



ISSN 2278 – 0211 (Online)

An Explorative Study to Determine the Prevalence of Low Birth Weight and Its Risk Factors among Postnatal Mothers in Selected Paediatric Hospital at Tamil Nadu State, India

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Abstract:

Birth weight is known to be an important factor, which the Newborn baby adjusts to its surrounding, and it is a critical determinant survival in the neonatal period and for future growth and development of the Newborns. A review of related literature enabled the investigator to develop conceptual framework, methodology for the study and plan for analysis of data were in an effective and efficient way. The conceptual framework adapted for this study was health belief model. A quantitative approach, an explorative design was used to determine the prevalence of low birth weight and its risk factor among postnatal mothers. The tools used for the study was planned interview schedule prepared by the investigator, consisting 3 parts. Tool : 1- consist of 2 section, section A consist of a demographic variable of the mother and section B consist of demographic variable of the child and Tool : 2 consist of categorization of LBW based on WHO, Tool : 3 consist of questions to assessing the risk factors such as

- Section I : Obstetrical factors
- Section II : Antenatal factors

Motherhood is a beautiful and joyous experience to a women and birth weight is a critical determinant for survival in the neonatal period and for future. If the baby born with less weight, it is an anxiety for the mother and entire family. As per the record, the occurrence of low birth weight is high in Government Hospital. Based on the results the investigator felt that, there is a need for good antenatal care to prevent the occurrence of low birth weight. Interactive method of teaching that is question and answer with booklet is an effective method of increasing the knowledge of mothers regarding prevention of low birth weight.

Key words: Objectives, Hypothesis, Methodology, Criteria, Selection of Tools, Frequency Distributions, Relationship, Major Findings, Implication, Reference

1. Objectives

- To find out the prevalence of low birth weight babies in selected hospitals.
- To identify the level of risk factors for low birth weight among postnatal mothers in selected hospitals.
- To find out the relationship between the low birth weight and its risk factor among postnatal mothers in selected hospital.
- To find out the association between low birth weight and the selected demographic variables.
- To find out the association between risk factors and the selected demographic variables.

2. Hypothesis

- There will be a significant relationship between low birth weight and its risk factor among postnatal mothers in selected Hospital.
- There will be a significant association between low birth and its selected demographic variables
- There will be a significant association between risk factors and the selected demographic variables

3. Research Methodology

3.1. Research Design

An explorative Research design was used to determine the prevalence of low birth weight and its risk factors among postnatal mother

3.2. Setting of the Study

This study was conducted in the postnatal ward of selected hospital in Tamil Nadu, situated at 50 KM. which consists of various departments like cardiology, cardio-thoracic surgery, Medical, Nephrology, surgery, pediatrics, obstetrics and Gynecology etc? The postnatal ward has the bed strength of 90. About 45 mothers were admitted in the ward for delivery per day. The total number of deliveries conducted in this hospital per month is nearly 1300 and per day is nearly 40.

3.3. Samples and Sample Size

A sample consists of 60 postnatal mothers and their LBW newborns that fulfill the inclusion criteria.

3.4. Sampling Technique

Non probability, purposive sampling was used to select the subject.

3.5. Criteria for Sample Selection

3.5.1. Inclusion Criteria

- Mothers of low birth weight newborns
- Mothers available during the study period
- Mothers who are willing to participate in the study
- Term babies with intrauterine growth retardation

3.5.2. Exclusion Criteria

- Critically ill child
- Critically ill mother
- Mother affected with any psychological problem.

4. Selection of the Tool

The planned interview schedules were selected for the study. It consists of 3 parts.

PART I: Consist of 2 sections.

Section: A

It deals with the demographic variables of the mothers such as age of the mother, education status, occupation, type of family, Religion, Income of the family, area of residence, type of marriage, nutritional pattern.

Section: B

It deals with the demographic variables of the child. Order of children in the family, Sex of the baby, Gestational weeks,

Part: II: Electronic Weighing scale was used to detect the weight of the baby.

Part: III: Consisted of questions related to risk factors of low birth weights which includes.

- Section I - Obstetrical factors
- Section II - Antenatal factors
- Section III - Nutritional factors
- Section IV - Fetal factors

5. Data Collection Procedure

The data collection procedure was preceded for 6 weeks as per plan. The list of low birth weight newborns were first collected from the admission register. Then interviewed the mothers with questionnaire prepared, side by side their case sheets were studied. Study was explained to them and obtained full data required to rule out the risk factors contributing to the LBW. The samples were selected by purposive sampling technique. At the end of the 5th day the researcher gave an instruction module on prevention of low birth weight and care of LBW to the mothers.

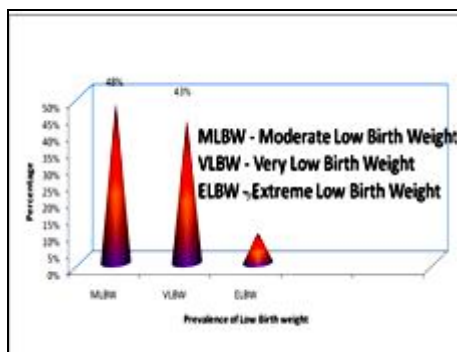


Figure 1

Sl. NO	Prevalence	Frequency	Percentage (%)
1	MLBW	101	48%
2	VLBW	91	43%
3	ELBW	18	9%

Table 1: Frequency distribution and Percentage of prevalence of low birth weight (N=210)

Table 1: shows that prevalence of low birth weight in that 101(48%) were moderate low birth weight, 91(43%) and 18(9%) were extreme low birth weight.

