RISK FACTORS ASSOCIATED WITH LOW BIRTH WEIGHT AMONG CEASARIAN SECTION DELIEVERIES AT PMC HOSPITAL NAWABSHAH (SBA).

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ABSTRACT

Objectives: To determine risk factors associated with Low Birth Weight among newborns delivered through Caesarian -Section at PMCH Nawabshah, SBA.**Material &Methods:**This cross-sectional study was conducted from 23 October 2019 and completed on 04 March 2020 at Gynecology & Obstetric Department at Operation Theater of PMCH Hospital Nawabshah (SBA) after approval of Ethical Review Committee of the university. The 350 babiesdelivered through caesarian section in obstetric O.T of PMCH Nawabshah (SBA) were observed byconvenience sampling. Weight of delivered baby was measured by analog weight machine within first hour of birth.Risk factors associated with low birth weight among Caesarian Section like number of family members, number of children of women, age of mother, number of Antenatal Care Visits, Food Restriction of mothers, socioeconomic condition, birth spacing, daily activity change during pregnancy were observed and documented in well-structured questionnaire. The data was entered and analyzed by using SPSS Version 24.00. **Results**The results of this research revealed the prevalence of LBW babies 46% delivered amongC-section in PMC Hospital Nawabshah city. The prevalence of Low Birth Weight was high in women having more than five children56.5%, highest in those women who is current age is below 20 years that is 62.5%, mothers who do not receive any antenatal visit 71.4%. Low birth weight observed more in illiterate mothers is 57.1%,women with low socio-economic status58.7% and women with food restriction 46.7%.48.2% low birth weight having more than ten family members and 50.3% in women with birth spacing less than 2 years.**Conclusion**The prevalence of Low Birth Weight was high in women having more than five children who is current age is below 20 years, mothers who do not receive any antenatal visit. Low birth weight observed more in illiterate mother, women with low socio-economic status, having food restriction, in more than ten family members' homesand in women with birth spacing less than 2 years.

Key Words: Low Birth Weight, Risk Factors, C-Section, Risk factors, Nawabshah.

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Introduction

Low birth weight (LBW) infants are live born infants with birth weight less than 2500gm regardless of gestational age[1]. Birth weight should be measured during the first hour of life. Less than 2500 grams (up from 2,499 grams irrespective of gestational age is called LBW. It can be divided into very LBW (<1500 grams) and extremely LBW (<1000 grams). LBW is mainly associated with childbirth (before 37 weeks of pregnancy) or due to retarded intrauterine growth.[1, 2]

The occurrence of LBW is likely to be 16% global, 19% in least developed and developing countries, and 7% in established countries.[3] LBW is well-documented as the leading cause of morbidity and mortality in newborns, and long-term effects include nutritional deficiency and development.[4, 5]

LBW can occur due to premature birth or intrauterine growth retardation. In developing countries like Asia, intrauterine growth restriction is a major cause and is predisposed by socioeconomic and maternal factors before and during pregnancy.[6]

The risk factor of LBW includes physical labor, illness especially infection, close birth intervals, very young age, short maternal stature, smoking, high parity, the weight of the mother, nutritional status, and anemia during pregnancy.[7]

LBW is related to many socio-economic factors like residence rural and urban), mother's age and occupation, family's income, birth order, and various maternal health conditions. For example, nutrition status, health status, and mother's education.[8]

Pakistan has one of the maximum birth rates in the world, with LBW. 32% in rural areas, 19% in urban areas. This high rate has led to a high neonatal mortality rate for children under five, with 58 babies per 1,000 live births. The LBW had a major role in obstructing Pakistan's improvement towards the achievement of the Millennium Development Goal 4 and is likely to affect its ability to achieve the Sustainable Development Goals in health and wellness. [9]This study identified a range of modifiable factors related to being underweight in term babies in rural Pakistan. These factors included illiteracy, null parity, miscarriages or previous abortions, the number and timing of antenatal care visits, lack of iron and folic acid supplementation during pregnancy, the presence of high blood pressure or anemia during pregnancy and after delivery maternal weight <45 kg. Earlier research has shown that educated women are less likely to have an LBW baby and maternal education has a protective effect of 33% against LBW. We also found that illiteracy was associated with the delivery of LBW, which is likely related to reduce use of services and less knowledge of positive health behaviors. [10]

The risk factor for low birth weight are hard physical labour during pregnancy, illness specially infection, short maternal stature, very young age, high parity, smoking, close birth intervals, weight of mother, nutritional status and anemia[2]. Low birth weight is associated with many socioeconomic factors such as residence (urban-rural difference), mother's age and occupation, birth order, the family's income, and many maternal conditions such as nutritional status, mother's educational and health status[3,4]..However, this differs from region to region. Most infants with LBW are full-term infants. Preterm infants have a greater risk of dying than concerning full-term babies.[11]

