



ISSN Print: 2394-7500
ISSN Online: 2394-5869
Impact Factor: 8.4
IJAR 2022; 8(4): 182-186
www.allresearchjournal.com
Received: 19-02-2022
Accepted: 21-03-2022

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A quasi-experimental study to assess the effectiveness of information booklet on knowledge of mothers regarding home management of selected common childhood illnesses among children in selected villages of district Solan

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Abstract

Introduction: Every year, in developing countries more than 10 million children die before the completion of 5-years of age. Most of these deaths are preventable by managing them at the time of occurrence such as diarrhea, respiratory tract infections, measles, malaria, AIDS, tuberculosis etc. Apart from malnutrition, the other factors which contribute to illnesses in this age group are poor living conditions, unsafe drinking water, poor hygiene, and overcrowding.

Aim: The study was carried out to assess the effectiveness of information booklet on knowledge of mothers regarding home management of selected common childhood illnesses among children.

Methodology: A quantitative research design was used to assess the knowledge of 60 mothers at selected villages of district Kangra by Non- Probability purposive sampling technique. A self structured questionnaire tool was used to assess the knowledge.

Results: The results of study revealed that there was significant association of level of knowledge score with age of mothers. No significant association was found between knowledge score and socio demographic variable such as education, occupation, parity, number of under five children, type of family and source of information.

Conclusion: Hence, it is concluded that the majority of mothers having good knowledge regarding the home management of selected common childhood illnesses.

Keywords: Common childhood illnesses, mothers of under-5 children

1. Introduction

In India, 15-20% of the population consists of children under the age of five years. Their protection is the greatest investment for country's economic prosperity and political stability. (2014) According to UN Inter-agency Group for Child Mortality Estimation (UN IGME), it is estimated that the number of deaths of children aged less than 5 years per 1000 live births. In India, it is estimated as 53 per 1000 live births in 2013. With about 2 million annual deaths of under-fives, India also accounts for 21% of the global child mortality ^[1].

According to United Nations Children's Fund (UNICEF), most child deaths result from one of the following five causes acute respiratory infections, diarrhea, measles, malaria, and malnutrition among which diarrhea and pneumonia being the leading cause in the post-neonatal period. (2012) According to the State of the World's Children report showed that globally, 7.6 million children under 5 years of age die annually.⁽²⁾ (2018) According to National Family Health Survey-3 revealed that 6% of under five children had symptoms of an ARI, (9%) incidence of diarrhea, (58%) prevalence of anemia, 13% prevalence of fever among under-five children, and 80% of children have had at least one episode of acute otitis media till the age of three year.

Lack of knowledge of mother regarding home management of common childhood illnesses is a lacking point in achieving health. Hence it is essential to assess and improve the knowledge of mothers on home management of common childhood illnesses. The mothers play a key role in the treatment of child. It is important that mothers understand the basic principles of treatment.

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Material and Methods

A quantitative research approach was used to accomplish the objectives of study. A quasi experimental research design was used to study the effectiveness of information booklet on knowledge of mothers regarding home management of selected common childhood illnesses among children. The study was conducted at selected villages of District Solan. The purposive sampling technique was used for selecting the sample from mothers and sample size was 60.

Data collection procedure

- The data has been collected in the month of November-December, 2020 in district Solan.
- Permission for research study was taken from Principal of Murari Lal Memorial college of nursing, Solan.

- Ethical clearance has been taken from ethical committee of Murari Lal Memorial College of Nursing
- Permission was taken from DGHS Shimla.
- Door to door visit was done to collect the data and all the participants were informed that their participation in the study was voluntary and they can refuse to participate and can withdraw from study at any time.
- Apart from this, written informed consent was taken from each staff nurse and permission has been taken from the authorities.
- Confidentiality and anonymity of the study subjects was being taken care of.
- Self structured knowledge questionnaire was used for data collection.

