Sarika Dewangan
Assistant Professor,
Department of Pediatric
Nursing, Government College
of Nursing, Ambikapur,
Chhattisgarh, India

A pre experimental study to assess the effectiveness of planned teaching program regarding essential new born care on knowledge of post natal mothers in selected hospital of Durg Chhattisgarh

Sarika Dewangan

Abstract
Introduction: Essential new born care is most important at birth. New born care is the term given to a new born baby from the time of birth up to 28 days of life. Its included essential new born care include immediate basic care of neonate and routine care of neonate. Immediate basic care of newborn of the newborn at birth included maintenance of temperature, establishment of open airway, initial of breathing and maintenance of circulation. Daily routine care of neonates include warmth, breast feeding, skin care, baby bath, care of eye, clothing of baby, general care, observation, weight recording, immunization, follow up and advice.
Methods research approach: Evaluative research approach. Research design, pre experimental research design (one group pre text post text design). The conceptual framework based of "conceptual Framework based on modified system model. The setting for this study was the selected areas of District hospital Durg, Chhattisgarh. The tools developed which include,
Section 1: Socio demographic data containing sample characteristics would be analyzed using frequency and percentage.
Section II: Mean median slandered deviation and mean percentage of pre test and post test knowledge scores would be computed.
Section III: The significant difference between the mean retest and pos t test knowledge score would be calculated using paired t test.
Section IV: The association between post test knowledge with selected demographic variables would be determined by the chi- square test.
Tools validity was done and tools found reliable, study found feasible after pilot study.
Result: it has been observed that in this study pretest and posttest design was used. The population for the present study comprised post natal mothers of seleted hospitals Durg. Total 40 samples were taken. sample was collected through the use of purposive sampling technique. To ensure reliability of tool data of the structured knowledge questionnaire was analyzed by split half method and the reliability coefficient was calculated through using spearman Brown prophecy formula. The reliability co-efficient of the tool was found to be r= 0.816. Hence the tool was found to be valid, reliable and feasible.
Section 1: Socio demographic data.
Section II: Assess the level of pre test and post test knowledge on post natal mothers regarding new born care
Section III: Evaluate effectiveness of planed teaching program by comparing pre and post test knowledge score.
Section IV: The association between post test knowledge with selected demographic variables.
Conclusion: The study findings showed that there was significant increase in the knowledge of post natal mothers after giving of planned teaching programme regarding new born care. Hence it was concluded that planned teaching programme has been an effective method to increase knowledge of post natal others regarding new born care.

Keywords: Knowledge, effectiveness, new born care, post natal mother

Corresponding Author:
Sarika Dewangan
Assistant Professor,
Department of Pediatric
Nursing, Government College
of Nursing, Ambikapur,
Chhattisgarh, India

Introduction
Doing what is best for the baby is our biggest priority.' New born care is the term given to a new born baby from the time of birth up to 28 days of life. Its included essential new born care include immediate basic care of neonate and routine care of neonate.

Immediate basic care of newborn of the newborn at birth included maintenance of temperature, establishment of open airway, initial of breathing and maintenance of circulation. Daily routine care of neonates include warmth, breast feeding, skin care, baby bath, care of eye, clothing of baby, general care, observation, weight recording, immunization, follow up and advice.

Cry after birth is not really the first breath of life because around 20weeks of gestation, fetus starts making relatively rapid (80 to 120/min) and ineffective respiratory movements. Basic care of normal newborn babies, it is desirable to keep the normal term babies with their mothers rather than a separate nursery. Rooming –in promotes better emotional rapport between the mothers and baby. The mothers can participate in the nursing care of her baby. This infuses self-confidence in her and reduces demands on nursing personnel. Cross infection in prevented and breast feeding is established easily.

Research design
In the present study one group pre test and post test design was contended appropriate to assess the effectiveness of planned teaching Programme on knowledge of post natal mothers regarding essential new born care.

Research setting
The present study was conducted in District hospital Durg Chhattisgarh.

Population
The present study target population comprises the post natal mothers at District hospital Durg in Chhattisgarh.

Sample
In the present study the samples are post natal mothers, admitted in selected District hospital Durg.

Sample size
The total sample is 40 post natal mothers in selected District hospital Durg.

Sample technique
Purposive sampling technique was used for selecting 40 post natal mothers were taken for the study.

Criteria for selection of sample
Inclusion Criteria
- Post natal mothers (Durg District hospital)
- Who are willing to participate in this study?

