Daffodil International University Journal of Allied Health Sciences. Volume 1, Issue 1, January 2014

PRESENT STATUS AND PREDICTORS OF LOW BIRTH WEIGHT AT SADAR HOSPITAL MOULOVIBAZAR

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Abstract: *In Bangladesh the prevalence of LBW is still very high. A descriptive cross sectional study was carried out during the period from January to June 2010 among the mothers whose babies were born in Gynaecology & Obstetric Department of Sadar Hospital, Moulvibazar in order to assess the proportion of LBW with its predictors. Total 140 mothers were selected purposively. A pretested semi-structured questionnaire and hospital record were used for data was collection. Result showed the proportion of LBW to be 25 %(n=35). Among them 64.3% had monthly income between Tk 3000-5000 and majority of mothers 62% were from age group (15-24). The result showed that gestational age, number of ANC visits, gap between two pregnancies were significantly associated with low birth weight. (P<0.05). Association was found between previous loss of pregnancy and previous history of low birth weight (P<0. 05). Age, parity and mother's education had no relation on birth weight. It may be concluded from the study that maternal health service need to be strengthened to reduce the prevalence of LBW in Bangladesh.*

Key words: *LBW, ante natal care, parity, gestation period*

Introduction

According to the World Health Organization (WHO) definition, infants with birth weights less than 2,500 g are classified as low birth weight (LBW). [1] Annually there are 23 million LBW infants among 121 million births. [2] LBW is not only a sensitive indicator for predicting the chances of infant survival, healthy childhood growth and development, and reflects the present and past health status of the mother. LBW is a leading cause of prenatal and neonatal deaths, and as such it remains a worldwide issue and one of the most important public health problems particularly in developing countries. [3] Birth weight is the single most important factor determining the survival chances of the new-born. Many of the new-born die during their first years of life. The infant mortality rate is about 20 times higher for all low birth weight babies than other babies. [4] The lower the birth weight, the lower is the survival chance of the new-born. Many of the low birth weight new-born become the victims of protein energy malnutrition (PEM) and also infection. [5] In recent years, low birth weight (LBW,) has been identified as an important risk factor associated with the subsequent development of various illnesses of childhood and later adult life. [6] A study of UNICEF reveals that incidence of low birth weight in Bangladesh is 30%, India 26%, Pakistan 21% and Sri Lanka 25%. [7] It is generally acknowledged that the etiology of LBW is multifactorial. [8] During the fetal phase, growth depends on the

nutritional condition of the mother, indicating that women (stunted and underweight) are likely to give birth to LBW babies thereby perpetuating a vicious cycle through generations. The socio-economic factors are income, education, occupation affect birth weight. Other important factors are parity; inter pregnancy interval, quality and number of antenatal care along with nutrition education affect birth weight.[9]

Methods and Materials

This descriptive type of cross- sectional study was conducted. In Gynae& Obstetric Department of Sadar Hospital, Moulvibazar from January to June 2010. A total 140 respondents were taken who gave birth within 72 hours. Samples were selected purposively following the inclusion and exclusion criteria. . Data was collected by face to face interview using a semi-structured questionnaire and by consulting hospital record. Questionnaire was developed in local language for better understanding. Informed consent was taken from all women. SPSS version 16 was used for data analysis. Both descriptive and bivariate tests were used for data analysis The analyzed data were presented in table and graphs.

Result

Among140 respondents 62% were from age group of (15-24) years, 31.4% from(25-34) and 5.7% from age group (34-45) . Out of 140 education of respondents were illiterate 4.3% ,Primary 91.4%, Secondary 2.9%, Higher Secondary 7%, and above higher Secondary 7%. The monthly income is Tk3000-5000 for 64.3%, >5000 for19.3% and <3000 is 16.4%.Majority 134(95%) respondents were housewives and 108(77,1%) lived with joint family. Half of the respondents husband 70(50%) were farmers 81.4% and had only primary education.

