

“To assess the effectiveness of planned teaching programme on knowledge regarding care of low birth weight babies among postnatal mothers in selected maternity hospitals of the city”.

“Effect of planned teaching programme regarding care of Low birth weight babies among postnatal mothers”.

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Abstract :

Background: Children are the future of nation and society and mothers are guardian of that future. Care of children has traditionally been the responsibility of mothers irrespective of education. Poor knowledge on part of mothers can lead to disastrous results in the field of care giving. LBW is the single most important factor determining the survival chances of the child. Many of them die during their first year. The infant mortality rate is about 20 times greater for all LBW babies than for other babies. Majority of the problems associated with LBW babies can be prevented by providing education to mothers regarding care of LBW babies. Thus, planned teaching programme will help the postnatal mothers to gain knowledge regarding care of LBW babies. The **objectives** of the study: 1. To assess the existing knowledge of postnatal mothers regarding care of LBW babies. 2. To evaluate the effectiveness of planned teaching programme on knowledge regarding care of LBW Babies. 3. To find out the association between pretest knowledge scores with selected Socio-demographic variables. **Hypothesis:** H1 – The mean posttest knowledge scores of postnatal mothers regarding care of LBW babies will be significantly higher than their mean pre-test knowledge scores at 0.05 level of significance. H2 - There will be significant association between pretest knowledge scores with selected demographic variables. **Research methodology:** The Conceptual framework of the study was based on Modified Rosenstock’s and Becker’s health belief model. The study was conducted using one group pretest and posttest, pre-experimental design. The independent variable in the study was planned teaching programme regarding care of LBW babies among postnatal mothers, while the dependent variable was knowledge of postnatal mothers. In this study the target population was postnatal mothers and postnatal mothers with LBW babies were considered as accessible population. Nonprobability purposive sampling technique was adopted for this study. From this population 60 postnatal mothers were selected as subjects of the study. **Result:** The study findings showed that in pre-test majority of the postnatal mothers 40(67%) had average knowledge and 13(21%) had good knowledge whereas 7(12%) had poor knowledge. In post-test majority of the postnatal mothers 52(87%) had good knowledge and 8(13%) had average knowledge whereas none had poor knowledge score. **Conclusion:** Based on the analysis of the findings of the study, the following inference was drawn. There was gain in knowledge scores after administration of planned teaching programme. The research study suggests that there is need to create awareness among postnatal mothers regarding care of LBW babies. Majority of the problems associated with LBW babies can be prevented by providing education to mothers regarding care of LBW babies.

Key Words- Low birth weight babies, postnatal mothers, planned teaching programme, Knowledge.

I. INTRODUCTION

The birth of an infant is one of the most awe-inspiring and emotional events that can occur in one’s lifetime. After 9 months of anticipation and preparation, the neonate arrives amid of flurry of excitement. The new human being affects the lives of the parents and also the other family members. Some parents and family adjust to the necessary changes in their lifestyles, whereas others find it difficult to cope with these changes and feel varying degrees of turmoil and anxiety. This is especially true if the neonate is not the robust, healthy, lovable infant who was expected.¹

In India nearly 26 million babies born in each year, accounts for 20% of global birth in which 1.2 million of these nearly die before completing 4 weeks of life. India thus contributes 30% of total 3.9 million death Worldwide and accounts for one quarter of all neonatal deaths in World, the main causes of new-born death are infectious disease (30-40%), preterm delivery, birth asphyxia, low birth weight, hypothermia.²

Neonatal mortality is on the decline globally. The world’s neonatal mortality rate fell from 33 deaths per 1,000 live births in 1990 to 21 per 1,000 in 2012. Children who die before they complete 28 days of life often do so as a result of disease and conditions that are readily preventable or treatable with proven, cost-effective interventions.³

The neonates are at risk for various health problems even though they are born with average birth weight. The morbidity and mortality rates in infants are high due to neonatal illness. Most of the health problems are life threatening to the neonates. They need optimal care for their improved survival. Essential new-born care is important to reduce the neonatal illness and deaths.⁴

Background of the Study

World Health Organization has defined low birth weight “as one whose birth weight is less than 2500gm irrespective of the gestational age”.⁵ LBW infants are broadly of two clinical types. First are those born before 37 weeks. Second category of LBW infants includes those babies who have intrauterine growth retardation. These babies are under nourished for a given gestation.