Sl. No	Risk factors	Mild influencing		Moderate influencing		Severe Influencing	
		F	P (%)	F	P (%)	F	P (%)
1	Obstetrical factors	38	63%	20	33%	2	3%
2	Antenatal factors	52	87%	8	13%	-	-
3	Nutritional factors	20	33%	28	47%	12	20%
4	Fetal factors	37	62%	17	28%	6	10%

Table 2: Frequency distribution and percentage of samples according to the level of risk factors for low birth weight

Table 2 shows that risk factors of low birth weight. In that Obstetrical factors 38(63%) were Mild 20, (33%) were moderate and 2(3%) were severe risk factors for LBW. Regarding antenatal factors 52(87%) were mild influencing 8(13%) were moderate influencing risk factor and no severe risk factor. Regarding Nutritional factors 20(33%) were mild, 28(47%) were moderate and 12(20%) were severe risk factor for LBW. Regarding Fetal factors 37(62%) were mild influencing 17(28%) were moderate risk factor and 6(10%) were severe risk factors for LBW.

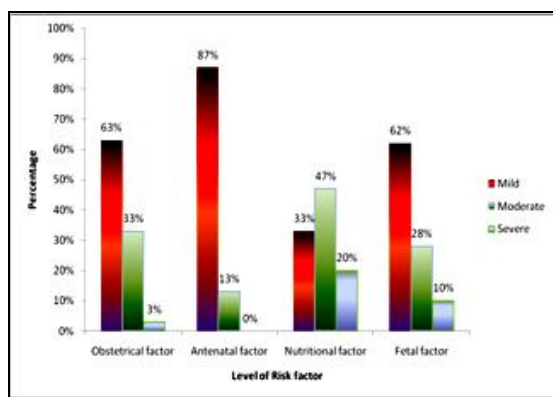


Figure 2: Percentage distribution of samples according to their level of risk factors

Sl. No	Variable	Co – efficient	Result
1	Low birth weight	r = 0.369 **	Positive Correlation
2	Risk factors		

Table 3: Relationship between the LBW and risk factors of Low Birth weight

** : significant at 0.01 levels, to find out the relationship between LBW and risk factors co-efficient correlation was used. The computed 'r' value is 0.39. The positive correlation was found between LBW and risk factors. Hence It was interpreted that child who had LBW they are influenced by certain risk factors.

6. Major Finding of the Study

- Regarding area of residence 53% were rural and 28% were urban
- Regarding type of marriage 45% were consanguineous 55% were non consanguineous.
- Regarding Nutritional Pattern 18% were vegetarian and 82% were Non-vegetarian
- Regarding order of the child 15% were 1 born, 47% 2 born 38% 3 and above born.
- Regarding sex 60% were male child, 40% were female
- Regarding gestational weeks 37% were below 37 weeks and 63% above 37 weeks.

7. Prevalence of Low Birth Weight

Regarding Prevalence 48% were moderate low birth weight, 43% were very low birth weight and 9% were extreme low birth weight.

8. Risk Factors (Level)

- Obstetrical factors 63% mildly 33% moderately and 3% severely
- Antenatal factors 87% mildly 13% moderately 0% severely
- Nutritional factors 33% were mild 47%, moderately and 20% severally
- Fetal factors 62% mild, 28% moderately 10%

9. Relationship

There was a positive correlation between LBW and risk factors of low birth weight

10. Association

- There was a significant association between low birth weight and age of the mothers, Educational status, income of the family, Nutritional Pattern, order of the child and gestational weeks.
- There was a significant association between antenatal factors and educational status, income of the family, type of marriage.
- There was significant association between Nutritional factors and occupation and religion of the mother.
- There was a significant association between foetal factors and occupation, income of the family, are of residence

11. Implication for Nursing Practice

- The study will help the nurses in the hospital and community to plan for antenatal health education programme.
- Health education activities can be initiated for the students and early detection of the risk factors.
- Marital counseling can be given to the girls of reproductive age group regarding the age at marriage and the pre pregnant weight.
- The findings would help the nurses in planning, organizing, implementing the measures to reduce the low birth weight.

12. Implication for Nursing Education

- Nurse educators can encourage students to conduct health educational program and exhibition to antenatal mothers.
- Nurse educators can encourage creative insight of students nurse to prepare pamphlets in various aspects of antenatal care.
- The Nurse educators can use the result of the study as information to the students.
- Nursing students must be trained to trace the risk factors during the antenatal period

13. Implication for Nursing Administration

- Nurse administrator can disseminate the research knowledge into practice, so that antenatal mothers can be benefited.
- Nurse administrator can conduct work shop on antenatal care
- Nurse administrator can encourage peripheral nurse to conduct health visit regularly for antenatal mothers.
- Nurse administrator can use mass media to create awareness about importance of antenatal care.

14. Implication for Nursing Research

- Extensive research can be conducted to find out the health problems of Low birth weight.
- The study can be a base line for future studies to build up.
- Nursing research contributes professional development of child health nurse.

15. Recommendation

- Similar study can be conducted using a large sample.
- Experimental study may be conducted to see the effectiveness Of proper antenatal care on risk mothers.
- Explorative study may be conducted to assess the knowledge of the mothers regarding LBW and its prevention.
- Explorative study may be done to assess the knowledge of the mothers regarding care of low birth weight babies.
- A comparative study can be conducted among rural and urban mother

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