



KNOWLEDGE OF POSTNATAL MOTHERS REGARDING THE CARE OF LOW-BIRTH- WEIGHT BABIES IN SELECTED HOSPITALS AT HARYANA: A DESCRIPTIVE STUDY.

Elsy (Sr. Prabha)

Designation: - Professor.

Department of Nursing (OBG)

BCM College of Nursing, Khairabad, Sitapur, Uttar Pradesh, India

ABSTRACT

The newborn health is a bigger challenge faced by India than that experienced by any other country. In this vast and diverse country, 20% of the world's infants i.e., about 26 million babies born with low birth weight because of either pre-term birth or impaired prenatal growth each year. Low birth weight neonates are prone to long-term disorders like infection, malnutrition, and neurodevelopmental disabilities. Thus, it is essential that home-based care of low-birth babies is made known to mothers so that they can be prepared for home care of their low-birth-weight babies. Low birth weight babies are more prone to morbidity and long-term developmental problems among those who survive. The care of low-weight babies comes under the category of high-risk a neonate does not end at discharge. Thus, it becomes the responsibility of the mother and family members to provide ongoing follow-up and home-based care to the low-birth-weight babies. A descriptive survey was done to assess the knowledge of 60 post-natal mothers having low birth weight babies with the help of a structured knowledge questionnaire having 50 questions. The aim of the study was to assess the level of knowledge of postnatal mothers regarding the care of low-birth-weight babies and the objective of the study was to develop and distribute pamphlet related to the care of low-birth-weight babies. Among the participants, the majority of 38(63.3%) of postnatal mothers had an average level of knowledge and 22(36.7%) of post-natal mothers had a poor level of knowledge regarding the care of low-birth-weight babies. Based on the survey results a pamphlet was prepared and distributed to mothers. The study concluded that mothers had an average level of knowledge regarding the care of low-birth-weight babies.

Keywords: Care of Low-birth-weight babies, knowledge, postnatal mothers

Introduction

In various parts of India infants with birth weight less than 2,500 gm constitute about 25-55% of all live births. More than half of these babies are born after the full term of gestation. The average birth weight of an Indian baby born at full term is 2,500 gm and a birth weight of 2000 gm is considered as a cut-off point for providing special neonatal care. Because of this large number and high morbidity rate of these neonates, the management and care of low-birth-weight babies constitute a major public health priority. Low birth weight is also a significant issue, with an estimated 15% to 20% of all births worldwide being LBW and the highest prevalence in South Asian countries, reaching up to 28%¹. In rural India, the overall prevalence of ABOs is more than 25%, adding to the public health crisis.² Knowledge of the mother about the care of a low-birth-weight baby is an important factor that can be useful in terms of improving the health of a low-birth baby and could strengthen the efforts for the survival of a low-birth-weight baby². It has also been universally accepted that improved survival rates of low-birth-weight babies can be successfully achieved by training and educating mothers on home-based care. The programs of the government of India namely Child Survival and Safe Motherhood (CSSM) and the Reproductive Child Health Program emphasizes the need to involve mother in essential newborn care which focuses on feeding, maintaining proper warmth, recognizing danger signs, immunization, spacing, follow up and screening³. During the clinical supervision, the researcher found that mothers had inadequate knowledge in looking after low birth weight babies. Thus, the researcher has chosen this topic for the research study.

Objectives

1. To assess the level of knowledge of postnatal mothers regarding the care of low-birth-weight babies.
2. To find out the association between knowledge of postnatal mothers and selected socio-demographic variables
3. To develop and distribute pamphlets related to the care of low-birth-weight babies.

Assumptions

1. Mothers possess some knowledge about the care of low-birth-weight babies.
2. Mothers would be interested to learn about the care of low-birth-weight babies.

Delimitations

The study results could be generalized only to mothers with babies weighing less than 2500 gm.