Results

Table 1: Frequency and percentage wise distribution of demographic profile of under- five mothers. (n=60)

Socio demographic proforma		Experimental f(%)	Control f(%)	Experimental (N=30)	Control (N=30)
Age	21-25 years	17%	27%	5	8
	26-30 years	33%	43%	10	13
	30-35 years	33%	23%	10	7
	35 and above	17%	7%	5	2
Education	10 TH	23%	33%	7	10
	12 th	33%	30%	10	9
	Graduation	30%	20%	9	6
	Post graduation	13%	17%	4	5
Occupation	Government	3%	3%	1	1
	Private job	40%	17%	12	5
	Housewife	57%	80%	17	24
Parity	Primigravida	30%	53%	9	16
	Multigravida	70%	47%	21	14
Number of under-5 children	One	83%	80%	25	24
	Two	17%	20%	5	6
Type of family	Joint	57%	40%	17	12
	Nuclear	43%	60%	13	18
Source of information	Mass media	0%	0%	0	0
	Health professionals	100%	100%	30	30

Table 1 shows subjects distribution into various categories according to their age, education, occupation, parity, number of under five children, type of family and source of information regarding home management of selected common childhood illnesses among children.

In the experimental group regarding age, majority of the mothers 33% belonged to age group 26- 30 years of age and 33% belonged to age group of 31- 35 years, 17% belonged to 21-25 years and 17% belonged above 35 years. In control group regarding age, majority of mothers 43% belonged to age group 26-30 years, 27% belonged to 21-25 years, 23% belonged to 30-35 years and 7% belonged above 35 years.

With regards to educational status in experimental group, majority of the mothers 33% were educated up to 12th standard, 30% were graduated, 23% up to 10th standard and 13% were post graduated. Educational status in control group, majority of the mothers 33% were educated up to 10th standard, 30% were educated 12th standard, 20% were graduated and 17% were post graduate.

In the experimental group according to occupation, the majority of mothers 54% were housewife, 40% were in private job and 3% were in government job. In the control group according to occupation, the majority of mothers 80% were housewife, 17% in private job and 3% were in government job.

In terms of parity in experimental group, majority of mothers 70% were multigravida and 30% in primigravida. In terms of parity among control group, majority of mothers 53% were primigravida and 47% in multigravida.

According to number of under five children in experimental group, majority of mothers 83% had one child and 17% had two children. In control group, majority of mothers 80% had one child and 20% had two children.

With regards to type of family in experimental group, majority of mothers 57% had joint family and 43% had nuclear family. In control group, more than half of mothers i.e. 60% had nuclear family and 40% had joint family.

According to source of information, 100% mothers got information about management of common childhood illnesses from health professionals.

Table 2: Frequency and percentage distribution of pre-existing knowledge of mothers regarding home management of selected common illness in children in experimental and control group.

Criteria measure of knowledge score of pre-test		
Category Score	Experimental	Control
Very good (31-40)	1(3.3%)	0(0%)
Good (21-30)	9(30%)	9(30%)
Average (11-20)	20(66.7%)	21(70%)
Poor (0-10)	0(0%)	0(0%)

Maximum score=40 Minimum Score=0

This Table 2 depicts the pre-existing knowledge score of mothers in experimental and control group. According to the table, in experimental group, 66.7% mothers had average knowledge, 30% mothers had good knowledge and only 1% of mothers had very good knowledge.

In control group, 70% mothers had average knowledge and 30% had good knowledge. Most of the mothers had average pre-existing knowledge scores in both experimental (66.7%) and in control group (70%) regarding home management of selected common childhood illnesses.