Exclusion Criteria
- Post natal mothers who are not willing to participate are excluded from the study.
- Who are not co-operative to the study?

Development of tools
The tool was constructed to assess knowledge among post natal mothers regarding essential new born care. Since there were no standardized tools available, extensive review of literature i.e.; books, journals, articles, experts' opinion & the investigators professional experience with questionnaire on the essential new born care provided the basis for the construction of the structured teaching, questionnaire and

these self-structured teaching is used to improve knowledge among post natal mothers.

Description of tools
The self-structured questionnaire is used for the data collection composed of three parts.

Parts I: These section deals with socio demographic variable consisted of 8 items such as Age, Religion, educational status of mothers, occupational status of mother's family monthly income, type of family, parity and area of antenatal care.

Part II: These section consisted of 36 knowledge items covering following content of areas:

1. Newborn - 5
2. Immediate care of Newborn - 3
3. Daily routine care of newborn - 10
4. Breast feeding - 12
5. Hypothermia - 3
6. Immunization - 3

All questions were multiple choice question type and having only one correct answer and correct answer carries a score of one mark and wrong answer scores zero.

Validity
The tools and content were given to experts. Based on the suggestions given by the evaluators. After considering the experts suggestions and modification, the tools was finalized.

Reliability of the tool
In order to establish the reliability of the tools it was administered to 6 postnatal mothers in District hospital, the split half method was used to test the reliability of tools. Knowledge questionnaires was calculated by used Karl Pearson`s co-relation co-efficient formula, the value was r= 0.816 knowledge questionnaire was found to be reliable. The tool was found to be statistically reliable for the present study.

Ethical consideration
- The research problem and objectives were approved by the research committee.
- Due permission from authority was sought and obtained.
- Informed written consent was taken from the participants,
- Anonymity of the participants was ensured.
- Confidential of the data was maintained.

Plan for data collection
Analysis of the data was done in accordance with objectives. It was done by using the descriptive & inferential statistics i.e.; calculating %, mean score, mean percentage, standard deviation, co-relation coefficient test used to identify the significant association of post natal mothers regarding essential new born care with selected variables & pie & bar diagram were used to depict the findings.

Section 1: Socio demographic data containing sample characteristics would be analyzed using frequency and percentage.

Section II: Mean median slandered deviation and mean percentage of pre test and post test knowledge scores would be computed.

Section III: The significant difference between the mean pretest and post test knowledge score would be calculated using paired t test.

Section IV: The association between post test knowledge with selected demographic variables would be determined by the chi- square test.

Pilot study
Pilot study was conducted from 7th January 2012 in Distic hospital Durg, Chhattisgarh. To ensure validity and reliability of the tools. It will be administered on 6 post natal mothers who are in the selection criteria. Following steps were adopted from the study.

- Formal written permission from civil surgeon, District hospital Durg.(C.G.)
- 6 subjects were selected by purposive sampling.
- Consent taken from the subjects. A self- structured questionnaire was administered.
- On an average, time taken by subject for completing the questionnaire was in ½ an hour.

Data analysis & interpretation
Socio demographic data containing sample characteristics would be analyzed using frequency and percentage. Mean median slandered deviation and mean percentage of pre test and post test knowledge scores would be computed. The significant difference between the mean retest and post test knowledge score would be calculated using paired t test. The association between post test knowledge with selected demographic variables would be determined by the chi-square test.

Section I: Distribution of subjects according to demographic variable.
Age distribution of post natal mothers that maximum number (50%) belong to the age of 20-24 year and (30%)belong to the age of 25-28year and minimum number (20%) belong to the age of 30-34years. The maximum number (67.5%) belong to the Hindu and (17.5%) were Christian and Muslim. The maximum (57.5%) of subject were nuclear family and (42.5%) were live in joint family. Maximum(47.5%) belong to educational status of mothers were primary/ middle school and (37.5%) belong to high school, high secondary and minimum number (7.5%) belong to illiterate and graduate. The Maximum number (65%) belong to post natal mothers are house wife and (27.5%) were private employee. The maximum number (37.5%) belong to monthly family income of 5001-8000Rs/ and (30%) were <5000 and 8001 -10.000Rs/ and minimum number (7.5%) belong to >10.000 Rs/.According to birth order (52.5%) mothers of primi para and (47.5%) were mother of multi para. The Maximum (40%) type of antenatal care are primary health care and (25%) are community health care, private doctor and (10%) of no antenatal care

Hence it is concluded that maximum number of post natal mothers belong to the age group 20-24years, lives in nuclear family and most of them Hindus. Majority of post natal mothers education was completed primary/ middle school and monthly family income of postnatal mother is 5001-8001/Rs. Most of them house wife and primi para and most of them taken primary health care.