Operational definitions

1. **Low birth weight baby:** It refers to an infant whose birth weight is less than 2500 gm regardless of their gestational age.
2. **Knowledge:** It refers to the awareness of mothers on the care of low-birth babies as measured by the scores obtained according to their responses to the items on a structured knowledge questionnaire.
3. **Post-natal mother:** It refers to the women who have delivered low birth weight babies within one to two weeks.
4. **Selected demographical variables:** These refers to the baseline variables of the mothers viz. age, education, occupation, income, parity, and antenatal check-up.

Hypothesis

H1: There will be a significant level of knowledge in postnatal mothers regarding the care of low-birth-weight babies.

H2: There will be a significant level of knowledge in postnatal mothers regarding the care of low-birth-weight babies with selected demographic variables age, education, occupation, income, parity, and antenatal check-up.

Research approach

In this study, non-experimental research (quantitative approach) was used.

Research design

In this study, descriptive research design is used.

Variable under study

The variables under study are: Demographic variables like Age, Education, Occupation, Income, Religion, Parity, Antenatal check-ups

The setting of the study: Selected hospitals of Haryana

Population

Target population- Postnatal mothers in the reproductive period (20-45 years)

Accessible population- Postnatal mothers who are available at the time of data collection

Sample and sampling technique

In this study sample are Postnatal mothers who are having LBW babies. A convenience sampling technique was used.

