Effectiveness of Structured Teaching Programme on Newborn Care among Primi Gravid Women in a selected hospital at Delhi

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Abstract: *Preparation of mothers for newborn care should start from antenatal period, because it is necessary that all pregnant women should know the different aspect of newborn care such as breast feeding, maintenance of personal hygiene, breast feeding immunization, thermoregulation and umbilical cord care. The study was conducted on 60 primi gravid women at selected hospital of Delhi with the following objectives.*

- *To assess the level of knowledge on newborn care among primi gravid women about newborn care.*
- *To determine the level of knowledge of the primi gravid women regarding newborn care.*
- *To find association between demographic variables and the knowledge of primi gravid women regarding newborn care before and after the structured teaching programme.*

Convenient sampling technique was used for the selection of sample. One group pretest –posttest design was selected for the present study. A structured questionnaire schedule was used to collect the data which consists of two sections.

Section-A : This section comprises of items on demographic variables such as age, religion, educational status, occupation, income, type of family, gestational age and utilization of health services.

Section B: This section comprises of items on knowledge regarding newborn care among primi gravid women regarding maintenance of personal hygiene, breast feeding immunization, thermoregulation and umbilical cord care. The collected data was tabulated and analysed based on the objectives. The major findings of the study were as follows:

- ***Level of knowledge of primi gravid women about new born care.***
  The data showed that majority of the primi gravid women had inadequate knowledge regarding maintenance of personal hygiene, thermoregulation, breast feeding, immunization and umbilical cord care.

- ***Level of knowledge of the primi gravid women regarding newborn care after structured teaching programme.***
  In the overall knowledge 20 (33.3%) primi gravid women gained moderately adequate knowledge and 40 (66.7%) primi gravid women gained adequate knowledge and no one had inadequate knowledge

- ***Findings based on the demographic variables***

The association between educational status and knowledge of primi gravid women at p< 0.001 level. It showed that educated women had adequate knowledge in post test.

1. INTRODUCTION:

The birth of a newborn is one of the most awe-inspiring and emotional event that can occur in one's lifetime. The new human being affects the lives of parents and also the other family members. After Nine months of anticipation and preparation the baby arrives with full excitement. Some parents adjust easily to the changes in their lifestyle; whereas other fined it difficult especially if the neonate is not the healthy and lovable infant who was expected [1]. Proper parenting is very important for an infant and it is a very difficult and complex job as well. Infants need a special care and parents must be prepared and trained well for proper newborn care. Parents' knowledge, attitude and practice towards the newborn care have a vital role in the way they treat and care their infants. Proper knowledge about newborn care is the base of proper newborn care. It is basically parent's own responsibility to attain this knowledge and they must gain it before they deliver their baby. Adequate newborn care knowledge is the main reason behind large infant mortality rates in developing countries. Inadequate knowledge results from many problems in the countries, some of them being finance, illiteracy, early marriages and child bearing as well as lack of experience [2]. Government and society has critical role in taking care of these issues and they must handle it proper for a healthier society. Neonatal mortality is one of the major causes of concern with newborns all over the world, especially developing and underdeveloped countries. Despite some remarkable improvement in neonatal health in recent years, the high mortality rate remains unchanged in many countries. Of the 10 million babies born every year approximately 4 million infants die during first week, 8 million during first year and around 10 million within 5 years of their life [3]. Great efforts have been made to improve health of child around the world but mortality rates are still high in neonates. Most neonatal deaths can be avoided through simple, affordable interventions, especially in areas with weak health systems and high rates of neonatal mortality. Outreach and family-community care, health education to improve

home-care practices, recognition of danger signs, generation of demand for skilled care, and increased health-seeking behaviour can lead to significant reductions in neonatal mortality [4.]

There are number of interventions in the essential newborn care practices and all of them are important and should be practiced in a proper way. It includes prevention of infection through clean delivery and hygienic cord care, thermal protection by keeping the baby warm, early and exclusive breast feeding, immunization, eye care practices and providing special care to immature and low birth weight infants. These interventions are clinically proved and found effective in reducing newborn death during their early periods and managing and reducing many diseases. Knowledge is the basis of all activities and it is same in case of newborn care as well[5.] This study aims to assess the level of knowledge of a given population of mothers regarding important aspects of newborn care. This study also aims to evaluate the possible relationship between newborn care knowledge and selected demographic variables such as educational status, monthly income, age of mother, religion, occupation, type of family, utilization of health services and gestational age in weeks.

2. STATEMENT OF PROBLEM:
"A Study to Assess the Effectiveness of Structured Teaching Programme on Newborn Care among Primi Gravid Women in a selected hospital at Delhi."

