

Effectiveness of Health Education on Knowledge of Mothers of Under Five Children Regarding Management of Children Suffering from Pyrexia

Prakash M. Naregal*, Vaishali R. Mohite, Prabhuswami Hiremath, Mahesh Chendake, Rajashri B. Karale, Shivaji Pawar and Ujwala R. More

Krishna Institute of Nursing Sciences, Karad-415539, Maharashtra, India; Prakash.naregal20@gmail.com

Abstract

Fever is a commonest medical problem in children for which mothers to seek immediate medical care and the parents experience "fever phobia". The study was aimed to assess the mothers' knowledge and effectiveness of health education on mother's knowledge on the management of children suffering from pyrexia. Data was collected from the mothers at pediatric ward, Krishna Hospital and Medical Research Center, Karad, Maharashtra, India. The study design was one group pre-test, post-test design. Forty mothers of children suffering from pyrexia were the samples selected by non-probability purposive sampling technique. The pre-test was conducted on the 1st day by administering structured knowledge questionnaire and health education was delivered on management of children suffering from pyrexia. Post-test was conducted on the 7th day. Descriptive and inferential statistics were used for analysis. Results show that 11.2 was the mean pre-test value and 20.8 was the mean post-test value. The paired t-test value was 11.097, ($p < 0.0001$) showing a significant gain in the mothers knowledge on management of children suffering from pyrexia. Chi-square test result shows that there was a significant association of knowledge scores of mothers with monthly family income ($\chi^2 = 11.039$, $p < 0.05$), source of health information ($\chi^2 = 17.861$, $p < 0.05$). The study concludes that the health education regarding management of children suffering from pyrexia was effective in improving the knowledge of mothers and thus health education interventions should be targeted to mothers to manage children suffering from pyrexia effectively.

Keywords: Effectiveness, Health Education, Knowledge, Management, Mothers, Pyrexia, Under Five Children

1. Introduction

Suffering from minor ailments is the commonest and frequent episode in childhood experiences¹. Most of the children consistently suffer from infectious diseases. The main primary symptom in any infection is fever. The majority of the mothers are not aware of the fever control measures. If the fever is not controlled, it leads to convulsions and irreversible brain damage².

Fever is one of the major markers of an illness and one of the frequently reported causes of underfive children's caretakers visits to healthcare facilities.^{4,7} Parents perceive

fever as harmful and dangerous to their children and measure it inaccurately as they don't have adequate knowledge about fever⁵.

The body temperature above 37°C (98.6°F) is considered as fever. Fever is caused by the interaction of various infectious and non-infectious processes with the host defense mechanism⁶.

The most important determinants of effective treatment of fever in children are mother's perceptions about the cause of the fever, duration of sickness, accessibility and the anticipated cost of treatment, frequent use of traditional medicine, and judgment of

* Author for correspondence

the severity of the fever⁸. Maternal socio-economic and demographic characteristics are linked to timely detection and treatment of fever in under five children. Mothers play primary role in health issues affecting their children⁹.

Families are more worried and anxious about the fever and it is one of the most common symptoms of childhood illness and wants to know its reason and have difficulty in assessing the severity of the illness^{3,10}. By providing information to parents and caregivers, especially to mothers of children regarding fever would prevent the unnecessary treatment of children, as well as minimizing delays and insufficient responses to fever¹¹.

Most fevers are not dangerous; Parents, especially mothers, nevertheless experience severe anxiety confronting children's fevers awareness and knowledge about fever in mothers helps to promote home measures, to correct false beliefs and to reduce mothers' anxiety¹².

Parents frequently perceive fever as a disease rather than as a symptom or sign of illness¹³. The important step for decreasing parental anxiety and concerns regarding fever and seizure related early prevention is by providing information to increase the knowledge and awareness regarding febrile seizure and prevention by managing the fever¹⁴.

Child care is mostly the responsibility of mothers. Nature and quality of care given to the child is influenced by the mother's knowledge regarding child care so health education programs should be targeted to high school girls, university students, mothers and other caregivers (e.g. fathers)¹⁵.

2. Problem Statement

A study to assess effectiveness of health education on knowledge of mothers of under five children regarding management of children suffering from pyrexia at Krishna Hospital, Karad.

2.1 Objectives

- To assess the knowledge regarding management of children suffering from pyrexia among the mothers of under five children.
- To determine an effectiveness of health education on knowledge of mothers regarding management of children suffering from pyrexia.
- To find out the association of knowledge scores of mothers regarding management of children suffering from pyrexia with their selected socio-demographic variables.

2.2 Assumption

Mothers will have some knowledge regarding management of children suffering from pyrexia. Health education will help to increase the knowledge and awareness regarding management of children suffering from pyrexia.

2.3 Hypothesis

H1: The mean post-test knowledge scores of mothers regarding management of children suffering from pyrexia will be significantly higher than that of their mean pre-test knowledge scores 0.05 levels of significance.