RESEARCH APPROACH

QUANTITATIVE RESEARCH APPROACH {NON EXPERIMENTAL}

RESEARCH DESIGN

DESCRIPTIVE RESEARCH DESIGN

SETTING

SELECTED HOSPITALS OF HARYANA

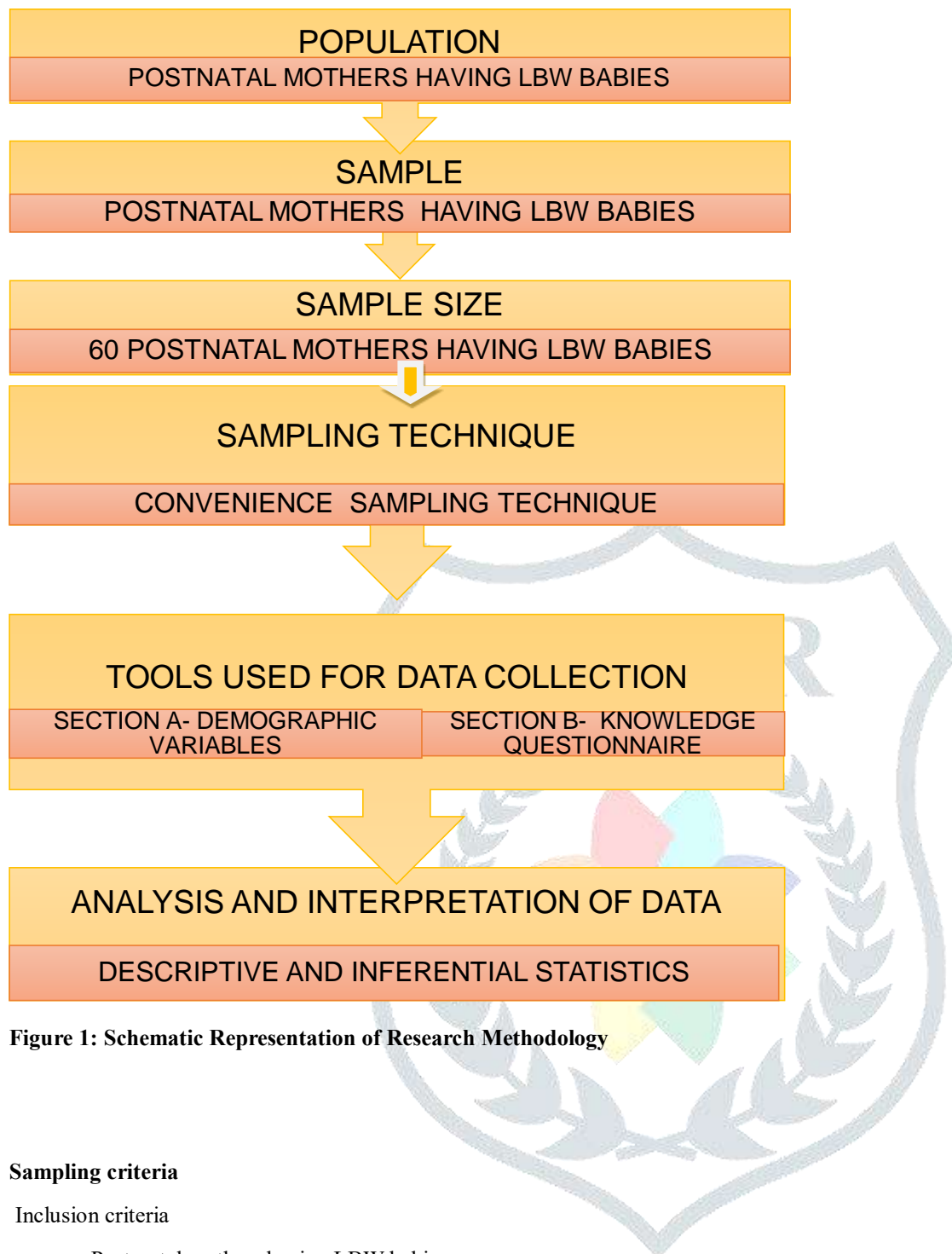


Figure 1: Schematic Representation of Research Methodology

Sampling criteria

Inclusion criteria

- Post-natal mothers having LBW babies.
- Post-natal mothers who are willing to participate.
- Postnatal mothers in the reproductive age (18-45)
- Postnatal mothers who are available during the study period.
- Postnatal mothers who can read and write Hindi.

Exclusion criteria

- Postnatal Mothers who are mentally ill.
- Mothers who have serious medical illnesses.

Selection and development of tools

The structured questionnaire was prepared to assess the knowledge of postnatal mothers regarding the care of low-birth-weight babies.

Section A – Demographic variables include age, education, occupation, income, religion, parity, and antenatal check-up.

Section B- It is a structured knowledge questionnaire having 50 items used by the researcher to assess the knowledge level of postnatal mothers regarding the care of low-birth-weight babies.

Table 1: Scoring of the questionnaire- The right question is awarded 1 mark and the wrong is given 0.

Total marks	50
Maximum	50
Low	0-15
Average	16-30
High	31-50

Section C- A Pamphlet was prepared on the care of low-birth babies

Part 1: Definition of low-birth-weight baby

Part 2 - Causes

Part 3 - Clinical features

Part 4- Thermoregulation

Part 5 – Feeding and Nutrition

Part 6- Care of a low-birth-weight baby

Part 7- Prevention of infection

Part 8- Immunization

Part 9- Complication

Ethical consideration

The research was ethically approved by the institutional ethical committee. The introduction was given to the participants and verbal consent was taken. The confidentiality of the subjects and their responses was assured.

Data collection and technique

The most crucial aspect of any investigation is the collection of appropriate information that would provide the necessary data to answer the question raised in this study. The convenience sampling technique is used for data collection. A structured knowledge questionnaire was prepared and used for data collection as questionnaires are regarded as one of the easiest research instruments to test for reliability and validity. Tools were translated into Hindi by a language expert

Content validity

Content validity of the tools was obtained from one medical and 9 nursing field experts. The tools were modified based on their suggestion and opinions.

Reliability of the tool

Reliability is the degree of consistency with which the attributes or variables are measured by an instrument. The reliability of the tool was done by Karl Pearson co- efficient correlation by test-retest method. The reliability of the tool was found to be 0.9. The normal value of reliability is -1 to +1.

Pilot study

Data was analysed by descriptive and inferential statistics were used for data analysis in consultation with statistical experts. The analysis was done based on the objectives and hypothesis. The scores of the structured knowledge questionnaire were analyzed by chi-square test and item analysis.