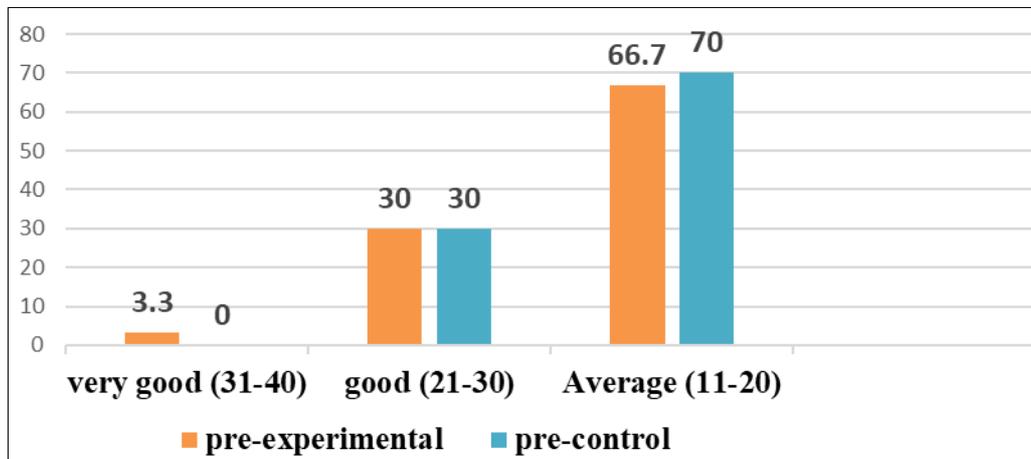


Fig 1: Evaluation criteria (knowledge scores)

Table 3: Effectiveness of information booklet on knowledge score of mothers in experimental group by frequency and percentage distribution of post test knowledge score.

Criteria measure of effectiveness of information booklet		
Criteria	Pre-test knowledge score	Post-test knowledge score
Very good (31-40)	1(3.3%)	7(23.3%)
Good (21-30)	9(30%)	18(60%)
Average (11-20)	20(66.7%)	5(16.7%)
Poor (0-10)	0(0%)	0(0%)

Maximum score=40 Minimum Score=0

In pretest, majority of mothers i.e. (66.7%) had average knowledge and in posttest only (16.7%) mothers remains in average knowledge score. Thus, the knowledge score is improved. In posttest (60%) of mothers had good knowledge against 30% in pretest score as the mothers in the average group improved their knowledge score and is included in good knowledge score. 23% mothers had very good knowledge against 3.3% mothers. None of the mother had poor knowledge in pre and posttest knowledge score.

Table 4: To determine the significant change in post test score of mothers both in experiment and control group.

Group	N	Knowledge score				Paired 't' Test		
		Pretest		Posttest		df	T	Result
Mean	SD	Mean	SD					
Experimental Group	30	18.37	5.203	25.70	4.977	29	19.856	Significant
Control Group	30	19.167	3.649	19.37	3.700	29	1.989	Non-Significant
Maximum = 40 Minimum = 0								

Hypothesis H₀₁: There will be not significant difference between mean pretest and posttest knowledge score of mothers in experimental and control group. indicates the significant change in post test score of mothers both in experimental and control group. In experimental group, pretest score indicates mean score, mean was 18.37±5.203 and after intervention 25.70± 4.977. In control group, mean value in pretest, mean value was 19.167 and S.D. 3.649 and post score, mean was 19.37and

SD was 3.700 The posttest experimental and posttest control group shows significant value. The paired 't' test was used for the comparison within the group i.e. pretest experimental and posttest experimental which showed significant change. Whereas, in pretest control and posttest control group there was no significant change. There was significant difference between mean pretest and posttest knowledge score of mothers in experimental and control group. Hence the null hypothesis is rejected.

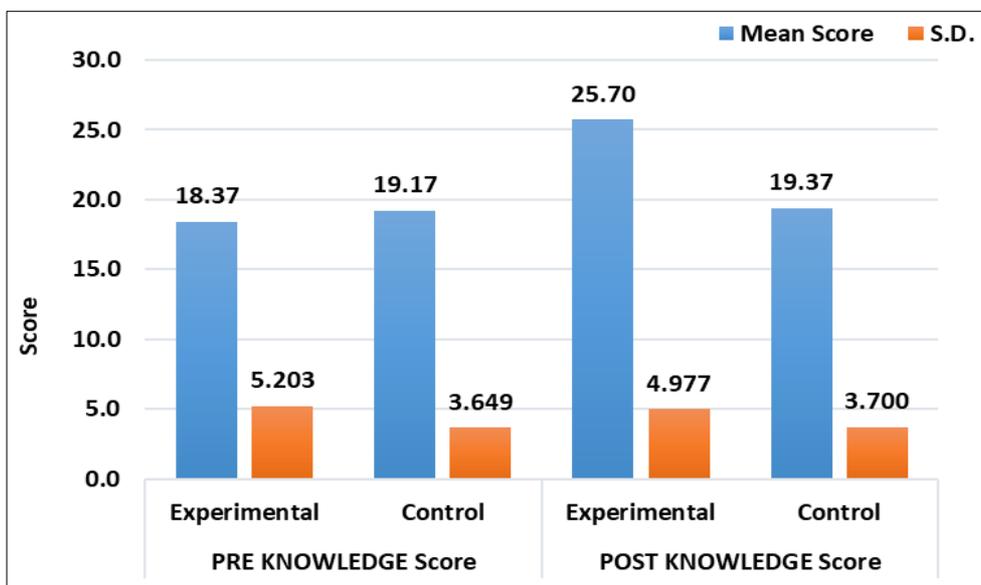


Fig 2: Diagram showing Knowledge Mean and SD Score (Between Groups)