H2: There will be a significant association of knowledge scores of mothers regarding management of children suffering from pyrexia with their selected socio-demographic variables.

3. Materials and Methods

The evaluative research approach was used. One group pre-test, post-test research design was appropriate for the study. Health education for mothers on management of children suffering from pyrexia was the independent variable and dependent variable of the study was knowledge scores. The setting of the study was in pediatric ward at Krishna Hospital and Medical Research Center, Karad, Maharashtra, India. 40 mothers of under five children suffering from pyrexia and admitted to a pediatric ward were selected as a sample of the study by using non-probability purposive sampling technique. Structured knowledge questionnaire was prepared after extensive review of literature and with the help of experts to assess the level of knowledge of mothers on management of children suffering from pyrexia.

The research tools consists of two sections

Section 1: Demographic variable - Age of the mother, age of child, religion, education, occupation, monthly income, type of family, source of health information.

Section 2: Structured knowledge questionnaire regarding management of children suffering from pyrexia.

4. Method of Data Collection

Official permission to conduct the study was obtained from the Medical Director, Krishna Hospital and Medical Research Center, Karad on 16.02.16. Informed written consent was obtained from each mother on the day of pre-test, at the very beginning by explaining the

Table 1. Distribution of mothers according to socio-demographic variables (n=40)

Sr. No.	Characteristics	Category	Frequency	Percentage
1	Age group	18–20 yrs	10	25
		21–24 yrs	12	30
		25–30 yrs	12	30
		> 30 yrs	6	15
2	Child age	0–1 yrs	12	30
		2–3 yrs	14	35
		3–4 yrs	9	22.5
		4–5 yrs	5	12.5
3	Religion	Hindu	14	35
		Muslim	10	25
		Christian	7	17.5
		Other	9	22.5
4	Education	Illiterate	11	27.5
		School Education	16	40
		Higher Secondary	9	22.5
		Graduate	4	10
5	Occupation	House wife	13	32.5
		Skilled Worker	12	30
		Service	7	17.5
		Other	8	20
6	Income	<5000	19	47.5
		5000–10000	16	40
		>10000	5	12.5
7	Type of family	Nuclear	23	57.5
		Joint	17	42.5
8	Source of health information	Health worker	16	40
		Family member	14	35
		News paper	10	25

purpose of the study followed by a structured knowledge questionnaire was administered to assess the existing level of knowledge of mothers regarding management of children suffering from pyrexia and health education was delivered on management of children suffering from pyrexia with the help of lesson plan and A.V. aids (charts and posters) and on 8th day post test was conducted.

5. Plan for Data Analysis

The data obtained was analyzed by descriptive and inferential statistics by considering the objectives of the

study. Experts in the field nursing and statistics were consulted for the plan of data analysis.

6. Results

Part I: Distribution of mothers as per socio-demographic variables

Table 1 shows that maximum numbers of mothers 12 (30%) were in the age group 21–24 and 25–30 years, respectively. 14 (25%) of children were in the age group of 2–3 years, 14 (35%) belongs to Hindu religion. A majority of 16 (40%) mothers studied up to school education,

13 (32.5%) were housewife, 19 (47.5%) were having a monthly family income of less than Rs. 5000, 23 (75%) were from nuclear family and 16 (40%) of the mothers source of health information was from a health worker.

Part II: Distribution of mothers according to knowledge scores on management of children suffering from pyrexia.

Table 2 shows that in the pre-test majority 16 (40%) mothers scored average, 13 (33%) poor and 11 (27%) good knowledge regarding management of children suffering from pyrexia and majority 22(55%) mothers scored average, 11 (27%) good and 7 (18%) mothers scored poor knowledge scores regarding management of children suffering from pyrexia in post-test.

Part III: Testing of hypothesis (H1) for evaluation of effectiveness of health education on knowledge of mothers regarding management of children suffering from pyrexia.

Table 3 shows that the mean pre-test knowledge score was 11.2 (SD=5.46) and post-test knowledge score was 20.8 (SD=3.495) hence there was a significant gain in post-test knowledge scores of mothers. The paired t-test value was 11.097, (p<0.0001) showing a significant gain in the of mothers knowledge on management of children suffering from pyrexia.

Part IV: Association of pre-test knowledge scores on management of children suffering from pyrexia with selected demographic variables of mothers.

Table 4 shows the Chi-square test results that there was a significant association of knowledge scores of mothers with monthly family income ($\chi^2=11.039$, p<0.05) and source of health information ($\chi^2=17.861$, p<0.05).

7. Discussion

The study was conducted to assess the effectiveness of a health education on knowledge of mothers of under five children regarding management of children suffering from pyrexia. The aim of the study was to improve the knowledge of mothers' on management of children suffering from pyrexia. The results showed that the health education was effective as the paired t-test value was 11.097, (p<0.0001) showing a significant gain in the of mothers knowledge on management of children suffering from pyrexia.