The sample consists of 60 postnatal mothers from different hospitals

Procedure for final data collection

1. A formal administrative permission was taken from the head of the institution.
2. A formal administrative permission was taken from the Medical Superintendent of the selected hospital
3. The nature and scope of the study were explained to ward sisters of above selected hospitals and permission was taken from them for data collection.
4. Postnatal mothers who met the designated criteria were selected. The objectives and nature of the study were discussed to select the sample.
5. An informed consent was taken from the sample and the confidentiality of their response was maintained.
6. Postnatal mothers were assured about the confidentiality of the data. A test was conducted to assess the knowledge of postnatal mothers regarding the care of low-birth-weight babies.
7. A questionnaire was distributed and instructions were given and after 1 hour the answer sheet was collected.

Analysis and interpretation of the data:

Data was analyzed and interpreted based on the objectives and hypothesis

Raw data collected was entered in the master data sheet for statistical analysis. It was interpreted using descriptive and inferential statistics. The data findings have been organized and presented under the following sections:

Table No2: Frequency and percentage distribution of sample characteristics

N=60

Sr.no	Demographic Variables	Frequency	Percentage%
1.	Age		
	18-24	23	38.33
	25-30	34	56.66
	31-38	03	05.00
2	Education		
	Metric	44	73.33
	Graduate	16	26.66
3	Occupation		
	Working	16	26.66
	Non-working	44	73.33
4.	Income		
	8000-50000	57	95.00
	Above 50000	03	05.00
5.	Religion		
	Hindu	56	93.33
	Sikh	03	05.00
	Muslim	01	1.66
6.	Parity		
	Primi gravida	31	51.66
	Multi gravida	29	48.33
7.	Antenatal Check-up		
	2 times	05	8.33
	3times	22	36.66
	More than 3 times	33	55.00

Table No.2.Shows the frequency and percentage distribution of respondents in relation to demographic variables such as age, education, occupation, income, religion, parity, and antenatal check-up.

Out of 60 postnatal mothers, most of them 34 (56.66%) of age group mothers belonged to the 25-30 years, whereas 23 (38.33%) belonged to the age group 18-24years, 3(5%) belonged to the age group 31-38 years, which is the lowest. With respondents' education, a maximum of 44 (73.33%) had metric education whereas 16(26.66%) had up to graduation, occupation the maximum of 44(73.33%) belonged to non-working area whereas 16(26.66%) belonged to working area, 57(95%) had 8000-50,000 income, whereas 3(5%) had > 50,000 per month. A maximum of post-natal mothers 56 (93.33%) belonged to Hindu, 3(5%) belonged to Sikh, and 1 (1.66%) belonged to Muslim, which is the lowest. With respondents' parity, a maximum of 31(51.66%) belonged to primi gravida, and 29(48.33%) belonged to multigravida. Thirty-three (55%) post-natal mothers had >3antenatal check-up, 22(36.66%) had 3 antenatal check-up, 5(8.33%) had done 2 antenatal check-up.

H1: There will be a significant level of knowledge in postnatal mothers regarding the care of low-birth-weight babies

Table No. 3. Descriptive analysis of the knowledge Scores of post-natal mothers having low birth weight babies

N=60				
Score	Frequency	Percentage	Valid Percent	Cumulative Percentage
0 - 15 (Low)	22	36.7	36.7	36.7
16-30 (Average)	38	63.3	63.3	100.0
High	0	0	0	
30 & above				
Total	60	100.0	100.0	

Table No.3. Shows that 38 (63.3%) post-natal mothers had an average level of knowledge regarding the care of low-birth-weight babies whereas 22 (36.7%) had a low level of knowledge regarding the care of low-birth-weight babies. No mothers had very high-level knowledge so the researcher accepted the null hypotheses and prepared a pamphlet on care of low-birth-weight babies & distributed it to the postnatal mothers.

