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A Study to Assess the Effectiveness of Planned Teaching Programme on Knowledge Regarding Selected Newborn Danger Signs among Antenatal Mothers at Selected Hospital at Jaipur

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ABSTRACT

BACKGROUND OF THE STUDY

The grim track of mysterious new illness has already killed scores of children. In less developed countries, there should be moves towards preventive measures, educating mothers and actions to reduce newborn mortality rate. All children, no matter where they are born, deserve a healthy start in life Significant progress has to be made in reducing death of babies during first month of life.

STATEMENTOFTHEPROBLEM

A study to assess the effectiveness of planned teaching programme on knowledge regarding selected newborn danger signs among antenatal mothers at selected hospital at Jaipur, (Rajasthan)"

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INTRODUCTION

A newborn is an infant who is with in hours, days, or upto a few weeks from birth. Newborn or neonate (from Latin, neonates, newborn) refers to an infant in the first 28 days after birth. The normal newborn characteristics are head represents one-fourth of his total body length. Its circumference is equal to that of his abdomen or chest. The average size is 13" to 14" (33–35 cm). Some newborns have a fine, downy body hair called lanugo. The newborn may also have Mongolian spots and various other birthmarks. Newborn genitals are enlarged and reddened. Normal Apgar score is 7 to 10.

It is an important link in the chain of events from conception to adulthood. The physical and mental well-being of an individual depends on the correct management of events in the perinatal period.

The newborn body is the most super sensitive, delicate and susceptible from which can easily harmed if not taken care off. To ensure that thebody has the best possiblestart in lifethere are critical aspects of newborn care, which all birth attendants and families should be aware off.

Neonatal outcomes are affected by maternal health and other factors such as care during pregnancy, childbirth, and immediately after birth. Globally, about three-fourths of all neonatal deaths occur during the early neonatal period (0-7days). Further, 25-45% of all Neonatal deaths occur in the first 24 hours after birth. Maternal complications carry a high risk of neonatal death, particularly in the early neonatal period. Newborn can become Seriously ill and any sort of infections may be dangerous, so illness at this age requires immediate attention. Health of children

has been considered of vital importance to all societies because children are the basic resources for the future of mankind.

NEEDOF THE STUDY

Many communities keep mothers and babies indoor for the first month after birth. If the mother or baby become ill during the period of seclusion, seeking health care is often delayed, yet sick babies often die within a few hours or delays can be fatal. Poor knowledge on the part of mothers can lead to disastrous results in the field of care giving.

Mother must regulate the child's behavior, attitudes, outlook and home environment in family, since these are the basic factors that influence the growth of newborn. If the mothers are not acquainted with a recognition and referral of newborn danger signs, it might affect the rearing of their children. Providing timely education in the form of intervention to mothers could fill these gaps in knowledge.

A cross-sectional study was undertaken in three of the 27 primary health centres of Wardha district with a population of 88,187 to know mothers' knowledge and explore their perceptions about newborn danger signs and health care seeking behavior. Out of 1,675 expected mothers, 1,160 mothers in the area were interviewed by house-to-house visits. Data (87.4%) responded that the sick child should be immediately taken to the doctor, but only 41.8% of such sick newborns got treatment either from government hospital (21.8%) or from private hospital (20%), and 46.1% of sick babies received no treatment.

The result shows that the reasons for not taking actions even in presence of danger signs/symptoms were ignorance of parents, lack of money, faith in supernatural causes, non-availability of transport, home remedy, non-availability of doctor and absence of responsible person at home. The study concluded that the present study found gap between mothers' knowledge and their health-seeking behaviour for sick newborn and explored their deep perceptions, constraints and various traditional treatments. Further, it revealed that comprehensive intervention strategies are required to change behaviour of caregivers along with improvement in capacity of Government healthcare services and National Health Programs to ensure newborn survival in rural area.

Children are the future for any nation. From them the future develops. In order to have a healthy generation, we need a healthy child. Hence, the researcher realizes the importance of the problem in current situation and created an intention to administer structured teaching programme to assess the knowledge of antenatal mothers regarding newborn danger signs, thereby enhancing their awareness on newborn danger signs in order to bring out a healthy baby in the society.

OBJECTIVES

- To assess the pre-test and post-test knowledge score of antenatal mothers regarding newborn danger signs.
- To determine the effectiveness of planned teaching programme on newborn danger signs.
- To determine the association between pre-test knowledge scores of antenatal mothers with selected demographic variables.