They are, therefore called small for gestational age (SGA) or small for dates (SFD) babies. Over 80 percent of all neonatal mortality in both the developed and developing countries occur among the LBW babies.⁶

A newborn baby may be LBW because of prematurity or intrauterine growth retardation (IUGR). Poor nutritional status of the mother and frequent pregnancies are the major causes of IUGR. The factors influencing the LBW of the baby, apart from the short gestational period are socio-economic status, nutritional & intrauterine environment. Ethnic background & genetic control are also important.⁷

Problem Statement:

“To assess the effectiveness of planned teaching programme on knowledge regarding care of low birth weight babies among postnatal mothers in selected maternity hospitals of the city”.

Objectives of the Study:

1. To assess the existing knowledge of postnatal mothers regarding care of LBW babies.
2. To evaluate the effectiveness of planned teaching programme on knowledge regarding care of LBW Babies.
3. To find out the association between pretest knowledge scores with Socio-demographic variables.

Conceptual framework: Conceptual framework for this study was adopted from Modified Rosenstocks and Beckers Health Belief Model.

Literature review: for this study is organized under the following headings

1. Review on care of LBW babies
2. Review on knowledge regarding care of LBW babies among postnatal mothers
3. Review on effectiveness of planned teaching programme.

RESEARCH METHODOLOGY

Research approach: Focusing on the nature of the research problem for the present study and the objectives to be fulfilled, an evaluative research approach was considered to carry out the study.

Research design: As this study involves evaluation of effectiveness of planned teaching programme to assess the knowledge which will be obtained immediately before the intervention and posttest knowledge data will be collected after it, Pre experimental one group pretest – posttest design was chosen.

Variables of the study:

“In quantitative study, concepts are usually referred to as variables, which are the central building blocks of the study”.

There are two variables identified in this study. They are independent and dependent variables.

Independent variable: Planned teaching programme on knowledge regarding care of Low birth weight babies among postnatal mothers.

Dependent variable: Gain in knowledge of postnatal mothers.

Population: A Population is the entire aggregation of cases in which a researcher is interested. The population can be target and accessible population. The target population is the entire population in which the researcher is interested. The accessible population is composed of cases from the target population that are accessible to the researcher as study participants.

Target and accessible population: In the present study, the target population comprised of postnatal mothers and accessible population comprises of postnatal mothers having LBW babies in selected Maternity Hospitals of the City.

Sample: A sample is a portion of population that represents the entire population. Thus, it is the subset of the population elements. The samples for the present study were postnatal mothers having LBW babies in selected maternity hospitals of the City.

Sampling Technique: The sampling technique used for the study was purposive sampling, which is a type of non-probability sampling. Purposive sampling is based on the belief that the researcher’s knowledge about the population can be used to hand pick sample members. This sampling technique permits the researcher to decide purposely, to select subjects which are judged to be typical of the population.

Sample size: The sample size considered for the study were 60 postnatal mothers having LBW babies in selected hospitals of the City.

Description of the tool: On modifying the tool as per the expert’s suggestions final tool consist of two sections.

Section I: Information on demographic variables of respondents containing eight items.

Section II: Knowledge questionnaire of 30 items on care of LBW babies with maximum score of 30.

Ethical review: 1. The topic was reviewed, and permission was obtained from research and ethical committee to conduct research. 2. Written permission was taken for conducting research from the concerned authorities of the selected Maternity Hospitals. 3. Written consent was obtained from the subjects. 4. The subject’s identity was kept confidential and autonomy was maintained of participation in the study.

Statistical analysis: The data were computerized and verified using the SPSS (statistical package for social science) version 16.0 to perform tabulation and statistical analysis. Qualitative variables were described in frequency and percentages, while quantitative variables were described by mean and standard deviation.

Results: The data was analyzed and presented in the following sections:

Section I: Findings related to demographic variables.

Table no.1: Frequency and percentage distribution of postnatal mothers according to demographic variables.

SN	Demographic variables	Frequency (f)	Percentage (%)
1	Age		
	• 20-25 years	49	82
		8	13
	• 26-30 years	3	5
		0	0
	• 31-35 years		
	• 36 years and above		
2	Educational status		
	• Non formal education	0	0
		19	31
	• Primary education	28	47
		13	22
	• Secondary education		
	• Higher secondary and above		
3	Occupation		
	• Government	0	0
		5	8
	• Private	55	92
	• Housewife		
4	Family income per month (Rs)		
	• Less than 2000	0	0
		13	21
	• 2001 – 5000	31	52
		16	27
	• 5001 – 10,000		
	• 10,000 and above		
5	Type of family		
	• Nuclear family	12	20
		48	80
	• Joint family		
6	Gravida		
	• Primi Gravida	31	52
		25	42
	• Multi Gravida	4	6
	• Grand Multi Gravida		
7	Parity		
	• Primi Para	39	65
		19	32
	• Multi Para	2	3
	• Grand Multi Para		