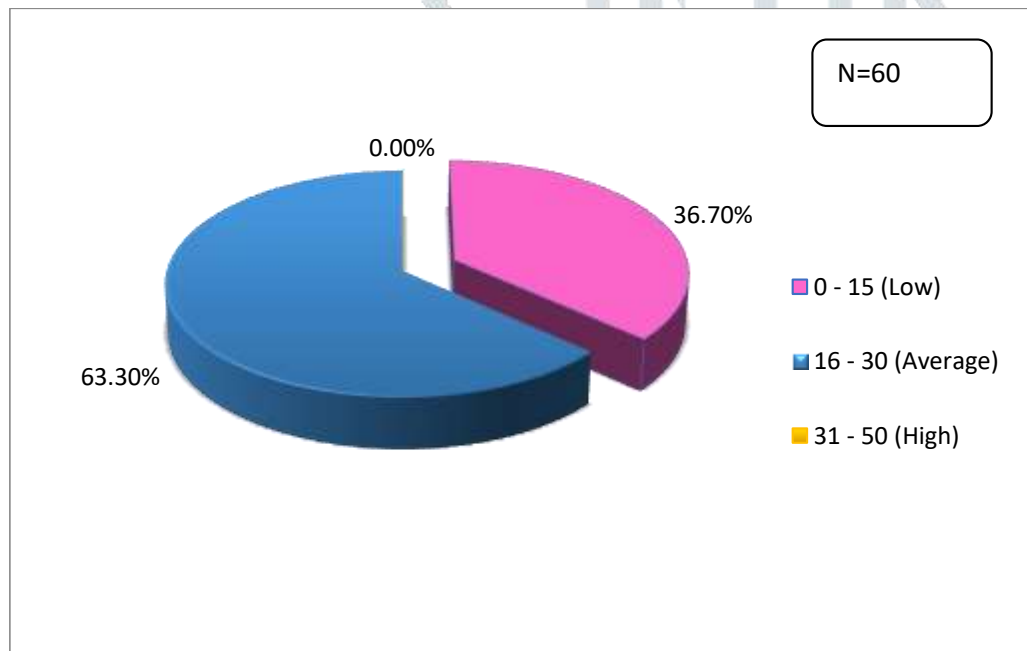


Figure2. Pie chart showing knowledge score of post-natal mothers having LBW babies

H2: There will be a significant level of knowledge in postnatal mothers regarding the care of low-birth-weight babies with selected demographic variables including age, education, occupation, income, religion, parity, and antenatal check-up.

A Chi-square test was computed to determine the association between the knowledge score of postnatal mothers regarding the care of LBW babies with selected variables such as age, education, occupation, income, religion, parity, and antenatal check-up.

The finding suggests that the computed value of age ($\chi^2 = 2.070$, df_2 , $P < 0.05$), education ($\chi^2 = 3.695$ df_1 , $P < 0.05$), income ($\chi^2 = 0.015$ df_1 , $P < 0.05$), religion ($\chi^2 = 2.481$ df_2 , $P < 0.05$), parity ($\chi^2 = 2.154$ df_1 , $P < 0.05$) were not statistically significant at p -value < 0.05 level of significance. Thus, the research hypothesis is rejected and the null hypothesis is accepted.

The association between the knowledge score of postnatal mothers with antenatal check-ups ($\chi^2 = 7.663$ df_2 , $P < 0.05$), and occupation ($\chi^2 = 5.487$ df_1 , $P < 0.05$) were found to be statistically significant. Thus, it can be inferred that the knowledge score of postnatal mothers regarding the care of LBW babies was associated with antenatal check-ups and occupation. Hence null hypothesis is rejected and the alternative hypothesis or research hypothesis is accepted.

Pamphlet related to the care of low-birth-weight babies

After data analysis, it was concluded that none of the postnatal mothers had a high level of knowledge (0%) whereas 38(63.33%) had an average level of knowledge followed by 22(36.7%) had a low level of knowledge regarding the care of low-birth-weight babies.

By keeping this in view a pamphlet was developed and distributed to post-natal mothers having LBW babies related to the care of low-birth-weight babies.

The major result of the current study shows that out of 60 post-natal mothers, the majority 38(63.3%) of postnatal mothers have having average level of knowledge regarding the care of low-birth-weight babies. The result of the present study is compatible with the study conducted by sr. Mercy George (2005) to assess the effectiveness of an information booklet on the care of low-birth-weight babies administered to mothers with such babies in St. John's Medical College and Hospital, Bangalore shows that 21(70%) of the initial subjects were selected in the control group and 20(66.6%) in the experimental group.