HYPOTHESES

H1 = There will be significant differences between pre-test and post-test knowledge scores of antenatal mothers regarding newborn danger signs.

H2 = There will be a significant association between pre-test knowledge score of antenatal mothers with selected demographic variables.

OPERATIONALDEFINITIONS

Assess: Refers to the organized, systematic process of collecting information about pre-test and post-test knowledge from antenatal mothers regarding newborn danger signs.

Effectiveness: Refers to the extent to which the planned teaching programme has achieved the desired outcome as measured in terms of knowledge scores.

Planned Teaching Programme: Refers to a systematically developed teaching module designed for educating antenatal mothers on newborn danger signs.

Knowledge: Refers to the appropriate response received from the antenatal mothers to the items elicited through a planned knowledge questionnaire.

Antenatal Mother: An antenatal mother is a pregnant woman receiving care during the period before childbirth.

Newborn: Refers to a baby within 28 days of life.

Newborn Danger Signs: Refers to danger signs that occur in the newborn within 30 days of life in selected areas, such as pathological jaundice, vomiting, diarrhoea, respiratory problems, poor feeding, and excessive weight loss.

ASSUMPTIONS

- Antenatal mothers may have some knowledge regarding newborn danger signs.
- Antenatal mothers may have an interest in knowing about newborn danger signs.

RESEARCH APPROACH

In view of the nature of the problem selected for the study and the objectives to be accomplished, an evaluative research approach was used for the present study.

RESEARCH DESIGN

For the present study, a pre-experimental one-group pre-test post-test design was adopted.

SETTING OF THE STUDY

The Pandya Hospital was selected as the setting for the present study. Because of the feasibility, the investigator selected this area to conduct the research study.

SAMPLE SIZE

The samples for this research study were antenatal mothers in Pandya Hospital at Jaipur. The sample size taken for this study was 60 antenatal mothers.

SAMPLING TECHNIQUE

In this study, a non-probability purposive sampling technique was used for selecting the samples.

INCLUSION CRITERIA

- Antenatal mothers who were willing to participate in the study.
- Antenatal mothers who were available at the time of data collection.

EXCLUSION CRITERIA

- Antenatal mothers who were not willing to participate.
- Antenatal mothers who were not mentally sound.

RESULT

Findings of the study revealed that the overall post-test mean score was 36.86 (89.32%) with a standard deviation of 3.89, and the respondents' knowledge was significantly higher than the overall mean pre-test knowledge score of 9.76 (25.87%) with a standard deviation of 1.3. The computed paired *t* value of 23.78 was higher than the table value of 2.56 at the $P < 0.001$ level. Hence, the planned teaching programme on newborn danger signs was effective and statistically significant.

The study revealed that there was no significant association between selected demographic variables like age, education, occupation, economic status, religion, and place of residence, and the pre-test knowledge scores of antenatal mothers at $P > 0.05$.

Data was analysed using descriptive and inferential statistics.

FINDING OF DEMOGRAPHIC VARIABLES AMONG ANTENATAL MOTHERS

Table 1: Frequency and Percentage Distribution of Respondents by Age (n = 60)

Age (Years)	Frequency	percentage
20-25	43	71.7
26-30	11	18.3
31-35	4	6.7
36-40	2	3.3
Total	60	100

Table-2- Frequency and percentage distribution by education

Educational status	Frequency	percentage
Non formal education	1	1.7
Higher secondary	47	78.3
Graduation	8	13.3
Post-graduation	4	6.7
Total	60	100

Table-3- Frequency and percentage distribution by occupation (n-60)

Occupation	Frequency	Percentage
Housewife	42	70.0
Government	4	6.7
Private	14	23.3
Total	60	100

Table-4 Frequency and percentage distribution of respondents by economic status (n-60)

Economic status	Frequency	Percentage
10000-15000	0	0
1501-20000	40	66.7
>20000	20	33.3
Total	60	100

Table-5- Frequency and Percentage Distribution of Respondents by Religion (n-60)

Religion	Frequency	Percentage
Christian	1	1.7
Hindu	10	16.7
Muslim	49	81.7
Total	60	100

Table 6: Frequency and Percentage Distribution of Respondents by Type of Family (n-60)

Type of family	Frequency	Percentage
Nuclear	48	80.0
Joint	12	20.0
Total	60	100

Table-7-Frequency and percentage distribution of respondents by place of residence (n=60)

Place of residence	Frequency	Percentage
Urban	50	83.3
Rural	10	16.7
Total	60	100

Table-8- Frequency and percentage distribution by number of children (n=60)

Number of children	Frequency	Percentage(%)
One child	46	76.7
Two children	11	18.3
More than two	3	5.0
Total	60	100

SECTION-II

Table-9 Frequency and percentage distribution of Respondents on Pre-test Knowledge level on newborn danger signs.

