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Birth Weight Status of the New Born Babies Born at Dhaka Medical College Hospital

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Abstract

A cross-sectional study was carried out to determine the birth weight status of the newborn babies born at Dhaka Medical College Hospital as well as to find out the prevalence of low birth weight among them. All the new born babies (202) born at the labour room of Dhaka Medical College Hospital during the specified period were included in the study. Maximum newborn babies (78.71%) had birth weight 2.5Kg or more and 21.29% had low birth weight (<2.5 Kg). It was found that mean weight of newborn babies was 2.73 Kg and standard deviation was ± 0.52 Kg. Among them 93.56% were full term babies. In a developing country like ours, occurrence of low birth weight is still very alarming, although it is preventable. Emphasis on health education to inform all the women during antenatal visit about the consequences of low birth weight and significance of delivering the babies with normal birth weight is recommended.

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Introduction

Birth weight is one of the important indices in estimating the maturity of the newborn. It is a well-recognized factor for evaluation of intrauterine growth and development. Extremes of birth weight are of great concern both to the Obstetrician and to the Paediatrician [1]. Low birth weight is the important cause of perinatal, neonatal and postnatal mortality and morbidity [2].

Each year about 18 million infants are born weighing less than 2.5 Kg [3, 4]. About 95% of them are in developing countries [5].

An average newborn infant in the developed countries weighs between 3.3 Kg to 3.5 Kg; in contrast an average newborn infant in the developing countries weighs between 2.5 to 3.1 Kg[1]. Low birth weight affects about 2 to 3 million children of Bangladesh every year[6]. Here the average birth weight is 2.48 to 2.53 Kg[7, 8]. About 50% of these new born are of low birth weight[9]. The mortality and morbidly rate from low birth weight in Bangladesh is between 30% and 50%[10].

It is important to note that most of the low birth weight babies are born in lower class group

(51.5%) and most of the average weight babies are born in higher-class group (88.8%)[11]. Incidences are more in primipara and young mothers less than 20 years comprising 57.6%[3].

The study on birth weight status of newborn has become essential, as low birth weight babies are very prone to perinatal asphyxia, meconium aspiration. The main causes of death in low birth weight babies are atelectasis, malformation, pulmonary haemorrhage, intracranial bleeding, secondary to anoxia or birth trauma, pneumonia and other infections etc.[12]. Again birth weight more than 4000 gm tends to develop morbidity and mortality. Large babies are prone to develop

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multidisciplinary diseases and congenital anomalies. They also have a higher incidence of birth injuries[1]. Through this study we want to highlight the present situation of the average well being of the newborn in our country so that it may help the concerned authority to take appropriate measures for improving this condition.

Materials and Methods

This cross-sectional type of descriptive study was done in the labour ward of the Department of Gynaecology and Obstetrics of Dhaka Medical College Hospital, during the period of 1st November 2003 to 31st March 2004 among the newborn babies born at the labour room of DMCH during the specified period of data collection. Total sample were 202. Pregnant women under labouring process who were cooperative and able to give correct information and women who have given birth to a living baby without any congenital anomalies were included in the study for interviewing using Interview schedule. Sampling technique was purposive where study population and sample size were same. The weight of the baby was taken within one hour of birth by using infant meter after standardization.

Results

A total of 202 mothers of newborn babies were included in the study. An interview schedule and a checklist were used for this purpose. The mean age of the respondents was 25.32 years and the standard deviation was ± 5.07 years. Total 202 respondents were distributed into 3 groups according to their age. Majority 139 (68.81%) were in the age group 20-29 years. Among them 94.55% were Muslim and 5.45% were Hindus. Regarding educational status, majority (49.01%) of them were in Class I to X group followed by S.S.C to graduate and above group (32.18%). Majority of them (83.17%) were housewives, 8.9% were service holders, followed by group of self-employed (2.47%). The mean monthly family income was Taka 8499.50 with a standard deviation of ± Taka 6834.19. Majority of them (58.91%) were in middle class group (Taka 3000-10,000) (Table-1). Majority (78.22%) had family members between 1 and 5. 21.77% of them had family members between 6 and 15 (Table-2).

One the basis of gravidity 55.94% was multigravida and the rest 44.06% were primigravida (Table-3). Most of the respondents (93.56%) gave birth to full term babies (Table-4). Regarding the history of pre-eclamptic toxaemia, only 11.39% of the respondents had the history of pre-eclamptic toxaemia (Table-5). Greater proportion of the respondents (70%) had the history of receiving antenatal care (Table-6). Regarding the distribution of the respondents by their height; most of them (70.79%) were between 146 to 156 cm. Only 9.9% were short statured. Mean height was 152.08 cm with SD of ± 5.55 cm (Table-7). Among the 202 newborn babies, 78.71% weighed 2.5 Kg or more. The rest 21.29% were low birth weight (LBW) babies. The mean birth weight was 2.73 Kg with SD of ± 0.52 Kg (Table-8).