The data presented in **Table 1** indicates that majority of postnatal mothers 49(82%) belonged to the age group of 20-25 years and minimum 3(5%) belonged to the age group of 31-35years. Maximum postnatal mothers 28(47%) had secondary education and minimum number of postnatal mothers 13(22%) had higher education. Majority of postnatal mothers 55(92%) were housewives and minimum 5(8%) were government employees. Majority of postnatal mothers 31(52%) had monthly income of Rs. 5001-10,000 and minimum 13(21%) had Rs 2001-5000 monthly income. Maximum number of postnatal mothers 48(80%) belonged to joint family and 12(20%) were from nuclear family. Most of the postnatal mothers 31(52%) were Primi Gravida and minimum 4(6%) were Grand multi Gravida. Majority of postnatal mothers 39(65%) were Primi Para and 2(3%) and minimum were Grand multi para.

Section II: Findings on knowledge regarding care of LBW babies among postnatal mothers.**Table no 2: Frequency and percentage distribution of pre-test and post-test knowledge scores of postnatal mothers regarding care of LBW babies. n=60**

Knowledge score	Pre-test		Post-test	
	Freq	%	Freq	%
Good knowledge (17-30)	13	21	52	87
Average knowledge(12-16)	40	67	8	13
Poor knowledge(0-11)	7	12	-	-

Table no.2 reveals that in pre-test majority of postnatal mothers 40(67%) had average knowledge, 13(21%) had good knowledge and 7(12%) had poor knowledge; whereas in posttest majority of postnatal mothers 52(87%) had good knowledge, 8(13%) had average knowledge and none had poor knowledge score.

Table 3: Mean and Standard Deviation of knowledge scores of postnatal mothers regarding care of LBW babies.

Area of analysis	Mean	S.D
Pre-test (x)	14	3
Post- test(Y)	23	3
Difference (y-x)	9	0

Table no 3 reveals that overall pretest mean knowledge score is 14, whereas posttest mean knowledge score had increased to 23, after administration of planned teaching programme.

Section II: Evaluation of the effectiveness of planned teaching programme on knowledge regarding care of LBW babies among postnatal mothers. The research hypothesis tested under this section was the mean post-test knowledge scores of postnatal mothers will be significantly higher than their mean pre-test knowledge scores at 0.05 level of significance.

Table no 4: Mean difference (d), Standard Error and Paired 't' values of knowledge score of postnatal mothers. n=60

Mean difference (d)	Standard Error (SE)	Paired 't' value Calculated	Table value at 59df
9	0.54	16.66*	1.960

*(p<0.05)

Table no 4 reveals that calculated paired 't' value (16.66) is greater than tabulated value. Hence H_1 is accepted. This indicates that the gain in knowledge score is statistically significant at $p<0.05$ levels. Therefore, the PTP regarding care of LBW babies is effective to improve the knowledge among postnatal mothers.

Table 5: Association between the existing pre-test knowledge score of postnatal mothers and demographic variables.

SN	Demographic Variable	Good	Average	Poor	Cal. Value	Tab. Value	df
1	Age in Years						
	• 20-25 years	9	36	4	31.35	12.59 (S)	6
	• 26-30 years	3	4	1			
	• 31-35 years	1	0	2			
	• 36 years and above	0	0	0			

2	Education							
	• Non-formal	0	0	0	0.801	12.59	6	
		0	16	3				
	• Primary	7	17	4				(NS)
		6	7	0				
	• Secondary							
	• Higher secondary and above							
3	Occupation							
	• Government	0	0	0	0.21	9.49	4	
		3	2	0				
	• Private	10	38	7				(NS)
	• Housewife							
4	Family income per month (Rs)							
	• Less than 2000	0	0	0	0.79	12.59	6	
		0	10	3				
	• 2001-5000	5	22	4				(NS)
		8	8	0				
	• 5001-10,000							
	• 10,001 and above							
5	Type of family							
	• Joint	11	31	5	0.03	5.99	2	
		2	9	2				(NS)
	• Nuclear							
6	Gravida							
	• Primi	9	20	2	0.22	9.49	4	
		4	17	4				
	• Multi	0	3	1				(NS)
	• Grand Multi							
7	Parity							
	• Primi	9	27	3	0.195	9.49	4	
		4	11	4				
	• Multi	0	2	0				(NS)
	• Grand Multi							

S= Significant, NS= Non-Significant

The findings of the table no.5 reveal that the demographic variable age with pre-test knowledge scores of postnatal mothers is significantly associated, whereas the demographic variables education, occupation, family income per month, type of family, Gravida and parity with pre-test knowledge scores of postnatal mothers are independent of each other.