Knowledge level	Category	Respondent	
		Frequency	Percentage
Inadequate	<_50 % score	42	70.0
Moderately Adequate	51-75 % score	18	30.0
Adequate	>75 % score	0	0
Total		60	100

SECTION-III

Table-10- Frequency and percentage distribution of Respondents on Post test knowledge level on newborn danger signs.

Knowledge score	Category	Post test score	
		Frequency	Percentage
Inadequate	<50% score	0	0
Moderately adequate	51-75% score	12	20.0
Adequate	>75% score	48	80.0
Total		60	100

SECTION-IV

Finding related to effectiveness of structured teaching programme by Comparing the area wise pre test and post-test knowledge scores regarding newborn danger signs.

Table-11 Area wise mean, mean percentage, standard deviation and percentage of enhancement of pre-test and post-test knowledge score.

S.no	Area wise knowledge score	Max score	Pre-test score			Posttest score			Percentage of enhancement
			Mean	SD	Mean%	Mean	SD	Mean%	
1.	Introduction	5	2.12	0.16	42.4	4.85	0.35	97.0	54.6
2.	Knowledge regarding jaundice	8	2.24	0.18	28.0	7.36	0.66	92.0	64.0
3.	Knowledge regarding diarrhoea	10	2.40	0.73	24.0	9.02	0.88	90.2	66.2
4.	Knowledge regarding vomiting	4	0.58	0.78	14.5	3.96	0.62	99.0	84.5

5.	Knowledge regarding respiratory problem	4	0.62	0.80	15.5	2.10	0.32	52.5	37.0
6.	Knowledge regarding poor feeding	7	1.04	0.44	14.9	6.44	0.72	92.0	77.1
7.	Knowledge regarding excessive weight loss	2	0.92	0.28	46.0	1.86	0.26	93.0	47.0
8	Over all score of newborn anger sign	40	9.92	1.14	24.80	35.59	3.92	88.98	64.18

SECTION-V

Table 12 Comparison between the pre-test and post-test knowledge level regarding newborn danger signs

Area wise knowledge score	Pretest			Posttest			t-value	p-value	Inference
	Mean	SD	Mean%	mean	SD	mean%			
Introduction	2.12	0.16	42.4	4.85	0.35	97.0	13.8	0.001	S
Knowledge regarding jaundice	2.24	0.18	28.0	7.36	0.66	92.0	30.5	0.001	S
Knowledge regarding diarrohea	2.40	0.73	24.0	9.02	0.88	90.2	24.8	0.001	S
Knowledge regarding vomiting	0.58	0.78	14.5	3.96	0.62	99.0	47.8	0.001	S
Knowledge regarding respiratory problem	0.62	0.80	15.5	2.10	0.32	52.5	17.5	0.001	S
Knowledge regarding poor feeding	1.04	0.44	14.9	6.44	0.72	92.0	22.8	0.001	S
Knowledge regarding excessive weight loss	0.92	0.28	46.0	1.86	0.26	93.0	10.0	0.001	S
Overall score of new born danger sign	9.92	1.14	24.80	35.59	3.92	88.98	23.39	0.001	S

S:Statistically significant at P<0.001

T (0.001, 59df) = 2.66

SECTION-VI

Association between pre-test knowledge scores of Ante-natal mothers regarding new born danger signs with selected demographic variables of the respondents.