The findings of the present study is incompatible with the study conducted by Helen Vupencye Gundani among post-natal mothers regarding low birth weight babies in an Urban setting in Zimbabwe (2012) showing that 32(64%) of the participants did not have any knowledge and 18 (36%) of the knowledge level score was below 50% with a mean of (1.56%) having inadequate knowledge of mother about the care of low birth weight baby. It is an important factor that can be useful in terms of improving the health of a low-birth-weight baby and could strengthen the efforts for the survival of low-birth-weight babies.

Discussion

A neonate with a birth weight of less than 2500 gm irrespective of the gestational age is termed a low-birth-weight baby. They include both preterm and small-for-dates (SFD) babies. These LBW babies are more prone to malnutrition, infections, and neurological development handicapped conditions. They are more vulnerable to developing hypertension, diabetes mellitus, and coronary artery disease in adult life. A baby with a birth weight of less than 2000 gm is more vulnerable and needs special care. Prevention and reduction in the incidence of LBW babies is the most important strategy to reduce prenatal morbidity and mortality rates and improve the quality of life among those who survive. Causes of preterm birth and SFD babies should be eliminated to fulfill the objectives. The aim of the present study is to assess the knowledge of postnatal mothers regarding the care of low-birth-weight babies in selected hospitals in Haryana

Implications

Nursing Practice

1. Health teaching is an integral component of nursing services. So, nursing practitioners should plan teaching programs to enhance the knowledge and practice of post-natal mothers regarding the care of low-birth-weight babies.
2. Timely supervision of nursing practice by ward sister will improve the practice of staff nurses regarding the care of low-birth-weight babies.
3. An in-service education program should be conducted in hospitals and homes to improve the skills of staff nurses regarding the care of low-birth-weight babies.

Nursing Education

1. The Nursing Personnel and nursing students working in various health services should be given in-service education regarding new advancements in the care of low-birth babies. This will update their knowledge related to the care of low-birth-weight babies.
2. There must be adequate guidance, supervision & evaluation of nursing students to ensure adequate knowledge & practice in dealing with low-birth-weight babies.
3. Students & staff should be taught, new technologies about the care of low-birth-weight babies.

Nursing Administration

1. The nursing administrator has the responsibility to provide nurses with staff development opportunities. This will enable the nurse to update their knowledge, skills & practice to provide high-quality care to low birth weight babies.
2. Continuing education programs should be planned for nursing staff to enhance their knowledge & practice in the care low birth babies.
3. Policies and protocols to be implemented for achieving high-quality care.

Nursing research

The evidence-based nursing should be incorporated into the clinical area for quality care in achieving the Millennium Development Goals by 2015, thus reducing the infant mortality rate.

Conclusion

The conclusion drawn from data collection shows that the majority of the post-natal mothers 38(63.3%) had an average level of knowledge regarding the care of LBW babies, and 22 mothers (36.7%) had having low level of knowledge.

After data analysis, it was observed that a maximum of post-natal mothers had to have an average level of knowledge regarding the care of low-birth-weight babies and others had poor knowledge regarding thermoregulation and infection control of the low-birth-weight babies. The above finding clearly shows that mothers were having an average level of knowledge.

Reference

1. Organization WH. Global nutrition targets 2025: anemia policy brief. 2014. <https://apps.who.int/iris/handle/10665/148556>
2. Padhi BK, Baker KK, Dutta A, Cumming O, Freeman MC, Satpathy R, et al. Risk of Adverse Pregnancy Outcomes among Women Practicing Poor Sanitation in Rural India: A Population-Based Prospective Cohort Study. *PLOS Medicine*. 2015;12: e1001851. doi: 10.1371/journal.pmed.1001851
3. Ford Al et al. Maternal perceptions of newborn treatments and healing. *JOGNN*. 1999; 28:501-506

4. Rio MIS. Home-based care of low-birth-weight babies Health Action. 2002 ;(ii):7-8.

