrent seizures in children under 1 year old involve more than 50% of children experiencing recurrent febrile seizures. According to a 12-year follow-up regarding neurological issues brought on by febrile seizures, 20% of kids have delayed or abnormal neurological development, 10% have neurological defects, and 5% have learning disabilities. While a straightforward approach to prevention can stop the spread of the illness and the complications of fever-related seizures in children by controlling fever, washing feet, and using antipyretics. Due to the concurrent occurrence of two major phenomena in children, namely fever and seizures, a relatively high prevalence of this illness results, which causes parents to become extremely anxious to the point where they occasionally announce that their children are dying. Many parents experience anxiety after witnessing the first febrile seizure, and it can be upsetting and problematic for them whenever their children have a fever. Fortunately, in contrast to what many parents believe, this disease in children is benign, easily preventable, and rarely results in cerebral injuries. The prevalence of febrile seizures was 100 (9.50%) (7.73-11.27 at 95% Confidence Interval) among 1052 children. 32 of these 100 patients (or 32%) had recurrent febrile seizures, while 68 (68%) of the patients had simple febrile seizures.

Title of the study

Effectiveness of Self-Instructional Module on Knowledge Regarding Prevention Of Febrile Convulsions Among Mothers of Under Five Children in Selected Areas: A Quasi- Experimental Study.

A) Objectives:

Primary objectives:

- To assess the effectiveness of self-instructional module on knowledge regarding prevention of febrile convulsions among mothers of under five children in selected areas.

Secondary objectives:

1. To assess the pre-test knowledge regarding prevention of febrile convulsions among mothers of under five children.
2. To assess the post-test knowledge regarding prevention of febrile convulsions among mothers of under five children.
3. To evaluate the effectiveness of self-instructional module on knowledge regarding prevention of febrile convulsions among mothers of under five children
4. To associate the knowledge score regarding prevention of febrile convulsions among mothers of under five children with selected demographic variables.

B) OPERATIONAL DEFINITION:

1. **Effectiveness:** In this study effectiveness, refers to the extent to which the self-instructional module on prevention of febrile convulsions achieves the desired effect in improving the knowledge level of the mothers of under five children.

2. **Self-instructional module:**
   In this study, self-instructional module refers to an educational material regarding prevention of febrile convulsions which consist of definition, causes, clinical manifestation, management and prevention of febrile convulsions.

3. **Knowledge:** In this study, knowledge means responses obtained from the mothers regarding prevention of febrile convulsions.

4. **Prevention:** In this study, prevention means the action to be taken to prevent febrile convulsions.

5. **Febrile convulsions:** In this study, febrile convulsions refer to convulsions in a child (0-5 years) caused by a
   high-grade body temperature (100.4◦F or above).

6. **Mothers:** In this study, mothers refer to women who are having children in the age group of 0-5 year.

7. **Under five children:** In this study, under five children refers to children in the age group of 0-5 years.

8. **Area:** In this study area means, selected areas (urban, rural) of the city.

C) HYPOTHESIS

Hypothesis will be tested at 0.05 level of significance.

- **H0**: There will be no significant difference between pre-test and post-test knowledge score regarding prevention of febrile convulsions among mothers of under five children in selected areas.
- **H1**: There will be significant difference between pre-test and post-test knowledge score regarding prevention of febrile convulsions among mothers of under five children in selected areas.

DELIMITATION

The present study is delimited to the mothers of under five children in selected areas.

D) ETHICAL ASPECTS

The ethical committee of the institution had given the approval for this study proposal. Prior permission was obtained from the concerned authority for conducting this study. After explaining all aspects of study

to the sample's, written consents were taken from them. All the information obtained from the samples was kept confidential.

E) Review of literature

In the present study the literature reviewed has been organized into following categories:

- Literature related to febrile convulsions in children.
- Literature related to prevention of febrile convulsions in children.
- Literature related to knowledge of mothers related to febrile convulsions
- Literature related to effectiveness of self-instructional module on mothers of under five children

F) Conceptual Framework

The conceptual framework selected for the study on Ernestine Wiedenbach's "Prescriptive Theory''(Helping art of clinical nursing).

IV. METHODOLOGY

Research approach: Quantitative research approach

Research design: Quasi experimental one group pre-test and posttest research design

Setting of the study: Selected areas of the city.

Variables of the study

- **Independent variable: -** Self-instructional Module
- **Demographic variable: -** Age, educational status, occupation, religion, type of the family, family monthly income, area of residence, Previous history of convulsion in family, Previous history of convulsion in children.

Population: All mothers of under five children

Sample: Mothers of under five children

Sample size :90 mothers of under five children

Sample technique: Non probability convenient sampling technique

- **Inclusion criteria:**

  Mothers who are:

- having under five children
- able to communicate freely in Marathi/Hindi/English
- present at the time of data collection.
- willing to participate in this study.

Exclusion criteria:

- health professionals

8.Description of tools

- Section A - demographic Variables
- Section B— self structured knowledge questionnaires

9.Validity:

For the content validity, the tool was distributed to 21 experts including child health nursing subject experts, Statistician and pediatrician. Experts were chosen according to their areas of speciality. Valuable suggestions were given and necessary corrections were made after the consultation with guide.

10.Reliability:

In this study, Karl Pearson correlation coefficient formula used, it was found to be 0.99 and hence tool is reliable and valid.

11.Pilot study:

It was conducted on 10 mothers of under five children and collected data was coded, tabulated and descriptive and inferential statistics used to analyse. The pilot study was feasible in term of time, money and resources.