3. OBJECTIVES OF THE STUDY:
- To assess the level of knowledge on newborn care among primi gravid women about newborn care.
- To determine the level of knowledge of the primi gravid women regarding newborn care after structured teaching programme.
- To associate the findings based on the demographic variables and the knowledge of primi gravid women regarding newborn care before and after the structured teaching programme.

4. OPERATIONAL DEFINITION:
- **Effectiveness:** It refers to determining the extent to which teaching programme has brought about the result extended and is measured in terms of knowledge gained in post test.
- **Structured Teaching Programme**: It refers to the systematically developed information designed to teach the antenatal mothers on newborn care by using handouts, charts, and flashcards.
- **Newborn Care:** Newborn care is care given to the baby during the period from birth to the first 28 days of life.
- **Primi Gravid Women:** A women who is pregnant for the first time.

5. RESEARCH METHODOLOGY:
Research Approach: A pre experimental research approach was used for the present study.

Research Designs: The research design selected for the present study was one group pre-test post test design.

Sample and sample size: A Sample of 60 primi gravid women who met the inclusion criteria was selected for the study.

Sampling Techniques: Convenient sampling technique was used for the study.

Description of Tool: The present study tool was consists of two sections.

Section A: This section consists of sociodemographic data of the individuals
Section B: This section consists of questionnaire regarding maintenance of personal hygiene, Thermoregulation, breast feeding, immunization and umbilical cord care.
The score was interpreted as: Knowledge on new born care:
< 50%   -   Inadequate knowledge
50-75%   -   Moderately adequate knowledge
>75%   -   Adequate knowledge
Data collection: Data was collected after obtaining permission from the medical officer. Informed consent was taken from the subjects. Data was collected with a structured questionnaire. The structured teaching programme contains information regarding maintenance of personal hygiene, breast feeding immunization, thermoregulation and umbilical cord care. Post test was conducted after a period of seven days using the same structured questionnaire.
Plan for data analysis: The data was analysed by using descriptive and inferential statistics.

6. RESULTS:
The major findings of the study were as follows:

Description of sample characteristics

Demographic variables	Category	Respondents	
		Number	**Percentage**
Age Group	<20 Yrs.	07	11.7
	21-25 Yrs.	42	70.0
	26-30Yrs.	11	18.3
	>31 Yrs.	-	-
Gestational Age	<12 weeks	16	26.7
	12-24 weeks	35	58.3
	25-40weeks	09	15.0

Table 1: Classification of participants by age and gestational weeks

Among 60 primi Gravid women, 42 (70%) were in the age group of 21-25 yrs, 11(18.3%) in the age group of 26-30 yrs and 07 (11.7%) belongs to <20yrs.

Regarding gestational age in weeks 35 (38.3%) primi gravid women were 12-24 weeks, 16 (26.7%) were below 12 weeks and 09 (15%) belongs to 25-40 weeks.

Percentage distribution of respondent by religion and family

Demographic variables	Category	Respondents	
Religion		Number	Percentage
	Hindu	45	75
	Christian	15	25
	Muslims	-	-
	Others	-	-
Family	Nuclear	56	93.3
	Joint	04	6.7

Table 2: This table is showing Percentage distribution of respondent by religion and family

Among 60 primi Gravid women majority of 45 (75%) were Hindu and 15(25%) were Christians. Regarding type of family 56 (93.3%) of them were nuclear family and 04 (6.7%) were joint family.

Percentage distribution of educational status among primi gravid women

Demographic variables	Category	Respondents	
		Number	**Percentage**
Educational Status	Illiterate	12	20
	Primary	24	40
	Middle school	16	26.7
	High school	08	13.3

Table 3: Indicates percentage distribution of educational status among primi gravid women

Among 60 primi Gravid women, 24 (40%) had primary school education, 16 (26.7%) had middle school education, 08 (13.3%) had high school and 12 (20%) were illiterate.

Percentage distribution of respondents by occupation, income, and utilization of health services

Demographic variables	Category	Respondents	
		Number	**Percentage**
Occupation	Private Employees	-	-
	Government	-	-
	Coolly	19	31.7
	Housewives	41	68.3
Income	<1000	-	-
	1001-2000	34	56.7
	2001-3000	19	31.7
	>3001	07	11.6
Utilization of health services	Government organizations	16	26.7
	Private Nursing Homes	40	66.7
	Voluntary Health services	04	6.6

Table 4: Indicates percentage distribution of respondent by occupation, income and utilization of health services

Regarding occupation, 41 (68.3%) were housewives and 19(31.7%) were Cooley workers. Regarding family monthly income 34 (56.7%) primi Gravid women were earning Rs. 1001-2000, 19 (31.7%) had monthly income between Rs.2001-3000 and only 07 (11.6%) had monthly income above Rs.3000

Majority of them, 40 (66.7%) had health services from private nursing homes and 16 (26.7%) were utilizing government organization and only 04 (6.6%) had health services from voluntary health organization.