Discussion:

Findings related to sample characteristics:

In the present study, samples of 60 postnatal mothers admitted in selected maternity hospitals of the city were taken for the study. The findings showed that majority of postnatal mothers 49(82%) belonged to the age group of 20-25 years. Similar findings were seen in the study conducted by Sharma K. The results showed that majority 31(62%) were in the age group 20-25 years.

Majority of postnatal mothers 28(47%) had secondary education, 19(31%) had primary education and 13(22%) had higher secondary education and above. Similar findings were seen in a study conducted by S Swathi. The results showed that majority 35% completed secondary education, 30% of subjects completed primary education and 22.5% completed graduation.

Majority of postnatal mothers 55(92%) were housewives and minimum 5(8%) were private employees. Similar findings were seen in a study conducted by Joseph T. The results showed that majority 20(66.67%) were housewives.

Majority of postnatal mothers 31(52%) had family income of Rs 5001-10,000 and 16(27%) had income of 10,001 and above and minimum 13(21%) had 2001 -5000 family income. Similar findings were seen in the study conducted by S Swathi. The results showed that majority of mothers 18(45%) had family income between Rs 5001-10,000 and 5(12.5%) of mothers had income below Rs 5000.

Majority of postnatal mothers 47(78%) belonged to joint family and 13(22%) were from nuclear family. The study done by S Swathi contradicts the present study as the results showed that majority of mothers 31(77.5%) belonged to nuclear family and only 9(22.5%) .

Majority of postnatal mothers 31(52%) were primi gravida, 25(42%) were multi gravida and 4(6%) were Grand multi gravida. Similar findings were seen in the study conducted by S Swathi. The results showed that majority 29(72.5%) of mothers were primi gravida and only 11(27.5%) were multi gravida.

Majority of postnatal mothers 39(65%) were primi para, 19(32%) were multi para, 2(3%) were grand multi para. Similar findings were seen in the study conducted by Sheoran P, Babu M, Mandal K, Rai K. The results showed that majority of mothers in the experimental group 16(53.3%) were primi para, 8(26.6%) were second para and 6(20%) were third para.

Findings related to knowledge of postnatal mothers regarding care of LBW babies:

The study findings showed that in pre-test majority of the postnatal mothers 40(67%) had average knowledge and 13(21%) had good knowledge whereas 7(12%) had poor knowledge. In post-test majority of the postnatal mothers 52(87%) had good knowledge and 8(13%) had average knowledge whereas none had poor knowledge score. Similar findings were seen in the study conducted by Joseph T. The results showed that majority of the mothers had average knowledge scores 25 (83.3%) while 5 (16.67%) had poor knowledge score and none had good knowledge and in the post test conducted after PTP 11(36.67%) had good knowledge scores, 19 (63.33%) had average knowledge scores and none had poor knowledge score.

The study findings showed that the mean posttest knowledge score (23) was higher than their mean pretest knowledge score (14) with a mean difference of 9. Similar findings were seen in the study conducted by Sheoran P, Babu M, Mandal K, Rai K. The results of the study showed that the mean posttest knowledge score (38.48) of experimental group was higher than their mean pretest knowledge score (24.20) with a mean difference of 14.8.

Findings related to association of selected demographic variables:

Knowledge regarding care of LBW babies among postnatal mothers was assessed and analysis for association, between pre-test and posttest knowledge scores was done using Chi-square test. There was significant association between demographic variable age and pre-test knowledge scores. There was no association between the demographic variables' education, occupation, family income, type of family, Gravida and parity with pretest knowledge scores of postnatal mothers.

Similar findings were seen in the study conducted by Sheoran P, Babu M, Mandal K, Rai K. The results showed that there was significant association between demographic variable age and pre-test knowledge scores. There was no association between the demographic variables' education and Parity with the pretest knowledge scores. The study findings were also supported by the study conducted by S Swathi. The results showed that there was no significant association between demographic variables education, occupation, income, family type and Gravida with the pretest knowledge scores.

Conclusion: Based on the analysis of the findings of the study, the following inference was drawn. There was gain in knowledge scores after administration of planned teaching programme. The study suggests that there is need to create awareness among postnatal mothers regarding care of LBW babies. Majority of the problems associated with LBW babies can be prevented by providing education to mothers regarding care of LBW babies. The demographic variable age had statistically significant association with pretest knowledge scores. Conversely, other variables did not have significant association with knowledge regarding care of LBW babies. Overall, carrying out the present study was really an enriching experience for the investigator. The direction from the guide, various experts and cooperation of the participants played a major role in successful completion of the study.

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