

EFFECTIVENESS OF PARENTAL PREPARATION IN PROVISION OF CARE FOR PRETERM BABIES

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ABSTRACT

Preterm babies are vulnerable group of infants because they are neurologically immature and physiologically unstable. Many times, the family is ignorant of the needs of these small babies. There is a lack of knowledge on preterm care among primary health care providers, and lack of parent understanding of need for follow up. Structured follow-up programme can result in improvement of implementation of preterm care and compliance. The present study is carries out the effectiveness of parental preparation strategies (PPS) strategies on selected parameters through provision of care for preterm babies. A simple randomization technique was adopted for 15 parents in experimental and 15 parents in control group with PPS for experimental group and hospital protocol was followed for control group. Then the total score for each subject was calculated and converted into percentage. The result of the study revealed that, no one has adequate knowledge in pretest whereas in posttest 12 (80%) had adequate knowledge in experimental group. In control group no statistically significant difference between pre interventional and post interventional knowledge of parents in provision of care for preterm babies.

Conclusion: PPS is found to be more effective in parental preparation in provision of care for preterm babies.

Key Words: Parental Preparation Strategy, Preterm care.

Everything ought to be done to ensure that an infant be born at term, well developed, and in healthy condition. But in spite of every care, infants are born prematurely.....

PIERRE BUDING THE NURSLING

Nature is supreme the way it looks after all the needs of the baby in the womb. The baby is gently rocked in the warm amniotic fluid and is well protected from infections and effectively shielded against light and sound 1. The baby is comfortably "nested" in a flexed posture with hands in the midline close to his mouth. The uterine blood flow provides a soothing music akin to a waterfall while tick-tack of the maternal heart beats provides him constant soothing beats of a cuckoo clock. The physiological needs of oxygenation, nutrition and excretion are admirably met by the utero-placental unit. Despite several attempts, scientists have failed to fabricate an incubator with all the qualities and characteristics of the womb².

Birthing is a traumatic experience for both the mother and her baby. Apart from the discomfort and trauma associated with the process of delivery, the baby is suddenly thrust into a world of bright lights, loud sounds and cold environment. Healthy term babies are neurologically mature to withstand these environmental onslaughts and they rapidly adjust to the extrauterine environment with minimal assistance without any serious difficulties or hazards 1.

Preterm babies are vulnerable group of infants because they are neurologically immature and physiologically unstable. They cannot tolerate environmental insults and stress, which may adversely affect their neuromotor development. In spite of advances in obstetric, neonatal and pediatric care, survival of preterm babies has improved but the quality of life among the survivors has not significantly improved. This means that a newborn has greater chance of complications because of conditions that occur during fetal development, conditions of the mother during pregnancy or problems that may occur during labor and birth. Some complications are unexpected and may occur without warning 3.

OBJECTIVES OF THE STUDY

- i) To assess and compare the preinterventional and post interventional level of knowledge of the parents in the provision of care for preterm babies in experimental and control group.
- ii) To determine the effectiveness of parental preparation strategies (PPS) on level of knowledge in provision of care for preterm babies among parents in experimental group
- iii) To associate the pre and post interventional level of knowledge of parents in the provision of care of preterm babies in experimental and control group with selected demographic variables.

OPERATIONAL DEFINITION

Effectiveness: It refers to the extent to which parental preparation strategies on provision of care for preterm babies has brought about changes in the post interventional level of knowledge in 3 months of age of the baby.

Parental preparation strategies: It refers to preparing the father/mother in care of preterm babies by means of systematically planned and organized video clips and booklet to impart preferred knowledge regarding the provision of care of preterm baby.

Selected parameters: It refers to knowledge on provision of care with respect to General, Thermoregulation, Nutrition, Prevention of Infection, Growth and Developmental monitoring, Immunization and Follow-up of Preterm Babies.

Provision of care: It refers to care given by the parents to the preterm babies and it assessed by using Knowledge questionnaire at 3 months of age of the baby.

Preterm babies: Babies born to the mother through Vaginal and Cesarean delivery with the gestational age from 28 to 37 weeks and weight more 1000gms.

MATERIALS AND METHODS

Research Approach

Quantitative approach was adopted for this study

Research Design

An Experimental design was adopted for the study

Research Setting

The study was conducted in the Neonatal Unit of the Institute of Child Health and Hospital for Children, Chennai.

Population

The parents of preterm babies getting discharged from Medical Newborn Ward

Sample and Sample Size

The mothers of preterm babies who fulfilled the inclusion criteria were selected for the study. The sample size was 30.

Sampling Technique

Simple Random sampling technique, using computerized generated randomization table was adopted for the study

CRITERIA FOR THE SAMPLE SELECTION

Inclusion criteria

1. Preterm babies admitted for routine preterm care.
2. Parents of preterm babies who consented to participate in the study and willing to come for follow-up for 3 month of age of the baby.
3. Preterm babies whose birth weight is more than 1000gms.
4. Preterm babies born with the gestational age between 28-37 weeks
6. Parents who can understand and speak Tamil or English.