TABLE-13 Association between pre-test knowledge score with selected demographic variables

Demographic variable	Categories	Pre-test knowledge score of antenatal mothers	Chi-square value	Degree of freedom	p- value inference	Inference
Age in years	20-25	22	4.21	1	<0.05	S
	25-30	21				
Education	Higher secondary	24	5.12	1	<0.05	S
	Graduation	18				
Occupation	Private	17	0.88	1	<0.05	S
	Housewife	25				
Economic status	10001-15000	26	3.95	1	<0.05	S
	15001-20000	16				
Religion	Hindu	13	0.32	1	<0.05	S
	Muslim	29				
Type of family	Nuclear	28	4.87	1	<0.05	S
	Joint	42				
Place of residence	Urban	19	2.80	1	<0.05	S
	Rural	23				
No. of children	One child	22	4.44	1	<0.05	S
	Two children	21				

Key

S= Significant

NS=Not Significant

SUMMARY

The statement of the problem undertaken was, **"To assess the effectiveness of the planned teaching programme on knowledge regarding newborn danger signs in Pandya Hospital at Jaipur."**

The study conducted was based on the following objectives:

1. To assess the pre-test and post-test knowledge score of antenatal mothers regarding newborn danger signs.
2. To determine the effectiveness of the planned teaching programme on newborn danger signs.
3. To determine the association between pre-test knowledge scores of antenatal mothers with selected demographic variables.

The study attempted to test the following research hypotheses at the level of P < 0.05.

The hypotheses were tested at the 0.05 level of significance.

H1: There will be significant differences between pre-test knowledge scores regarding newborn danger signs.

H2: There will be a significant association between pre-test knowledge scores of antenatal mothers with selected demographic variables.

The conceptual framework for the study was based on **Goal Attainment Theory**, developed by **Imogene King** in the early 1960s. King's Goal Attainment Theory is based on the concepts of communication, perception, judgment, action, reaction, transaction, and feedback.

RESEARCH METHODS

The research approach adopted for this study was an **evaluative approach**, where the research design was a **pre-experimental design**. The sample for this research study consisted of **60 antenatal mothers at Pandya Hospital, Jaipur**. A **purposive sampling technique** was used to select the sample.

The **independent variable** in this study was the **planned teaching programme on newborn danger signs**, and the **dependent variable** was the **knowledge of antenatal mothers regarding newborn danger signs**.

The instrument used for the study was a **structured questionnaire** to assess the pre-existing knowledge of the respondents and to assess the effectiveness of the planned teaching programme on knowledge regarding newborn danger signs among antenatal mothers.

TOOL

The tool consists of two parts, Part 1 and Part 2.

Part 1 consists of demographic variables such as age, educational status, occupation, economic status, religion, type of family, place of residence, number of children, previous knowledge, and source of information.

Part 2 consists of 24 items regarding knowledge of newborn danger signs.

A pilot study was conducted at National Hospital, Dudu, Jaipur. The reliability coefficient of the whole test was estimated using the **Spearman-Brown prophecy formula**, and it was found to be highly reliable at **r = 0.98**.

The main study was conducted at Pandya Hospital, Jaipur. The sample consisted of **60 antenatal mothers** at Pandya Hospital, Jaipur. The data gathered were analyzed and interpreted according to the objectives using **descriptive and inferential statistics**.

MAJOR FINDINGS OF THE STUDY

With respect to age, the majority of the antenatal mothers (72%) belonged to the age group of 21–25 years, 18% belonged to the age group of 26–30 years, 6% were in the age group of 31–35 years, and 4% belonged to the age group of 36–40 years.

With respect to educational status, the majority of antenatal mothers (78%) had higher secondary education, 14% had graduation, 6% had non-formal education, and 2% of the mothers were postgraduates.

With respect to occupation, the majority of mothers (70%) were housewives, 6% were government employees, and 24% had private occupations.

With respect to economic status, the majority of antenatal mothers (66%) had an income of ₹15,000–₹20,000, and 34% had an income of more than ₹20,000.

With respect to religion, the majority of mothers (82%) were Muslim, 15% were Hindu, and 2% were Christian.

With respect to type of family, 80% belonged to nuclear families, while 20% belonged to joint families.

With respect to place of residence, the majority of antenatal mothers (84%) belonged to urban areas, while 16% belonged to rural areas.

With respect to the number of children, the majority of antenatal mothers (76%) had one child, 18% had two children, and 6% had more than two children.

With respect to previous exposure to education on danger signs, none of the mothers had previous exposure to education on newborn danger signs.

The present study found that, among 60 respondents, 15 (30%) had a moderate knowledge score, 35 (70%) had an inadequate knowledge score, and no subject had adequate knowledge before the implementation of the planned teaching programme.

After the planned teaching programme, the post-test knowledge level showed that the majority of the respondents, 40 (80%), had adequate knowledge, 10 (20%) had moderate knowledge, and no subject had inadequate knowledge regarding newborn danger signs.