Section II: To assess the pre-test and post test knowledge of post natal mothers regarding essential new born care.
H1 the mean post test knowledge score of post natal mothers regarding essential newborn care in greater than the mean pre test knowledge score at $p<0.05$.
Ho there will be no different between pre test and post test knowledge score of post natal mothers regarding essential new born care at $p>0.005$ level of knowledge questionnaires.

Table 1: Each area wise pretest and posttest percentage of post natal mothers, knowledge on essential newborn care

Knowledge related to	No. Of questions	Min –Max score	Pretest		Posttest	
			Mean± SD	%	Mean± SD	%
New born	5	0 -5	2.55±1.28	51.0%	4.25±0.87	85.0%
Immediate basic care	3	0 -3	1.68±0.76	56.0%	2.23±0.62	74.3%
Daily routine care	10	0 -10	4.55±2.34	45.5%	8.25±1.15	82.5%
Breast feeding	12	0 -12	4.88±2.78	40.7%	9.50±1.22	79.2%
Hypothermia	3	0 -4	1.45±0.88	48.3%	2.48±0.55	82.7%
Immunization	3	0 -3	1.60±0.74	53.3%	2.42±0.55	80.7%
Overall	36	0 -36	16.70±4.79	46.4%	29.13±2.00	80.9%

Postnatal mothers pretest and post test percentage of knowledge on essential newborn care. In pre test they are having maximum knowledge in immediate basic care (56%) and minimum knowledge in Breast feeding (40.7%), on an average they are having 46.4% of knowledge in newborn daily routine care, hypothermia and immunization. In post test they are having maximum knowledge in new born (85.0%) and minimum knowledge in Immediate basic care (74.3%), On an average they are having 80.9% of knowledge in daily routine care, breast feeding, breast feeding, hypothermia and immunization.
Hence it is concluded that in pre test, post natal mothers having maximum knowledge in area of immediate care of essential new born care and in post test, post test mothers having maximum knowledge in area of new born

Section III: To compare the pre-test and post test knowledge of post natal mothers regarding essential new born care.
H1 the mean post test knowledge score of post natal mothers regarding essential newborn care in greater than the mean pre test knowledge score at $p>0.05$.
Ho there will be no different between pre test and post test knowledge score of post natal mothers regarding essential new born care at $p>0.005$ level of knowledge questionnaires.

Table 2: Comparison of each area wise knowledge score

Knowledge	Pretest	Posttest	Student's paired t-test
New born	2.55±1.28	4.25±0.87	T=7.22 P=0.001*** DF= 39 significant
Immediate basic care	1.68±0.76	2.23±0.62	T=4.64 P=0.001*** DF= 39 significant
Daily routine care	4.55±2.34	8.25±1.15	T=10.32 P=0.001*** DF= 39 significant
Breast feeding	4.88±2.78	9.50±1.22	T=9.26 P=0.001*** DF= 39 significant
Hypothermia	1.45±0.88	2.48±0.55	T=6.32 P=0.001*** DF= 39 significant
Immunization	1.60±0.74	2.42±0.55	T=6.68 P=0.001*** DF= 39 significant

* Significant at P≤0.05 ** highly significant at P≤0.01 *** very high significant at P≤0.001

New born, in pretest, postnatal mothers are having 2.55 knowledge score and after planned teaching programme they are having 4.25 knowledge score. The difference is1.70 score. It is a large difference. Immediate basic care, In pretest, postnatal mothers are having 1.68knowledge score and after planned teaching programme they are having 2.23 knowledge score. The difference is 0.55 score. Daily routine care, in pretest, postnatal mothers are having 4.55 knowledge score and after planned teaching programme they are having 8.25 knowledge score. The difference is 3.70 score. Breast feeding in pretest, postnatal mothers are having 4.88 knowledge score and after planned teaching programme they are having 9.50 knowledge score. The difference is 4.63score. Hypothermia In pretest, postnatal mothers are having 1.45 knowledge score and after planned teaching programme they are having 2.48 knowledge score. The difference is 1.03 score. Immunization In pretest, postnatal mothers are having 1.60 knowledge score and after planned teaching programme they are having 2.42knowledge score. The difference is 0.82 score. There are a large difference. This difference is statistically significant. Statistical significance was calculated by using student's paired 't' test.

