

Vaccine Preventable Diseases among Mothers of Under Five Children

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Abstract

A quasi experimental study was conducted using one group pre test and post test research design. Convenient sampling technique was used to select 50 mothers of under five children at Bagavati village, of Bagalkot Dist, Karnataka. Data was collected using structured knowledge questionnaire.

Result: The results reveal that the overall mean score was 30% in the pre test and 65.5% in the post test. Majority of the mothers had inadequate knowledge in pre test. After the implementation of Information Booklet with an enhancement of 33.5% mothers of under five children had more adequate knowledge regarding Vaccine Preventable Diseases. Paired 't' test showed that there was a significant improvement between pre test and post test scores with 't' value of 11.03 at $P < 0.05$.

Conclusion: The study findings revealed that information booklet on vaccine preventable diseases is effective in improving knowledge of mothers of under five children.

Keywords: Knowledge; information booklet; vaccine; preventable; under five children.

Introduction

Our children are the future generation of the nation hence it is our responsibility in prevention of children related to seven killer diseases of the under five children. Vaccines are prepared to work by training and preparing the body's to develop the natural defences the immune system to recognize and fight off viruses and bacteria. If the body is exposed to those disease conditions to causing pathogens later, it will be ready to fight and destroying them quickly¹.

When a child gets vaccinated against a disease, their risk of infection is also reduced so that they're

also far less likely to transmit the disease to others. As more children in a community get vaccinated, fewer children remain vulnerable, and there is less possibility for passing the pathogen on from person to person. Lowering the possibility for a pathogen to circulate in the community protects those who cannot be vaccinated due to other serious health conditions from the disease targeted by the vaccine².

Children are innocent, trusting and full of hope and joy. Their childhood should be joyful and loving. Their lives should mature gradually, as they gain new experiences. Each child is a unique person, a person whose future will be affected for better or worse by the influences that mould his or her life during the early years. One child will grow up to become a joy to God and parents and a blessing to others. Another will grow up and become a menace to society. Many others will live out their lives unfairly good ways. The future of any society depends on its children. Parents are laying the foundation for their child's lives. So the parents have a very key role and opportunity to help promote the health of the children. Children who receive their immunizations on time are healthier children³.

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Under five children death occurred each year more than 10 million children die before they reach their fifth birthday. Seven in ten of these deaths are due to just five preventable and treatable conditions: pneumonia, diarrhoea, malaria, measles, and malnutrition, and often a combination of these each year more than 10 million children die conditions. The estimated proportion of deaths in which under nutrition is an underlying cause is roughly similar for diarrhoea 61%, malaria 57%, pneumonia 52%, and measles 45%. This problem causes a higher under-five mortality rate especially in South-East Asia⁴.

Statement of the Problem: “Effectiveness of Information Booklet on Vaccine Preventable Diseases among Mothers of under five children, of Bagavati village of Bagalkot Dist, Karnataka”.

Objectives:

1. To assess the pre-existing knowledge regarding vaccine preventable diseases among mothers of under five children.
2. To assess the knowledge regarding vaccine preventable diseases among mothers of under five children at Bagavati village after administering the information booklet.
3. To evaluate the effectiveness of information booklet by comparing the pretest and posttest knowledge scores regarding vaccine preventable diseases among mothers of under five children
4. To find out the association between pretest knowledge scores of mothers of under five children and their selected socio demographic variables.

Research Methodology

Research approach: Quantitative research approach

Research design: quasi experimental one group pretest and post test design

Variables:

Independent Variable: Information booklet on knowledge regarding vaccine preventable diseases among mothers of under five children of Bagavati village of Bagalkot Dist, Karnataka.

Dependent Variable: Knowledge regarding the vaccine preventable diseases among mothers of under

five children of Bagavati village of Bagalkot Dist, Karnataka.

Extraneous Variables: Age, religion, types of family, Educational Qualification, Occupation, Number of children, previous knowledge and Source of Information on vaccination.

Population: Target populations for the present study were mothers of under five children attending selected villages of Bagalkot dist.

Sample and Sample Size: Sample is the subset of a population selected to participate in a research study. This study samples were the Mothers of under five children of Bagavati village of Bagalkot dist.

The sample for the present study were 50 mothers of under five children attending selected villages of Bagalkot dist.

