ORIGINAL RESEARCH PAPER VOLUME-6 | ISSUE-8 | AUGUST - 2017 | ISSN No 2277 - 8179 | IF : 4.176 | IC Value : 78.46

INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

INFLUENCE OF NEONATAL FACTORS ON NEWBORN BIRTH WEIGHT: A RETROSPECTIVE STUDY

Nursing

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ABSTRACT

A Retrospective study of neonatal factors relating to birth weight in tertiary care hospital. The objectives were to determine the mean birth weight & sex ratio of live term deliveries. A Sample of 642 neonates who fulfilled the inclusion criteria were selected for the study. An extensive review of literature and guidance by experts formed the foundation to the development of the study. The data collection was done by reviewing the medical records in medical record section. The collected data was tabulated and analyzed. The mean value is 44.9 and the frequency distribution of the study shows that 83%neonates are belongs to normal birth weight, 12% neonates are belongs to low birth weight ,2.18% neonates are belongs to overweight and 0.98% neonates are very low birth weight.

KEYWORDS:

Birth weight, neonatal factors, Retrospective study

Introduction:

"The Nature has desired the provision that infants be fed upon their mother's milk. They find their food and mother, at the same time. It is complete nourishment for them, both for their body and soul- Rabindranath Tagore.

The birth of a baby is a momentous occasion; tiny details of the experiences surrounding the whole event are etched in the memory forever. Motherhood is a beautiful and joyous experience to a woman. The health of the mother during pregnancy is important to give birth to a healthy baby. Birth weight is a critical determinant for survival in the neonatal period and for future growth and development of the newborn. The newborn with the low -birth weight starts life with a handicap and this way persists in life. Low -birth weight (LBW) refers to all newborn whose weight at birth is less than 2500g irrespective of the duration of gestation.

According to WHO normal average birth weight of Indian baby is 2.5kg. Birth weight is one of the important indices in estimating health and the maturity of the newborn which is influenced by maternal factors like, maternal age, parity and as well as the environmental factors e.g. pesticides. It is a well-recognized factor for evaluation of intrauterine growth and development. Low birth weight is the important cause of prenatal, neonatal and postnatal mortality and morbidity. An average new born in the developed countries weighs between 3.3kg to3.5kg; in contrast an average newborn in developing countries weighs between 2.5 to 3.1kg.

Statement of the Problem:

A retrospective study of neonatal factors relating to birth weight in a tertiary care hospital.

Objectives:

1. To determine the mean birth weight & sex ratio of live term deliveries.

Hypothesis:

H_0: There is no significant association between the maternal age and birth weight among selected demographic characteristics of mothers of newborns.

H_1: There will be a positive significant association between the maternal age and birth weight among selected demographic characteristics of mothers of newborns.

Methodology:

In this study we were used quantitative, non-experimental evaluative, retrospective research approach. and Cross sectional retrospective design with Convenient sampling technique were used to collect the data on Live births from January 1, 2016 to December 31, 2016 from the medical record whose data fulfills the given criteria in Medical Record department, in Chettinad Hospital and Research Institute, Kelambakam, Kanchipuram District, Tamilnadu, India . Data on neonates for live births, 642 samples were collected for the period of 1 year. .

Finding of the study:

Totally 642 samples were collected. This study was done to determine the mean birth weight, incidence of low birth weight. Gender of newborn baby shows the data were more female newborns than males .Gestational age of the newborn baby shows as follows the mean value is 44.9 and the frequency distribution of the study shows that 83%neonates are belongs to normal birth weight, 12% neonates are belongs to low birth weight,2.18% neonates are belongs to overweight and 0.98% neonates are very low birth weight. Parity of above mentioned live birth was more multiparty 401 (63%) than primi 241 (37%). Type of gestation were identified as more single birth than multiple birth as follows single birth 640 (99.69%), multiple birth 02 (0.31%). In Type of gestation, single birth is the highest frequency (99.69%) & multi birth is the lowest frequency (0.31%).

Table - 1 Mean Percentage of newborns birth weight.

N=642

S.NO	CHARACTERISTICS	NUMBER OF NEWBORNS	SCORE RANGE	TOTAL SCORE		MEAN	MEAN%
1.	VERY LOW BIRTH WEIGHT	642	WEIGHT <1500GM	6	642	288.27	44.9%
2.	LOW BIRTH WEIGHT		WEIGHT 1500 GM5 < 2500GM	83			
3.	NORMAL WEIGHT		WEIGHT >2500GM TO 3500GM	539			
4.	OVER WEIGHT		WEIGHT > 3500GM	14			

Note: Table 2 shows the mean aspects of newborns birth weight found to be mean percentage 44.9%.

Table:2 -Association of birth weight among selected demographic characteristics of mothers of newborns.

N=642

S.NO	Characteristics	Category	Very Low Birth Weight	Low Birth Weight	Normal Weight	Over Weight	Chi square value and P value
1.	Gender	Male	0	48	221	5	Calculated value 10.589>table value 7.815 Significant at0.05Level
		Female	6	35	318	9	
2.	Gestational age	Preterm	5	49	43	0	Calculated value 152.71 >table value 7.815, Significant at0.05Level
		Term	7	34	493	11	
3.	Parity	Primi	3	40	193	5	Calculated value 8.22>table value 7.815, Significant at0.05Level
		Multi	14	41	338	8	
4.	Type of gestation	Single birth	6	81	539	14	Calculated value 26.52>table value 7.815, Significant at0.05Level
		Multi birth	0	2	0	0	

Table:2 -Association of birth weight among selected demographic characteristics of mothers of newborns-indicates the association of demographic variables of neonatal factors and birth weight.

Conclusion:

health education are recommended by the investigators for the antenatal mothers to maintain the nutrition status, psychological status will enhance the normal birth weight of the newborn and will prevent preterm delivery.

The current study provides an update and more inclusive data on Gestational age, gender, parity, type of gestation of newborn baby. Furthermore, these data could be used as base-line information for the comparison.

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