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A study to assess the effectiveness of an information booklet on knowledge regarding the prevention of selected neonatal infections among primipara mothers in selected hospital at Mangalore

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Abstract
Background: The commonly occurring infections in newborn are ophthalmia neonatorum, omphalitis, skin infections, candidiasis, and gastroenteritis. [1, 2,] Mothers are the first care providers for their newborn and adequate knowledge of the mothers on care of newborn is needed to reduce the infant mortality rate. [3]
The aim of the present study was to assess the effectiveness of an information booklet on knowledge regarding prevention of neonatal infections among primipara mothers in a selected hospital at Mangalore.
Materials and Method: A pre-experimental one group, pre-test post-test design was used for the study. Purposive sampling technique was used to select 30 primipara mothers from the post-natal and postoperative wards. The investigator assessed the knowledge using structured knowledge questionnaire and an information booklet was administered to the subjects and on the seventh day post-test was conducted with the same questionnaire. The collected data was analysed using descriptive and inferential statistics.
Result: The mean post-test knowledge score (19.63) was significantly higher than the mean pre-test knowledge score (14.53). The computed 't' value (14.70) was higher than the tabled value (t_{29}=2.05*) at $p<0.05$* level of significance and was inferred that information booklet was effective in increasing knowledge of primipara mothers regarding neonatal infections. There was no significant association between knowledge of primipara mothers on neonatal infection and demographic variable

Keywords: primipara mothers; knowledge; effectiveness; information booklet

Introduction
Every year more than 10 million children die in developing countries before they reach their 5th birthday [1, 2]. A majority of new born problems are specific to perinatal period and is the results of poor maternal health, inadequate care during pregnancy inappropriate management and poor hygiene during the delivery, lack of new born care and discriminatory care [3]. Education enables mothers to acquire greater knowledge and learn better child care practices. Mother is an important primary care provider and therefore, her education and access to information will help her, on care of her infant. Neonatal mortality in developing countries is one of the most important problems that need immediate attention in order to achieve millennium development goals [4, 6].

The objectives of the study
1. To determine the pre-test level of knowledge of primipara mothers regarding prevention of neonatal infections as measured by a structured knowledge questionnaire.
2. To evaluate the effectiveness of an information booklet on knowledge regarding prevention of neonatal infections in terms of gain in mean post-test knowledge score.
3. To find out the association between mean pre-test knowledge score with selected demographic variables (age, education, income, occupation, type of family, and area of residence).

Hypotheses
All the hypotheses will be tested at 0.05 level of significance.
H_1: The mean post-test knowledge score of primipara mothers on the prevention of selected neonatal infections will be significantly higher than their mean pre-test knowledge score.
H_2: There will be significant association between the mean pre-test knowledge score of primipara mothers on the prevention of selected neonatal infections and selected demographic variables

Material and Methods
The research design used in the study was pre-experimental one group pre-test post-test. Thirty primipara mothers, who met the inclusion criterias, were selected by using purposive sampling technique from the postnatal and postoperative wards of Govt. Lady Goshen Hospital, Mangalore which is a maternity hospital with total bed strength of 260. After the pre-test the primipara mothers were given the information booklet on prevention of selected neonatal infections and post-test was conducted after seven days. The tool used for the data collection was Demographic Proforma and The Knowledge questionnaire on prevention of selected neonatal infections. After obtaining the formal permission from the hospital authorities and from the subjects, the pre-test was administered. Then the information booklet contains the prevention of selected neonatal infections was administered to the mother and the post test was conducted on the seventh day. The data collection period extended from 14th August to 7th September 2013. The information booklet was

administered to 10 mothers on 14-8-2013, to another 10 mothers on 23-8-2013, and to the remaining 10 mothers on 1-9-2013, following the pre-test. Post-test was conducted after seven days for each section. The respondents cooperated well with the investigator during data collection.