Sampling Technique: Non probability convenient sample technique was used for study, to select 50 mothers of under five children.

(A) Inclusion Criteria:

1. Mothers who are willing to participate.
2. Mothers who are available at the time of data collection.

(a) Exclusion Criteria:

1. Mothers who attended any research studies about vaccine preventable disease.
2. Mothers who are illiterate.

Organization and Presentation of the Data: Collected data were edited, tabulated, analyzed, interpreted, and findings obtained were presented in the form of tables and diagrams presented under the following sections.

Section I: Analysis of the demographic variables of the mothers of under five children at Bagavati village.

Section II: Analysis and interpretation of pretest knowledge score of mothers of under five children at Bagavati village on vaccine preventable diseases.

Section III: Analysis and interpretation of posttest knowledge score of mothers of under five children at Bagavati village on vaccine preventable diseases

Section IV: Analysis and interpretation of the effectiveness of information booklet among mothers of under five children at Bagavati village on knowledge regarding vaccine preventable diseases.

Section V: Analysis and interpretation of pretest knowledge score and the socio demographic variables of mothers of under five children at Bagavati village.

Section I: Analysis of the demographic variables of the mothers of under five children at Bagavati village.

Age of the Mothers: Below 24 years (42%), 25-30 years (20%), 31-35 years (28%) and 36 years and above (10%).

Religion: Hindu (95%), Christian (1%), Muslim (04%) and any other (0%).

Marital Status: unmarried (00%), married (94%), divorced (2%), and widow (4%).

Education Status: SSLC (62%), PUC (24%), under graduate (14%), and post graduate (00%).

Occupational Status: Housewife (37%), coolie (27%), employees (13%) and agriculture (11%).

Type of family: Nuclear (40%) and joint (60%).

Monthly Income: Below Rs.5000 (22%), Rs.5001-10000 (32%), Rs. 10001-15000 (32%) and Rs. 15001 above (14%).

Number of children: One (32%), Two (50%), Three (16%), 4 and more(2%).

Previous knowledge on vaccination: Yes (22%) and No(78%).

Source of information on vaccine preventable diseases: Family member (28%), health personnel (30%), mass media (42%) and any other(00%).

Section II: Analysis and interpretation of pretest knowledge score of mothers of under five children at Bagavati village on vaccine preventable diseases.

Table 1: Aspect wise pre test mean knowledge score on vaccine preventable diseases N=50

Sl. No.	Aspects	Maximum score	Pretest Knowledge scores		
			Mean Score	SD	Mean %
1.	Meaning	7	1.74	1.32	24.8%
2.	Poliomyelitis	5	1.68	1.0	33.6%
3.	Measles, Mumps, rubella	6	1.12	1.09	18.7%
4.	Diphtheria, Pertussis, Tetanus	8	3.08	1.23	38.5%
5.	Tuberculosis and other diseases	4	1.06	0.88	26.5%
Total		30	8.68	3.92	28.9%

Table 2: distribution of subjects according to the pretest knowledge scores N=50

Level of knowledge	Frequency	%
Inadequate knowledge	45	90%
Moderate knowledge	05	10%
Adequate knowledge	0	0%
Total	50	100%

Table 2 indicate the overall pretest level of knowledge among subjects. 90% subject had inadequate knowledge, 10%of subjects had moderate knowledge and none of them had adequate knowledge.

Section III: Analysis and interpretation of posttest knowledge score of mothers of under five children at Bagavati village on vaccine preventable diseases

Area on vaccine preventable diseases:**Table 3: aspect wise post test knowledge score on vaccine preventable diseases. N=50**

Sl. No.	Aspects	Maximum score	Post test Knowledge scores		
			Mean Score	SD	Mean %
1.	Meaning	7	4.54	2.03	64.8%
2.	Poliomyelitis	5	3.02	1.08	60.4%
3.	Measles, Mumps, rubella	6	3.68	1.33	61.3%
4.	Diphtheria, Pertussis, Tetanus	8	4.44	1.48	55.5%
5.	Tuberculosis and other diseases	4	2.68	0.97	67%
Total		30	18.00	5.20	65.5%

Table 3 indicate the overall posttest level of knowledge among subjects. 18% subject had inadequate knowledge, 60%of subjects had moderate knowledge and 22% of them had adequate knowledge.

