

A study to assess the effectiveness of structured teaching programme on knowledge regarding care of low birth weight babies among mothers in selected rural areas of Rajkot, Gujarat

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Abstract

A quasi experimental study with pre test, post test without control group design was undertaken on 60 mothers selected by purposive sampling technique to assess the effectiveness of teaching programme on home management of low birth weight baby among mothers using closed ended questionnaire. Result reveals that more or less similar percentage 47% was in the age group of 21-25 and 46% in the age group of 26-30 years. The overall mean knowledge on practice score in pre test was 13.34 ± 3.25 whereas it was 24.18 ± 3.09 in post test revealing 31.89% enhancement of knowledge scores.

Key words: low birth weight, infant survival.

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Introduction

Birth is the most important aspect of the motherhood. The birth weight is an important factor for the chance of survival. The average weight of the newborn varies from 2.5 to 3 kg. The weight of an infant is dependent on the length of the antenatal stage and intrauterine growth. Low birth weight can lead to various problems such as mental retardation. The health and survival of the new born baby depends on the health status of the mother and her educational skills regarding the child rearing practices. Early involvement of the mother in the care of her baby is the best way to promote and encourage mother to have a successful parenthood stages[1,2].

Need for the study

Globally more than 20 million infants are born with low birth weight. The number of low birth weight babies is concentrated in two regions of the developing world where as 72% of the LBW infants are born in developing countries. Rajkot has reported that only 48.32% delivery is institutional or home delivery. Low birth weight baby can be easily attended by a properly trained mothers regarding the various characteristics of the newborn baby and how to care the low birth weight baby. Mother caring the baby helps to establish a mother child bond relationship. This will help to have good attachment between mother and child and promotes exclusive breast feeding. Mother needs to be taught the various aspects of child care. Teaching programme is the best effective method to improve the

knowledge of the mothers in child rearing practices among low birth weight babies.

Problem statement: A study to assess the effectiveness of structured teaching programme on toilet training of children among parents in selected village Rajkot, Gujarat.

Objectives

1. To assess the knowledge of mothers regarding care of LBW babies prior to the implementation of teaching programme.
2. To assess the effectiveness of teaching programme regarding care of LBW baby.
3. To compare the effectiveness of teaching programme with their demographic variables.
4. To find the significant difference between pre and post test knowledge scores of mothers.
5. To find association between pre test knowledge score of mothers with their demographic variables.

Review of literature: WHO estimates that globally 25 million low birth weight babies are born each year. LBW is known to be a major determinant of infant mortality. A study was conducted on predicting LBW delivery during maternal and uterine parameters which reveals that the LBW is a major public health problem in India and is the leading cause of neonatal mortality and morbidity. The prevalence of LBW in developing countries is high. In India it varies from 20-40% and it account for a very high neonatal mortality.

A study was conducted on effect of oil massage on growth and neuro behaviour of LBW babies in New Delhi reported that weight gain in the oil massage group 365.8 ± 165.29 was higher compared to the only massage group 290 ± 150.2 . it concludes that the oil application may have a potential to improve weight gain among LBW babies.

There are various studies which states that the kangaroo mother care is an effective strategy to handle the low birth weight babies of more than 1.5 kg and those babies who are hemodynamically stable. KMC has various benefits which can be seen by results of the various studies conducted across the globe. KMC promotes breast feeding, maintains body temperature, improves the mother child bonding and improves the weight gain and improves the confidence of mother in handling the low birth weight babies.

Low birth weight (LBW; <2500 g), which is often associated with preterm birth, is a common problem in

India. Both are recognized risk factors for neonatal mortality. Kangaroo mother care (KMC) is a non-conventional, low-cost method for newborn care based upon intimate skin-to-skin contact between mother and baby. Study cohort comprised in-born LBW babies and their mothers - 300 mother-baby pairs were selected through purposive sampling. Initially, KMC was started for 1 hour duration (at a stretch) on first day and then increased by 1 hour each day for next 2 days. Axillary temperature, respiration rate (RR/ min), heart rate (HR/ min), and oxygen saturation (SpO2) were assessed for 3 consecutive days, immediately before and after KMC. Data from 265 mother-baby pairs were analyzed. Improvements occurred in all 4 recorded physiological parameters during the KMC sessions. Mean temperature rose by about 0.4°C , RR by 3 per minute, HR by 5 bpm, and SpO2 by 5% following KMC sessions. Although modest, these changes were statistically significant on all 3 days. Individual abnormalities (e.g. hypothermia, bradycardia, tachycardia, low SpO2) were often corrected during the KMC sessions.