Hence it is concluded that post natal mothers having more knowledge after giving planned teaching programme in all to care of new born.

Table 3: Comparison of overall knowledge score

	No. Of mothers	Mean ± SD	Student's paired t-test
Pretest	40	16.70±4.79	T=17.75 P=0.001***
Posttest	40	29.13±2.00	DF=39, significant

* significant at P≤0.05 ** highly significant at P≤0.01 *** very high significant at P≤0.001

The comparison of pre-test knowledge score with post-test knowledge mean score. There was significant difference between pre-test and post-test knowledge mean score. In pretest, post natal mothers are having 16.70 score and in post test, post natal mothers are having 29.13 score. Difference is 12.43 score. The difference between pretest and posttest knowledge score is large and it is statistically significant. Differences between pretest and posttest score was analyzed using paired t-test. These result indicates that post-test knowledge mean score was higher than the pre-test knowledge mean score at p0.05levels.

Hence, the null hypothesis which states that there will be no significant difference between pre-test and post test knowledge mean score at p0.05levels is rejected and alternative hypothesis is accepted.

To assess the effectiveness of planned teaching programme regarding essential new born care.

Table 4: Effectiveness of planned teaching progrmme

	Min –Ma x Score	Mean Knowledge Score	% of Knowledge Score	% of Knowledge gain
Pretest	0 -36	16.70	46.4%	34.5%
Posttest	0 -36	29.13	80.9%	

The effectiveness of the planned teaching programme. Considering the overall aspects, parents are gained 34.5 percent more knowledge after the administration of planned teaching programme.

Hence it is concluded 33.5percent of knowledge gain is the benefit of this study, which indicates the effectiveness of planned teaching programme.

Section IV: To associate post test knowledge of post natal mothers with selected demographic variables.

The association between post test knowledge with demographic variables such as – age, religion, type of family, educational status of mothers, monthly family income, parity and area of ante natal care. The significance of the association between them was analyzed by the chi-square test. The calculated value of chi square for age of post natal mothers 7.21(p=0.02) which shows significant association with knowledge level. The calculated value of chi square for religion of post natal mothers 0.57(p=.75) which shows not significant association with knowledge level. Calculated value of chi square for type of family of

post natal mothers0.01 (p=0.89) at 5% level of significant, which shows not significant association with post natal mothers. The calculated value of chi square for educational status of post natal mothers 6.12(p=0.05) at 5% level of significant, which shows significant association with knowledge level. The calculated value of chi square for occupational status of post natal mothers 0.32(p=0.85) at 5% level of significant, which shows not significant association with knowledge level. Calculated value of chi square for family monthly income of post natal mothers 1.10(p=0.78) at 5% level of significant, which shows not significant association with knowledge level. As per parity of post natal mothers chi square value is 1.38(p=0.24) at 5% level of significant, there was not significant association with knowledge level. As per area of antenatal care chi square value is 7.38(p=0.02) at 5% level of significant, there was significant association between the area of antenatal care and knowledge level.

Hence it is concluded that there was significant association between knowledge score with age, educational status of mothers and area of ante natal care.

Conclusion
On the basis of findings of the study following conclusion were drawn.

- The pre test knowledge score of the post natal mothers revealed that there was knowledge deficit regarding essential new born care.
- The planned teaching programme was effective in enhancing the knowledge of post natal mothers regarding essential new born care.
- Paired "t" test revealed that the pre test and post test knowledge score of post natal mothers was significant higher (t= p=0.001).
- There was significant association between the age and area of ante natal care of post test knowledge score and demographic variables.

Limitations
1. The study lacks randomization due to limited time, purposive sampling was done from selected area in District Hospital Durg (C.G) which restricts the generalization of the study.
2. The size of the sample studied was only 40 post natal mothers hence it was difficult to make broad organization.
3. The time span of the study was short.
4. This study is limited to those who are willing to participate in the study.
5. The structured knowledge questionnaire was developed as no standardized tool was available.

Recommendations
1. This study can be replicated on a large sample there by findings can be generalized for larger section of the health care facilities to cover a larger population of health care team.
2. A Similar study can be carried out by using other teaching strategies. e.g instructional module, computer based learning and video assisted teaching. Similar study can be replicated to see the retention of knowledge of post Natal mothers towards essential new born care.

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