Exclusion Criteria:

Preterm babies with congenital, cardiac, neurological or other associated critical illness.

DESCRIPTION OF TOOLS:

The tool was prepared by the investigator after an extensive review of related literature and with the guidance of experts. The Research instrument used for his study consists of four parts.

Part I : Demographic data which consist of Mother and baby profile.

Part II : Questions related to knowledge regarding care of preterm babies.

PARENTAL PREPARATION STRATEGIES (PPS)

The teaching strategies on preterm care consisted of having information of care of preterm babies. This includes content about thermoregulation, Nutrition, prevention of infection, Growth monitoring, Developmental monitoring, Immunization and follow-up care. The method of teaching was lecture cum discussion and demonstration. Visual aids used were charts, flash cards, Booklet and video clip's prepared by the researcher. Duration of these teaching strategies was approximately 45 minutes for each session.

DATA COLLECTION PROCEDURE

Parents of the preterm babies who were discharged from Medical Newborn Ward of Institute of Child Health and Hospital for Children and willing to come for follow-up at 3 months of age of the baby were selected for the study. The study carried out in phases as follows.

Phase I: Initially, the researcher identified the preterm babies getting discharged from Medical Newborn Ward. The pretest was carried out among parents of preterm newborns getting discharged from Medical Newborn Ward after getting consent for data collection. The structured interview schedule was used for collecting the essential data from parents. Either mother or father who was there at the time of data collection was interviewed. The interview lasted for one hour with each parent. After the interview, the parental preparation strategies was administered to the parents and family

members which included group discussion using flash cards, charts and video demonstration prepared by the researcher and the duration was for 45 minutes.

For parents of control group after pretest the routine hospital protocol was followed.

Phase II: Posttest was administered at 3 months during follow – up care using same knowledge questionnaire.

Growth and it was maintained for both control and experimental group.

COMPARISON OF PRE AND POSTINTERVENTIONAL LEVEL OF KNOWLEDGE OF THE PARENTS IN THE PROVISION OF CARE FOR PRETERM BABIES IN EXPERIMENTAL AND CONTROL GROUP

S.No	Domain	No. of question	Min-Max Score	Experimental n=15		P Value	Control n=15		P Value
				Mean Score	%		Mean Score	%	
1	General	3	0-3	0.86	28.7	P=.000 ***	0.94	31.3	P=.813
2	Thermoregulation	19	0-19	6.43	33.8	P=014 *	6.13	32.3	P=.018
3	Nutrition	4	0-4	18.43	46.1	P=.000 ***	19.13	47.8	P=.510
4	Prevention of Infection	11	0-11	6.00	54.5	P=.015 *	5.44	49.5	P=.382
5	Growth Monitoring	8	0-8	4.36	54.8	P=.245	3.75	46.9	P=.894
6	Developmental Monitoring	4	0-4	2.43	60.8	P=.245	1.88	47.0	P=.397
7	Immunization	13	0-13	6.29	48.4	P=.016 *	6.25	48.1	P=.940
8	Follow-Up	2	0-2	1.07	53.5	P=.000 ***	1.06	53.8	P=.492

MAJOR FINDINGS OF THE STUDY

The finding of the study reveals that

- In experimental group, majority of mothers, ten (66.7%) were in age group of 20- 25 years, 8(53.3%) of them were residing in rural areas
- Most mothers, Nine (60.0%) belongs to SC/ST community.
- In profile of the baby, six (40.0%) infants were more than five days of age and out of 15 babies, ten (66.6%) babies were male and five(33.3%) were females.
- Regarding Gestational age of the baby at the time of birth, 6 (40.0%) was in 35- 36 weeks, and only one (6.7%) was in 28-30 weeks of Gestation.
- Nine (89.7%) mothers registered the pregnancy in first trimester, 14 (93.3%)

mothers had regular Antenatal Check-Up by Doctors and 11(66.7%) had taken iron and folic acid tablets for 2 months in control group

- There is significant difference between preinterventional and post interventional level of knowledge of mothers regarding care of preterm babies in Experimental group ($P \leq 0.001$) in the domains like General, Maintenance of thermoregulation, Nutrition, Prevention of Infection, Immunization and Follow-Up
- There is no statistically significant difference between pretest and post scores of knowledge of parents in provision of care of preterm babies in Control group.
- In pretest 10(66.7%) had inadequate knowledge, 5(33.3%) had moderately adequate knowledge and none of them had adequate knowledge whereas in posttest 12(80.0%) had adequate knowledge, 3 (20.0%) had moderately adequate knowledge in experimental group.

CONCLUSION

The present study shows that there is significant difference in pre test and post test

knowledge regarding care of preterm baby among parents after administering Parental preparation strategies. The paired 't' test was used to evaluate the effectiveness of parental preparation strategies on selected parameters through provision of care of preterm babies. It was found that the post test knowledge was significantly higher than the pre test knowledge $t=13.64$. This shows parental preparation strategies were effective. There is highly significance difference ($p < 0.001$) found in knowledge of parents regarding care of preterm baby after administering parental preparation strategies.

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