A similar study conducted at Birmingham to find the effectiveness of a community-based educational intervention on fever management. Nurse led A.C.T (Assess-Communicate-Treat) fever management program was used. Results showed that the A.C.T. fever management program was successful in increasing knowledge of fever management knowledge of parents¹⁶.

A similar study was conducted to find the effect of the planned teaching programme on mother's knowledge on febricidal measures in children. Results show that the

Table 2. Distribution of mothers according to knowledge scores on management of children suffering from pyrexia (n=40)

Knowledge Score	Pre-test		Post-test	
	Frequency	Percentage	Frequency	Percentage
Good (mean+SD)	11	27	11	27
Average (mean+SD to mean-SD)	16	40	22	55
Poor (mean-SD)	13	33	7	18

Table 3. Mean, standard deviation and paired t-value of knowledge scores of mothers regarding management of children suffering from pyrexia (n=40)

Area of Analysis	Mean	Standard Deviation
Pre-test	11.2	5.46
Post-test	20.8	3.495
Paired t-value	9.366, p<0.0001	

Table 4. Association of pre-test knowledge scores on management of children suffering from pyrexia with selected socio-demographic variables of mothers (n=40)

	Frequency	Good	Average	Poor	Chi-square	DF	p-Value
Age group							
18–20 yrs	10	6	3	1	7.298 NS	6	0.2942
21–24 yrs	12	3	5	4			
25–30 yrs	12	4	5	3			
> 30 yrs	6	0	3	3			
Child age							
0–1 yrs	12	4	3	5	7.022 NS	6	0.3188
2–3 yrs	14	6	4	4			
3–4 yrs	9	2	5	2			
4–5 yrs	5	1	4	0			
Religion							
Hindu	14	5	5	4	1.771 NS	6	0.9395
Muslim	10	2	5	3			
Christine	7	3	3	1			
Other	9	3	3	3			
Education							
Illiterate	11	3	7	1	7.168 NS	6	0.3056
School Education	16	4	6	6			
Higher Secondary	9	4	3	2			
Graduate	4	2	0	2			
Occupation							
House wife	13	6	3	4	7.616 NS	6	0.2676
Worker	12	5	4	3			
Service	7	1	3	3			
Other	8	1	6	1			
Monthly family income (Rs)							
<5000	19	3	7	9	11.039 S	4	0.0261
5000–10000	16	8	7	1			
>10000	5	2	3	0			
Type of family							
Nuclear	23	6	9	8	1.739 NS	2	0.4192
Joint	17	7	7	3			
Source of health information							
Health worker	16	7	9	0	17.861 S	4	0.0013
Family member	14	10	0	4			
News paper	10	8	2	0			

pre-test mean knowledge score was 6.25. The post-test mean knowledge score was 16.65. The calculated t- value is 8.67, $p < 0.05$ which means that there is a significance difference in the post-test, which clearly indicates that there has been as an increase in the knowledge level of mothers of children between the age of 0–8 years regarding febricidal measures after the intervention. Chi-square test and calculating p-value, it was found that the

socio demographic variable like the age of the mother was found most significant².

A similar study conducted to assess 348 mothers knowledge and practices of managing minor illnesses of children under five years at comprehensive health centres in Irbid, Jordan. Results show that the mean knowledge scores on fever management was 8.6 (SD=1.7). There was a significant positive association between the mother's

demographic variables with knowledge and practices of fever and/or upper respiratory tract infection, $p < 0.05$. Nurses and other health care providers could play a significant role in educating women on how to manage their children's minor illnesses¹⁷.

A similar study conducted at Afshar Hospital in Yazd, Iran to assess the mothers' knowledge, perception and management of fever in their children through answers to a structured questionnaire. 240 mothers who brought febrile children to Afshar Hospital were the samples of the study. Results showed that most mothers perceive that fever is harmful and dangerous for children. Also, their knowledge is poor and the temperature is not measured accurately³.

Results of the present study are similar to a cross sectional study conducted in a Baqiyatallah Hospital pediatric clinic to determine 180 mothers attitude of military families about their child's fever. The study concludes that fear of fever and about the definition is a major problem. Mothers need education about the definition and significances of fever, the correct way to use a thermometer and antipyretics for fever home management⁷.

A similar study was conducted at GMMF Research and Education Hospital Pediatrics Clinic and aim of the study was to assess the knowledge and practice about fever among 150 mothers of children (0–6 years). Results showed that mothers tried to understand high fever. The study concludes that mothers haven't enough knowledge about high fever and they have faults when they try to do therapy to their children they have traditional applications¹⁸.

8. Conclusion

The present study concludes that mother's knowledge regarding management of children suffering from pyrexia is inadequate in pre-test and after delivery of health education, there was a gain in knowledge of mothers of under five children. Therefore, health education is an effective method for increasing the mother's knowledge.

9. References

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