Discussion

Birth weight is a recognized indicator of survival and future prognosis of the new born. In both developed and developing countries birth weight is probably the single most important factor that affects neonatal mortality, infant mortality and infant and childhood morbidity[11]. A total of 202 pregnant women of different socioeconomic classes were interviewed in order to investigate the status of birth weight. Of the total 202 newborn babies in the present study, 21.29% were found to be low birth weight. Sadia Chowdhury and Zeba Mahmud (1998) in a study on birth weight in different areas of Bangladesh found that 22% of the infants were born with low birth weight[13]. A recent study of UNICEF also reveals that incidence of low birth weight in Bangladesh now 30% (2002) [14].

All these results are consistent with the present study result. India (26%), Pakistan (21%), Srilanka (25%) have a high incidence of low birth weight[14]. Bhutan (35-44%) and Nepal (25-50%) also have a high incidence of low birth weitht[15]. The incidence of low birth weight varies widely between the regions of the world with levels 32% in Southern Asia, 9% in Eastern Asia, 11-16% in Africa and 10-12% in Latin America & Caribbeans[16]. This variation may be due to difference in geographical location, socioeconomic condition, educational status and percapita GNP.

Analysis of the result showed that a large number of respondents (68.81%) in this study belonged to the age group of 20-29 years. The mean age of the respondents was 25.32 years and the standard deviation was ± 5.07 years. But this result is inconsistent with the findings of the study conducted by Nahar, Afroza and Hossain (1998) [17]. They found higher percentage of respondent (42.9%) among 15-19 year age group. This discrepancy may be due to the fact that their study was conducted in three selected communities (Urban, rural & urban slum) The occurrence of early marriage and early child bearing is relatively high in rural area & the respondents have less access to health care facilities and are less conscious about the early pregnancy. Therefore maximum respondents belonged to the 15-19 years age group in that study. Since our study was conducted in the center of Dhaka city, most of the respondents were aware of the adverse effect of early pregnancy as they have more access to information and health education. Therefore, maximum respondents in our study belonged to 20-29 age group. 94.55% of the respondents were Muslim and the rest (5.45%) were Hindu. This result is similar with the findings of BBS-98%[18].

Most (83.17%) of the respondents of this study were housewives and 58.91% belonged to the middle class group. Majority of them (78.72%) had families comprising 1-5 member and 21.78%. were of 6-15 member families. As most of them were Dhaka based, where the living cost is relatively high; therefore majority of them maintained small family.

From this study, it can be opined that among the newborn babies born at the department of Gynaecology & Obstetrics at DMCH, occurrence of low birth weight is significantly high.

Conclusion

This study revealed some hidden facts and information. 21.29% of the newborn babies were of low birth weight. Maximum (58.91%) respondents were form the middle socioeconomic class. In a developing country like ours, occurrence of low birth weight is still very alarming, although it is preventable. We must take appropriate measures to improve this condition.

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Table-1: Sociodemographic characteristics of the respondents (N=202).

Variables	Number	Percentage
Age (years)		
15-19	16	7.92%
20-29	139	68.81%
30-44	47	23.27%
Religion		
Muslim	191	94.55%
Hindu	11	5.45%
Level of Education		
Class I to X	99	49.01%
SSC to Graduation	56	32.18%
Illiterate & Informal education	38	18.81%
Occupation		
House wife	168	83.17%
Service holder	18	8.90%
Self-employed	5	2.47%
Student	2	0.98%
Other	9	4.46%
Monthly Family Income		
Lower class (<Taka 3000)	32	15.84%
Middle class (Taka 3000-10,000)	119	58.91%
Upper class (>Taka 10,000)	51	25.25%

Table-2: Respondents distribution by their number of family members.

No of family members	Numbers	Percentage
1-5	158	78.22%
6-15	44	21.78%
Total	202	100.00%

Table-3: Distribution according to Gravidity

Gravidity	Numbers	Percentage
Primigravida	89	44.06%
Multigravida	44113	55.94%
Total	202202	100.00%

Table-4: Distribution respondents by duration of current pregnancy

Duration of Current pregnancy	Numbers	Percentage
Preterm (<37 weeks)	13	6.44%
Term (37-42 weeks)	189	93.56%
Post term (>42 weeks)	0	0.00%
Total	202	100.00%

Table-5: Respondents distribution according to the history of PET

History	Numbers	Percentage
Yes	23	11.39%
No	179	88.61%
Total	202	100.00%

Table-6: Distribution according to receiving antenatal care

Receiving Antenatal care	Numbers	Percentage
Yes	141	70%
No	61	30%
Total	202	100%

Table-7: Distribution of the respondents by their height

Height of mother (cm)	Numbers	Percentage
<145	20	9.99%
146-156	143	70.79%
>156	39	19.31%

Table-8: Distribution of the newborn babies according to their birth weight.

Birth weight (kg)	Numbers	Percentage
<2.5Kg	43	21.29%
2.5Kg or >2.5Kg	159	78.71%
Total	202	100.00%

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