The mean post-test knowledge score was higher than the mean pre-test knowledge score. The overall post-test mean score was 36.86 (89.32%), with a standard deviation of 3.89, which was significantly higher than the overall mean pre-test knowledge score of 9.76 (25.87%), with a standard deviation of 1.13. This implies that the planned teaching programme on newborn danger signs was effective and statistically highly significant at the **P < 0.001** level.

The present study revealed that there was no association between selected demographic variables, such as age, educational status, occupation, economic status, religion, type of family, place of residence, number of children, previous knowledge, and source of knowledge, in relation to the pre-test knowledge scores of antenatal mothers at **P > 0.05**.

The study results revealed that the planned teaching programme was effective in terms of gain in knowledge among antenatal mothers regarding newborn danger signs.

CONCLUSION

The study findings show that there was a significant improvement in knowledge after the PTP on newborn danger signs. The mothers expressed that the teaching programme was very informative and clear, and it would help them to modify their knowledge appropriately to prevent complications regarding newborn danger signs.

Hence, the PTP was instructionally effective, appropriate, and feasible and enhanced the level of knowledge of antenatal mothers regarding newborn danger signs. Therefore, the study concluded that the objectives were achieved, the hypotheses were tested at the level of **P < 0.05**, and the assumptions were accepted.

The PTP on newborn danger signs, which was implemented for the antenatal mothers, was effective.

NURSING IMPLICATIONS OF THE STUDY

Nursing Education

The nursing curriculum should put more emphasis on the prevention of newborn danger signs. When students are posted in the NICU and antenatal ward, they should educate mothers regarding newborn danger signs. The study has shown that improving the knowledge of antenatal mothers regarding newborn danger signs will bring about better awareness of newborn danger signs and help in timely management of these life-threatening signs.

As nurse educators, there are abundant opportunities for nursing professionals to educate other healthcare workers and the general public regarding newborn danger signs.

Nursing Practice

Health education is an important aspect of nursing practice. Nurses working in hospitals and community health centres can provide information and timely help to mothers regarding newborn care and the identification of newborn danger signs.

The study findings signify the importance of formulating and implementing planned teaching programmes by nursing personnel, especially in maternal and child health. Since there is a gross inadequacy in knowledge regarding newborn danger signs, nurses should equip themselves with appropriate, advanced knowledge-based education and evidence-based practice in clinical areas.

Nursing Administration

The nurse administrator should depute nursing personnel to attend conferences, workshops, and training programmes. They should take initiatives in health policy-making and in developing protocols related to awareness regarding newborn danger signs.

Nurse administrators should review institutional guidelines, policies, and practices regarding newborn care. Administrators in both private and government sectors should take initiatives to update the knowledge of health personnel regarding newborn danger signs through in-service education.

Administrators must provide an adequate supply of audiovisual aids for conducting awareness programmes.

Nursing Research

The importance of research in nursing is to build the body of knowledge. The findings of the present study serve as a basis for professionals and students to conduct further studies.

Research helps healthcare providers develop a systematic problem-solving approach to improve and develop strategies to promote good maternal and child health. Evidence-based practice is fast emerging because of its factual and substantive results. These studies yield fruitful outcomes that are of great help in addressing emerging problems and setting nursing protocols.

In-depth research studies of antenatal mothers regarding newborn danger signs can be conducted on a large scale. Such studies can be conducted to bring

awareness among prospective parents about this important aspect of maternal and newborn health.

RECOMMENDATIONS

On the basis of the findings of the study, the following recommendations have been made:

- The study can be replicated on a larger sample, thereby allowing the findings to be generalized to a larger population.
- A similar study can be conducted to assess the knowledge level of antenatal mothers regarding newborn danger signs.
- A self-instructional module can be prepared to enhance the knowledge of rural mothers regarding newborn danger signs.
- A similar study can be conducted to compare the knowledge level between urban and rural antenatal mothers.
- Pamphlets or information booklets can be prepared with the guidance of this planned teaching programme and distributed among the staff nurses in the antenatal ward to increase awareness about newborn danger signs.

LIMITATIONS OF THE STUDY

- The study is limited to antenatal mothers of a selected hospital in Jaipur.
- The study is limited to a sample of 60 antenatal mothers.
- The data collection period is limited to 4–6 weeks.
- A structured questionnaire was used for data collection, which restricts the amount of information that can be obtained from the respondents.
- The study was conducted with a small sample size, which restricts the generalization of the findings.

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