SECTION II
Distribution of level of knowledge regarding newborn care among primi gravid women in the pre test

Knowledge Aspects	Inadequate Knowledge		Moderate Knowledge		Adequate Knowledge	
	Number	Percentage	Number	Percentage	Number	Percentage
Maintenance of personal hygiene	35	58.3	22	36.7	03	5.0
Thermoregulation	51	85	08	13.3	01	1.7
Breast Feeding	48	80	12	20	-	-
Immunization	32	53.3	22	36.7	06	10.0
Umbilical cord care	40	66.7	16	26.7	40	6.7
Over all	46	76.7	14	23.3	-	-

Table 5: This table is showing distribution of level of knowledge regarding newborn care among primi gravid women in the pretest.

Majority of 35(58.3%) primi gravid women had inadequate knowledge on maintenance of personal hygiene and 22 (36.7%) had moderately adequate knowledge and 03(5%) had adequate knowledge. Regarding thermoregulation 51(85%) primi gravid women had inadequate knowledge and 08 (13.3%) had moderately adequate knowledge and 01 (1.7%) had adequate knowledge.

Regarding breast feeding 48(80%) primi gravid women had inadequate knowledge and 12(20.0%) had moderately adequate knowledge and no one had adequate knowledge. On immunization 32 (53.3%) women had inadequate knowledge and 22 (36.7%) had moderately adequate knowledge and 06 (10.0%) had adequate knowledge and40 (66.7%) women had inadequate knowledge. Regarding umbilical cord care 16 (26.7%) had moderately adequate knowledge and 04 (6.7%) had inadequate knowledge. Regarding overall knowledge 46 (76.7%) had inadequate knowledge and 14 (23.3%) had moderately adequate knowledge on newborn care.

Mean and standard deviation of pretest knowledge on newborn care among primi gravid women

Knowledge aspects	Knowledge score	
	Mean	SD
Maintenance of personal hygiene	44.44	25.79
Thermoregulation	26.19	20.06
Breast Feeding	27.02	18.97
Immunization	47.22	28.98
Umbilical cord care	39.44	28.45
Over all	31.86	16.35

Table 6: This table is showing the Mean and standard deviation of pretest knowledge on newborn care among primi gravid women

Overall mean value was 31.83 with a SD of 16.35 which reveals that the primi gravid women had inadequate knowledge regarding newborn care on all aspects like maintenance of personal hygiene, thermoregulation, breast feeding, immunization and umbilical cord care in the pretest.

Mean and standard deviation of posttest knowledge on newborn care among primi gravid women

Knowledge aspects	Knowledge score	
	Mean	SD
Maintenance of personal hygiene	77.22	19.88
Thermoregulation	80.95	20.32
Breast Feeding	88.09	12.38
Immunization	69.22	30.37
Umbilical cord care	63.33	30.33
Over all	80.78	13.29

Table 7: This table is showing the Mean and standard deviation of post test knowledge on newborn care among primi gravid women

Overall mean value was 80.78 with a SD of 13.29 which reveals that the primi gravid women gained adequate knowledge in newborn care on all aspects like maintenance of personal hygiene, thermoregulation, breast feeding, immunization and umbilical cord care in the post test.

SECTION III
Effectiveness of structured teaching programme regarding newborn care among primi gravid women

Knowledge aspects	Improvement score		Paired t-test value
	Mean	**SD**	
Maintenance of personal hygiene	32.78	29.74	8.53 P<0.001 (S)
Thermoregulation	54.76	29.77	14.24 P<0.001 (S)
Breast Feeding	61.07	25.10	18.84 P<0.001 (S)
Immunization	20.00	45.59	3.40 P<0.001 (S)
Umbilical cord care	23.89	40.29	4.59 P<0.001 (S)
Over all	48.94	23.14	16.38 P<0.001 (S)

Table   shows the effectiveness of structured teaching programme between pre and post test regarding newborn care among primi gravid women

There is a significant improvement between pre and post test knowledge at p<0.001 level, in all aspects like maintenance of personal hygiene, thermoregulation, breast feeding, immunization and umbilical cord care in the overall knowledge in the primi gravid women.