Table I Distribution of Respondents by Socio demographic Characteristics:

Variables	Frequency	Percentage (%)
Age group of respondents		
(15-24)	88	62%
(25-34)	44	31.4%
(34-45)	8	5.7%.
Educational status of respondents		
Illiterate	6	4.3
Primary	128	91.4
Secondary	4	2.9
Higher Secondary	1	7
Above higher Secondary	1	7
Educational status of respondents husband		
Illiterate	10	7.1
Primary	114	81.4

Secondary	10	7.1
Higher Secondary	5	3.6
Above higher Secondary	1	7
Occupation of Respondents		
Housewife	134	95.7
Farmer	1	0.7
Business		
Labor		
Govt. service	5	3.6
Occupation of Respondents Husband		
Farmer	70	50
Business	27	19.3
Labor	16	11.4
Govt. service	4	2.9
Type of family		
Single	32	22.9
Joint	108	77.1
Age at first pregnancy		
<20	24	17.1
>20	116	82.9

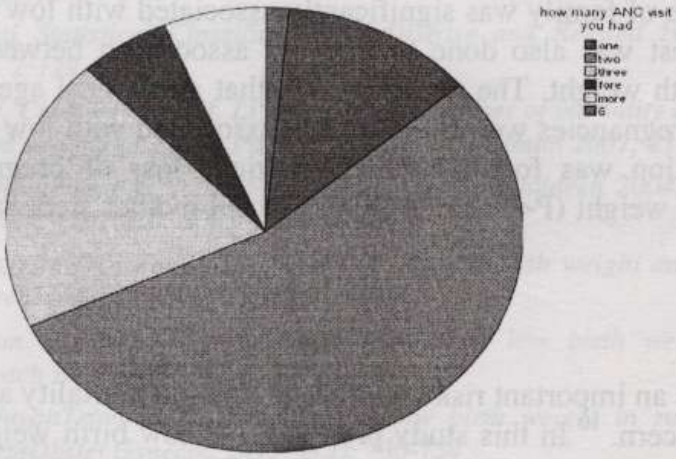

Fig 1 Distribution of Respondent by ANC Visit

Table 2: Distribution of Respondents according to status of Birth Weight

Variables	Frequency	Percentage (%)
What was the birth weight of your baby		
Less 2.5	35	25.0
More 2.5	105	75.0

Table 3: Maternal factors affecting Low Birth Weight

Variables	LBW		P Value
	Yes	No	
Gestational age during delivery			
28-37 weeks	2	0	0.05
>37 weeks	32	106	
Number of ANC visits			
1-3 visits	25	96	
More than 3 visits	9	10	0.008
Inter pregnancy interval			
< 2 years	17	32	0.000
>2 years	17	74	
Loss of pregnancy			
Yes	5	44	0.003
No	29	62	
Do you have LBW babies			
Yes	8	3	0.001
No	26	103	

Bivariate analysis was done to show association between socioeconomic factors and maternal factors and low birth weight. Results of chi square test showed that husband's occupation and type of family was significantly associated with low birth weight. (P< of 0.05).Chi square test was also done to find out association between various maternal factors and low birth weight. The result showed that gestational age, no. of ANC visits, gap between two pregnancies were significantly associated with low birth weight. (P< of 0.05).Also association was found between previous loss of pregnancy and previous history of low birth weight (P<0. 05). Age, parity and mother's education had no relation on birth weight.

Discussion

Low birth weight is an important risk factor for childhood mortality and morbidity so it is a public health concern. [10] In this study proportion of low birth weight was found to be 25% which is similar to a study done in Bangladesh Medical college Hospital in 2009 where the proportion was 25.4%.[11]another study done at Shahed Shohrawady Medical college Hospital found the proportion of Lbw 23.2% which is similar to this study. [12] In the current study, significant association was found between LBW and husbands occupation and type of family (P<0.05) that was dissimilar to the study done in Bangladesh Medical College Hospital and Shahed Shohrawady Medical college Hospital. In this study significant association was found between maternal factors like number of ANC visits and inter pregnancy interval with LBW (P<0.05). This is similar to study at Shahed Shohrawady Medical college Hospital. The possible effect of ANC on LBW was also found in a study done in Azimpur maternity and Child Health Training institute in 2002 and other studies. [13, 14]

In this study age, parity and mothers education has no effect on birth weight. But a study done in ShahedShohrawady Medical college Hospital found age, parity and mothers education to be significantly associated with LBW ($p<0,05$) and hence dissimilar to this study. The current study identified a significant association between gestational age and LBW ($p<0.05$) which is confirmed by studies done worldwide.

Conclusion

The study concluded that there are a web of factors such as gestational age, number of ANC visits, interpregnancy interval, previous loss of pregnancy and previous history of low birth weight leading to Low birth Weight. To overcome these problem preventive programs in maternal and child health should be enhanced.

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