Table 5: Association of Knowledge Score with socio- demographic variables (Post knowledge) Experimental Group

Demographic Variables		Association of knowledge Score with demographic variables in experimental group							
Variables	Options	Very good	Good	Average	Chi Test	P Value	df	Table Value	Result
Age	21-25 years	0	4	1	16.60	0.011	6	12.59	Significant
	26-30 years	3	4	3					
	30-35 years	0	9	1					
	35 above	4	1	0					
Education	10 th	0	4	3	8.543	0.201	6	12.59	Not Significant
	12 TH	2	6	2					
	Graduation	3	6	0					
	Post-graduation	2	2	0					
Occupation	Government job	1	0	0	4.328	0.363	4	9.488	Not Significant
	Private job	2	7	3					
	Housewife	4	11	2					
Parity	Primigravida	1	7	1	1.738	0.419	2	5.991	Not Significant
	Multigravida	6	11	4					
Number of under 5 children	One	7	14	4	1.840	0.399	2	5.991	Not Significant
	Two	0	4	1					
Type of family	Joint family	4	11	2	0.711	0.701	2	5.991	Not Significant
	Nuclear family	3	7	3					
Source of information	Mass media	0	0	0	NA				
	Health professional	7	18	5					
	Neighbour	0	0	0					

Significant at 5% level (i.e., p<0.05)

Not significant at 5% level (i.e. p>0.05) the table shows association between the level of scores and sociodemographic variable. Chi square test was used to associate the level of knowledge and selected demographic variables. It showed that there was a significant association between the knowledge with age of mothers.

No significant association was found between knowledge score and socio demographic variable such as education, occupation, parity, number of under five children, type of family and source of information.

The calculated Chi-square values were less than the table value at the 0.05 level of significance. Hence, hypothesis is rejected.

Discussion

According to objectives

Objectives 1: To assess the pre-existing knowledge of mothers regarding home management of selected common illness in children in experimental and control group. The

findings of the study show that the mean score of pretest knowledge score in experimental group was 18.37+- 5.203. In control group, knowledge score of under-five mothers had mean value of 19.17and SD is 3.649. the pre-existing knowledge score of mothers in experimental and control group. According to the table, in experimental group, 66.7% mothers had average knowledge, 30% mothers had good knowledge and only 1% of mothers had very good knowledge. In control group, 70% mothers had average knowledge and 30% had good knowledge. Most of the mothers had average pre-existing knowledge scores in both experimental (66.7%) and in control group (70%) regarding home management of selected common childhood illnesses.

Objective 2: To develop and validate the information booklet regarding management of common childhood illness. The findings of pretest knowledge score in experimental group revealed that the mean score of pretest knowledge was 18.37+-5.203 and in post-test after intervention knowledge score was 25.70+-4.977. The

computed 't' value of knowledge score ($t= 19.856$) showed statistically significant.

Objectives 3: To evaluate the effectiveness of information booklet on home management of selected common childhood illness among children in experimental group. To determine the significant change in post test score of mothers both in experiment and control group. In the current study it was found that, posttest knowledge score of mothers in experimental group shows that 23.3% mothers had very good knowledge, 60% had good knowledge (an increase of 20%), 16.7% (an increase of 30%) had average knowledge

Objective 4: To determine the association of post test score of mothers with selected demographic variable. The present study reports that in experimental group, that there was a significant association between the knowledge score and socio demographic variable i.e. with age of mothers and there was no significant association found between knowledge score and other socio demographic variable i.e. education, occupation, parity, number of under five children, type of family and source of information.

Conclusion

From the result of the study it was concluded that implementation of educational interventions like information booklet, educating mothers and other methods can improve their knowledge and management skills.

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