SECTION IV
Association between level of primi gravid women's knowledge on newborn care in post test and the demographic variables

S. No	Demographic variable	Moderate adequate (50-75%)		Adequate (>75%)		χ^2-Value P- value
		No	**%**	**No**	**%**	
1.	**Age**					
a	<20yrs	3	42.9	04	57.1	χ^2=0.44
b	21-25yrs	13	31.0	29	69.0	p>0.05
c	26-30yrs	04	36.4	07	36.6	(NS)
d	>30yrs	-	-	-	-	
2.	**Religion**					
a	Hindu	18	31.6	39	68.4	χ^2=4.58
b	Christian	02	100.0	01	100.0	p>0.05
c	Muslim	-	-			(NS)
3.	**Educational status**					
a	Illiterate	03	25	09	75.0	χ^2=11.63
b	Primary	11	45.8	13	54.2	p<0.001
c	Middle school	03	18.8	13	81.3	(SS)
d	High school	03	37.5	05	62.5	
4.	**Occupational status**					
a	Private employed	-	-	-	-	χ^2=2.26
b	Govt.	01	100.0	13	72.2	p>0.05
c	Cooley	05	27.8	27	65.9	(NS)
d	HW	04	34.1	-	-	
5.	**Income (in Rs.)**					
a	<1000	01	20.0	04	80.0	χ^2=9.13
b	1001-2000	11	32.4	23	67.6	p<0.05
c	2001-3000	07	36.8	12	63.2	(SS)
d	>3000	01	50.0	01	50.0	

6.	**Type of family**					
a	Nuclear	18	32.1	38	67.9	χ^2=0.53
b	Joint	02	50.0	02	50.0	p>0.05
						(NS)
7.	**Utilization of health services**					
a	Govt. organization	03	18.8	13	81.3	χ^2=5.83
b	Private nursing homes	14	35.0	26	65.0	p>0.05
c	Voluntary health services	02	100	-	-	(NS)
8.	**Gestational age in weeks**					
a	Below 12 weeks	05	31.3	11	68.8	χ^2=2.39
b	12-24 weeks	10	28.6	25	71.4	p>0.05
c	25-40weeks	05	55.6	04	44.4	(NS)

P<0.05, p<0.001, NS=Not Significant
Table 11 shows association between levels of knowledge of primi gravid women on newborn care in the post test and the demographic variables.

The demographic variables, like educational status is statistically significant at p<0.001 level. Variables like monthly income is statistically significant at p< 0.05level. Variables like age of mother, religion, occupation, type of family, utilization of health services and gestational age in weeks are statistically not significant with their knowledge.

7. DISCUSSION:

The overall findings of the present study showed that majority of the primi gravid women had inadequate knowledge regarding maintenance of personal hygiene, thermoregulation, breast feeding, immunization and umbilical cord care. This study also showed that the overall knowledge had increased after structured teaching programme and STP was effective. This type of educational programme can bring a change in primi gravid women's knowledge and create awareness in caring newborn effectively.

Similar study was conducted by Sheetal Kadam and Sunita Tata on impact of structured Education programme on antenatal mothers regarding essential newborn care reported that the mean post test knowledge score (26.38) was higher than the mean pre test knowledge score (14.53). The mean and median in both pre test (Mean was 14.53, Median was 14) and post test (Mean was 26.38, Median was 24) were found to be lying to be close to each other. The study concluded that a structured education program on essential newborn care was effective in increasing the knowledge of antenatal mothers [5].

Another study was conducted by Rama R, Gopalakrishnan S, Udayshankar PM on Assessment of knowledge regarding new-born care among mothers. The study results showed that mean age of mothers was 25 years and mean weight of babies was about 3 kg. Regarding the education status, 67% studied up to 10th standard and 18% studied up to plus two levels. Majority of them got information on new born care from health workers (44%) and family members (36%). The level of adequate knowledge regarding new-born care was present only in 15%, feeding practices in 39%, various components of immunization in 8%, growth and development in 42% and about newborn illness in 33% of the mothers. The knowledge regarding new born care was found to have a significant association with the educational status of the mothers.

This study outcome shows the need for a better revamped awareness and education program coupled with effective health care delivery system to improve the level of knowledge among mothers on new born care, in achieving better health indicators as far as RCH services are concerned [6].

8. CONCLUSION

On the basis of the findings of the above study findings conclusion can be drawn that community women need to be provided structured teaching programme regarding newborn care practices as majority of them had inadequate knowledge about maintenance of personal hygiene, thermoregulation, breast feeding, immunization and umbilical cord care. A deliberate effort should be instituted to educate primi gravid mothers regarding these newborn care practices as overall knowledge had increased after structured teaching programme.

9. IMPLICATIONS:

Nursing Education: In nursing education teachers should emphasize and motivate the students to give planned health discussion, teaching regarding newborn care in clinical areas and in the classrooms.
Nursing services: The community health nurse can conduct health education programme on preventive aspects of certain infections on the newborn during antenatal visits.
Nursing Administration: This study emphasized the need for health education among the primi gravid mothers. Administrators of various health agencies can organize health education programme to create awareness programmes.

10. LIMITATIONS OF THE STUDY:

- No broad generalization could be made due to small sample size and limited area of setting.
- This study did not use any control group.
- The sampling technique used for the study was convenient sampling.

11. RECOMMENDATIONS:

- Similar studies can be conducted in community settings and on a large sample.
- A comparative study can be done between primi and multi gravid mothers.
- An experimental study can be done using control and experimental group.

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