12. Data collection:

The main study data was gathered from 5/12/2023 to 26/12/2023. Permission was obtained from the sarpanch of concerned gram panchayat. The samples were approached in small group on a daily basis. Consent of the samples were taken Before giving the questionnaire self - instruction was given by the investigation and the Purpose of the study mentioned. The pre-test questionnaires were distributed and

collected back after 30 minutes. After collecting the pre-test score, the investigator administrated the treatment (self- instructional module on knowledge regarding prevention of febrile convulsion). After 7 days post-test was taken on the same subjects.

V. RESULT:

SECTION – I

Table IV.1: Frequency and percentage wise distribution of Mothers of under five children according to their demographic variables.

n=90

Demographic Variables	Frequency (f)	Percentage (%)
Age(yrs)		
	15	16.7
19-22 23-26 27-30 ≥31	25	27.8
	20	22.2
	30	33.3
Educational Status		
Primary	12	13.3
Secondary	30	33.3
Higher Secondary	28	31.1
Graduate	14	15.6
Post Graduate	6	6.7
Other	0	0
Occupation		
Govt Service	3	3.3
Private Service	21	23.3
Homemaker	43	47.8
Self Employed	12	13.3
Labour	10	11.1
Other	1	1.1
Religion		
Hindu	32	35.6
Muslim	11	12.2
Christian	18	20.0
Buddhist	28	31.1
Other	1	1.1
Type of family		
Nuclear	35	38.9
Joint	47	52.2

Extended	8	8.9
Monthly family income (Rs)		
Below 10000	9	10.0
10001-20000	32	35.6
20001-30000	44	48.9
≥30001	5	5.6
Area of residence		
Rural	0	0
Urban	0	100
Semi Urban	0	0
Previous history of convulsion in family		
Yes	7	7.8
No	83	92.2
Previous history of convulsion among children		
Yes	5	5.6
No	85	94.4

SECTION II: Table IV.2: Assessment of pre-test knowledge regarding prevention of febrile convulsions among mothers of under five children in selected areas.

n=90

Level knowledge score	Score Range	Level of Knowledge Score	
		Frequency (f)	Percentage (%)
Poor	0-6(0-20%)	25	27.78
Average	7-12(21-40%)	47	52.22
Good	13-18(41-60%)	13	14.44
Very Good	19-24(61-80%)	4	4.44
Excellent	25-30(81-100%)	1	1.11
Minimum score		3	
Maximum score		26	
Mean knowledge score		9.51 ± 4.40	
Mean % Knowledge Score		31.70 ± 14.68	

SECTION III

Table IV.3: Assessment of post-test knowledge regarding prevention of febrile convulsions among mothers of under five children in selected areas.

n= 90

Level knowledge score	Score Range	Level of Knowledge Score	
		Frequency (f)	Percentage (%)
Poor	0-6(0-20%)	0	0
Average	7-12(21-40%)	1	1.11
Good	13-18(41-60%)	20	22.22
Very Good	19-24(61-80%)	52	57.78
Excellent	25-30(81-100%)	17	18.89
Minimum score		12	
Maximum score		27	
Mean knowledge score		21.45 ± 3.28	
Mean % Knowledge Score		71.51 ± 10.93	

SECTION IV: Table IV.4: Table showing Significance of difference between knowledge score in pre and post-test of Mothers of under five children regarding prevention of febrile convulsion.

n=90

Test	Mean	SD	Mean Difference	df	Calculated t-value	Tabulated t-value	p-value
Pre- Test	9.51	4.40	11.94±5.67	89	19.96	1.98	0.0001, p<0.05, S
Post -Test	21.45	3.28					

SECTION V: Table V: Association of post-test knowledge score regarding prevention of febrile convulsion among mothers of under five children in relation to demographic variables

n=90

Demographic variable	Calculated value			df	Table value	Level of significance< 0.05	Signification
	T-value	F-value	p-value				
Age in years	-	6.90	0.0001	3,86	2.70	P<0.05	S
Education	-	5.45	0.001	4,85	2.47	P<0.05	S
Occupation	-	0.76	0.57	5,84	2.32	p>0.05	NS
Religion	-	0.90	0.46	4,85	2.47	p>0.05	NS
Type of family	-	2.10	0.12	2,87	3.10	p>0.05	NS
Area of residence	-	0.60	0.55	2.72	3.71	p>0.05	NS
Monthly family income (Rs)	-	0.38	0.76	3,86	2.71	p>0.05	NS
Previous history of convulsion in family	0.38	-	0.70	88	1.98	p>0.05	NS
Previous history of convulsion in children	1.08	-	0.28	88	1,98	p>0.05	NS

VI. DISCUSSION:

The finding of the study was discussed with reference to the objectives and the findings of the other studies in this section. The present study was undertaken to assess the effectiveness of self-instructional module knowledge regarding prevention of febrile convulsion among the mothers of under five children in selected areas. In the present study post-test knowledge score of mothers of under five children was higher than pre-test. It shows that 57.78 % of the mothers of under five children had very good level of knowledge score, 22.2 % of mothers of under five children had good level of knowledge score, 18.89 % of the mothers of under five children had excellent level of knowledge score and 1.11% of mothers had poor level of post -test knowledge score. The mean and standard deviation of the result reveals that mean score is 9.51 and SD is 4.40 in pre- test and mean score is 21.45 and SD 3.28 in post-test. Thus, it was concluded that self-instructional module on knowledge regarding prevention of febrile convulsion among mothers of under five children in selected urban areas of the city was found to be effective as a teaching strategy.

VII. CONCLUSION

Hence, it was concluded undoubtedly that the educational intervention by the investigator in the form of self-instructional module helped the mothers of under five children to increase knowledge regarding prevention of febrile convulsion.

VIII. ACKNOWLEDGEMENT

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