Section IV: Analysis and interpretation of the effectiveness of information booklet among mothers of under five children at Bagavati village on knowledge regarding vaccine preventable diseases.

Table 4: comparison of pretest and posttest knowledge score of subjects regarding vaccine preventable diseases. N=50

Area of knowledge	Knowledge score				Paired 'test	DF	Significance
	Pretest		Posttest				
	Mean	SD	Mean	SD			
Meaning	1.74	1.32	4.54	2.03	t=8.6	49	p=0.005*** Significant
Poliomyelitis	1.68	1.0	3.02	1.08	t=8.61	49	p=0.005*** Significant
Measles, Mumps, rubella	1.12	1.09	3.68	1.33	t=12.06	49	p=0.005*** Significant
Diphtheria, Pertussis, Tetanus	3.08	1.23	4.44	1.48	t= 6.0	49	p=0.005*** Significant
Tuberculosis and other diseases	1.06	0.88	2.68	0.97	t= 9.09	49	p=0.005*** Significant
Total	8.60	3.89	18.00	5.20	t=15.03	49	p=0.005*** Significant

***Very high significant at $p < 0.005$

Table 5: Percentage of knowledge gain on different aspects of structured knowledge questionnaire N=50

Area of knowledge	Pretest knowledge score	Posttest Knowledge score	Mean % of knowledge gain
Meaning	24.80%	64.80%	40.00%
Poliomyelitis	33.60%	60.40%	26.80%
Measles, Mumps, rubella	18.70%	61.30%	42.60%
Diphtheria, Pertussis, Tetanus	38.50%	55.50%	17.00%
Tuberculosis and other diseases	26.50%	67%	40.50%
Total	30%	65.5%	33.5%

Table 5 shows knowledge score percentage before and after the administration of information booklet. Mothers of underfive children gained 33.5% overall knowledge on regarding meaning of vaccine preventable diseases.

Section V: Analysis and interpretation of pretest knowledge score and the socio demographic variables of mothers of under five children at Bagavati Village

The association posttest level of knowledge and their demographic variables. Age, education, Number of children and previous knowledge on vaccination were significantly associated with their pretest level of knowledge. There was no significant association between religion, family Income, type of family, and source of information regarding. This association was statistically significant and it was calculated using Chi square test. There search hypothesis H_2 was accepted. Hence the objective 4 is achieved.

Conclusion

The results of the study show that the difference between the pre-test and post- test knowledge score of mothers of under five children is statistically significant and the enhancement shows the effectiveness of information booklet on vaccine preventable diseases.

Recommendations:

- A similar study may be conducted on a large sample for wider generalization.
- A comparative study can be done to assess the knowledge, attitude and practice of rural and urban mothers regarding Vaccine Preventable Diseases.
- A study can be done to evaluate a planned teaching program on Vaccine Preventable Diseases.

- A follow up study may be conducted to evaluate the effectiveness of Information Booklet.

Ethical clearance certificate is obtained from the:
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Reference

1. Hicks J, Allen G. 1999. A century of change: trends in UK statistics since 1900. Research paper 99/111. London, UK: House of Commons Library. See <http://researchbriefings.parliament.uk/ResearchBriefing/Summary/RP99-111>
2. Who.int. 2020. [online] Available at: < <https://www.who.int/ith/ITH-Chapter6.pdf> > [Accessed 29 December 2020].
3. Picton-Howell T. Child rights and you UK,C/O–Pennington’s Manches LLP <http://uk.cry.org/knowus/importanceofchildrights.html>.
4. Bunyan S, Chompikul J. Pathom. N General Hospital Thailand. Journal of public Health and Development 2007; 2(2). Available from: <http://www.aihd.mahidol.ac.th>.
5. Park K. Parks Textbook of preventive and social medicine. edition 24. Publication–Banarsidas. Bhanot 2017;133-138, 248-251.
6. Sharma R. Essentials of pediatric Nursing. 1st editions. Jaypee Brothers Medical publishers New Delhi. 2013:139-40.
7. Basavanthappa BT. Essentials of Community health Nursing, 1st edition, Jaypee Brothers Medical publishers, New Delhi 2011: 143-4.