An prospective observational study conducted in neonatal care unit of tertiary care centre. Mothers with their LBW babies were included as per the inclusion and exclusion criteria. KMC was started in these babies after counseling of mothers. The details of gestational age, Birth weight, Weight gain were recorded. The vital parameters such as temperature, Heart rate and Respiratory rate and SPO2 were also recorded before and after KMC. Total 80 newborns were enrolled in this study. Out of these 40 newborns had a gestational age of 32-34 weeks, the mean birth weight was 1.626 KG. The increase in the weight after KMC was seen in 40 babies out of 57 after 4 days and all babies after 8-12 days of KMC with an average weight gain of 14.53 gms. The change in temperature ranged from -2 to +2 and 78 babies had increased in temperature. The change in heart rate (HR) ranged from 3 to 12 beats/min. 73 babies had decreased heart rate. The range of change in respiratory rate (RR) was 3 to 8 per minute. Total 75 babies had a decreased RR. The change in SPO2 was 3 to 8 and total 78 babies showed an increase in the SPO2. The mean of HR was 146.95 and 139.55, For RR 45.96 and 40.175, for temperature 97.69 and 98.50 and was 93.55 -97.48 for SPO2 before and after receiving KMC respectively .P value was <0.0001 in all parameters.

Research design and approach: Quasi experimental research design with pre and post test without control group with experimental approach was used to evaluate the effectiveness of teaching programme regarding care

of low birth weight baby on knowledge on practice of mothers. 60 mothers were selected from the village for the study. Purposive sampling technique was used to select the mothers.

Tool: tool consisted of demographic Performa and knowledge questionnaire and teaching programme regarding care of low birth weight babies[3-7].

Results

Table 1: Frequency and percentage distribution of sample according to demographic characteristics

S.No	Demographic variables	Frequency	%
1	Age <30 30-35 36-40 Above or equal to 41	23 22 10 5	38.33 36.67 16.67 8.33
2	Religion Hindu Christian Muslim	35 4 21	58.33 6.67 35
3	Educational qualification Primary Graduate Post graduate and above	50 10 0	83.33 16.67 0
4	Type of family Nuclear Joint Extended	40 20 0	66.67 33.33 0

Table 2: Comparison of knowledge level and effectiveness of pre-test and post-test of the study

Range of score	Level of knowledge	F	%	Pre test Mean %	F	%	Post test mean %	t-test
0-5	Poor	8	13.33	7.93	0	0	13.8	19.79
6-10	Moderate	46	76.67		5	8.33		
11-15	Good	6	10		46	76.67		
16-20	Very good	0	0		9	15		

Table 3: association between pre test knowledge with demographic variables

Demographic variables	Chi square value	Df	p-value	Inference
Age	0.102	1	0.749	NS
Religion	1.071	1	0.301	NS
Educational qualification	0	1	1	NS
Religion	0	1	1	NS
Type of family	1.071	1	0.301	NS

Table value= 3.84

Findings of the study reveals that the post test knowledge score 13.8 ± 2.38 was higher than the pre test knowledge score 7.93 ± 2.62 . The calculated t value 19.795 was greater than the table value 1.68. This shows that gain in the knowledge was significant after administering teaching programme

Discussion

Majority 38.33% of the participants are in the age group of below 30. Highest percentage 58.33% of them belonged to Hindu religion. Majority 83.33% of samples were had primary education. Most of the participants 66.67% were from nuclear family.

The result shows that the total mean knowledge score is increased by 29.35% with mean and SD of 13.8 ± 2.38 after the administration of teaching programme

The assessment of association of knowledge of mothers on care of low birth weight babies with demographic variables revealed that there is no significant association between knowledge with the selected demographic variables.

Recommendations

- Same study with large sample size can be done for replication to standardize the teaching programme on care of low birth weight babies.
- Same study can be conducted with the control group.
- A study can be conducted on practice of mothers on care of low birth weight babies.

Source of Support: Nil

Conflict of Interest: Nil

Conclusion

Effectiveness of structured teaching programme on care of low birth weight babies reveals that the total mean knowledge score is increased after administration of teaching programme. The pre test knowledge level of parents was average 60%, poor 35% and good 2% and post test knowledge level very good 12.5%, good 70.5% and average 12.5%.

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