Results

Most of the mothers (50%) were in the age group of 18-23 years, 50.0% were in the age group of 24-29. Fifty percent of primipara mothers had primary education, 33.3% had secondary education and 16.6% had graduation or above graduation educational status. Majority of the mothers (83.3%) were homemakers and 16% of mothers were collie workers. Thirty percent of mothers were from nuclear and 66.6% were from joint families. Sixty percent of mothers were from rural area and 33.33% were from urban area.

Section I: Knowledge level of mothers regarding the prevention of selected neonatal infections

Table 1: Grading of pre-test and post-test knowledge scores on prevention of selected neonatal infections n=30

Grading of knowledge	Score	Percentage	Pre-test		Post-test	
			f	%	f	%
Excellent	22-28	81-100	0	0	3	10.0
Good	17-21	61-80	3	10.0	27	90.0
Average	11-16	41-60	27	90.0	0	0
Poor	0-10	0-40	0	0	0	0

Maximum score =28

Table 2: Area-wise mean percentage and mean gain of pre-test and post-test knowledge scores of mothers on prevention of selected neonatal infections n=30

Area	Max. score	Pre-test		Post-test		Actual gain
		Mean	Mean %	Mean	Mean %	
Introduction	2	1.56	78.00	1.70	85.00	7.0
Ophthalmia neonatorum	5	1.63	32.60	3.80	76.00	43.4
Omphalitis	6	1.26	42.00	2.43	81.00	39.0
Skin infections	5	2.93	58.60	3.93	78.60	20.0
Candida infections	2	1.16	58.00	1.66	83.30	25.3
Gastroenteritis	11	4.46	40.50	7.80	70.90	30.4

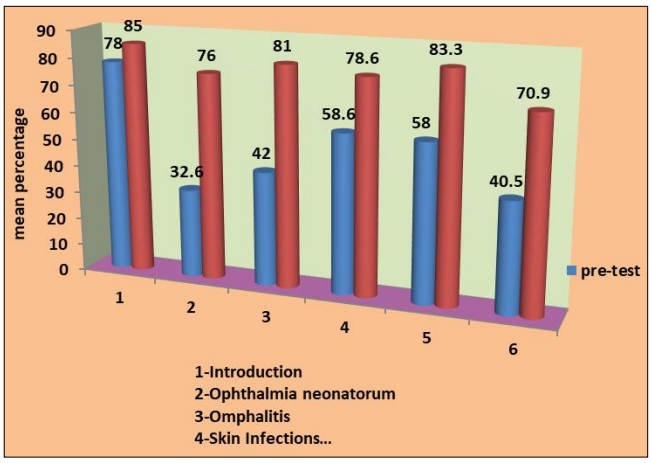

Fig 1

Cylindrical Diagram showing the area-wise percentage and mean gain of pre-test and post-test knowledge scores

Difference between mean pre-test and post-test knowledge scores is shown in Table 3.

Table 3: Mean, SD and median of pre-test and post-test knowledge scores n=30

Area	Mean±SD	Median
Pre-test	14.53±1.51	13.0
Post-test	19.6±1.32	21.5

Maximum score: 28

Section II: Effectiveness of an information booklet in terms of gain in knowledge scores

Table 4: Significance of difference between the mean pre-test and post-test knowledge score n=30

Group	Mean knowledge score	Mean difference	SD of difference	't' Value	Inference
Pre-test	14.53	5.07	0.19	14.70	Significant
Post-test	19.60				

Max. Score: 28 (t_{29}=2.05, p< 0.05)

Section III: Association between pre-test knowledge level and selected demographic variables

Chi-square Yates Correction Formula was used to test the hypothesis and the calculated values of Chi-square were lesser than the tabled value (χ^2 = 3.84 at 0.05 level of significance). It indicates that there was no association between the mean pre-test knowledge score and selected demographic variables.

Discussion

The findings of the present study showed that information booklet was effective in improving the knowledge of primipara mothers regarding prevention of selected neonatal infections. The findings of the present study are consistent with the findings of other studies and strongly support the effectiveness of information booklet in improving the knowledge [5, 6, 7].

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