LBW is often associated with premature birth and IUGR even at Thirty-seven weeks of pregnancy. The unborn have little time to grow and gain weight in the uterus. A significant portion of the baby's weight is found during the last trimester of pregnancy.[12]

The second reason for LBW is intrauterine growth retardation.[13]This is when the infant is not developing well during gestation. This could be due to the placenta, maternal exercise, or infant health problems.Full term means that between 37 to 41 weeks of pregnancy. These infants can be fully developed but with LBW.[14]

Methods:

This cross-sectional study was conducted from 23 October 2019 and completed on 04 March 2020 at Gynecology & Obstetric Department at Operation Theater of PMCH Hospital Nawabshah (SBA) after approval of Ethical Review Committee of the university. The 350 babies delivered through caesarian section in obstetric O.T of PMCH Nawabshah (SBA) were observed by convenience sampling. Proper interview of the mother by herself and careful assessment of birth weight.Weight of delivered baby was measured by analog weight machine within first hour of birth. Risk factors associated with low birth weight among Caesarian Section like number of family members, number of children of women, age of mother, number of Antenatal Care Visits, Food Restriction of mothers, socioeconomic condition, birth spacing, daily activity change during pregnancy were observed and documented in well-structured questionnaire. The data was entered and analyzed by using SPSS Version 24.00. The all quantitative variables were analyzed by T-Test and all categorical data was analyzed by Chi-square Test. The data is presented by graphs and charts.

RESULTS

161 (46%) babies were found to be Low Birth Weight from 350 babies delivered through cesarean section.graph 1

Prevalence of lbw 62.5%is highest in those women who is current age is below 20 and 48.5% in those women who is age above 40 years and 37.5% in age group of 20-30 years.table 1

Prevalence of low birth weight in illiterate mothers is 57.1%, in primary education is 48.8% and in higher education is 12.5%.table 1

Prevalence of LBW in those women who have more than 5 children which is 56.9% and 38.2% in those women who have less than 3 children. Table 1

Prevalence of low birth weight in mothers who do not receive any antenatal visit is 71.4% and those who received less than 3 visit is 45.6% and 39.1% in the women who received more than 6 Antenatal visits.table 1

Prevalence of LBW was 46.7% in those women who had any food restriction during pregnancy and 45.7% in those women who have no food restriction.table1

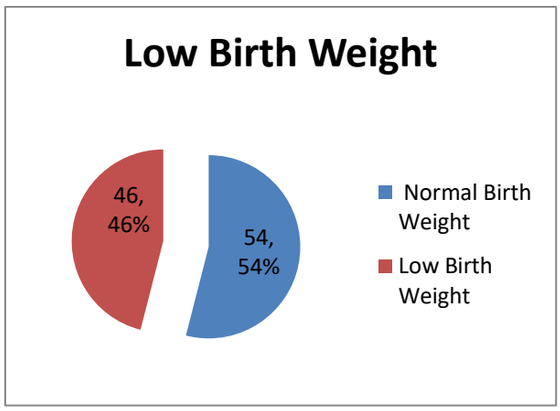
Prevalence of LBW in lower socioeconomic status was 58.7% and in Upper socioeconomic status was 22%.table 1

Prevalence of LBW was 48.2% in women who had number of family members more than 10. And 18.2% in the women who had number of family members are less than 5.table 1

Prevalence of LBW is 50.3% in women with birth spacing less than 2 years and 41% in women with birth spacing more than 2 years.table 1

Prevalence of LBW was 50% in those women who had more daily activities during pregnancy and the prevalence in women who had unchanged daily activities was 46.8% and 44.1% in those women whose daily activities were less. Table 1.

Graph No: 1. Prevalence Low Birth Weight



Age of Mother	Low Birth Weight			
	Yes		No	
	Frequency	Percentage	Frequency	Percentage
Below 20 years	10	62.5	6	37.5
20-30 years	15	37.5	25	62.5
30-40 years	64	44.4	80	55.6
Above 40 years	72	48.5	78	52
Total	161	46	189	54
Educational status of Mother				
Uneducated	76	57.1	57	42.9
Primary	60	48.8	63	51.2
Secondary	24	27.9	62	72.1
Higher	1	12.5	7	87.5
Total	161	46	189	54
Number of children				
Less than 3	42	38.2	68	61.8
3-5	70	46.4	81	53.6
More than 5	29	56.9	22	43.1
No children	20	52.6	18	47.4
Total	161	46	189	54
Antenatal visits				
No	35	71.4	14	28.6
Less than 3 visits	31	45.6	37	54.4
3-6 visits	59	41.8	82	58.2
More than 6 visits	36	39.1	56	60.9
Total	161	46	189	54
Any food restriction				
Yes	50	46.7	57	53.3
No	111	45.7	132	54.3
Total	161	46	189	54
Socioeconomic status				
Upper	13	22	46	78
Middle	104	48.1	112	51.9
Lower	44	58.7	31	41.3
Total	161	46	189	54
Number of Family members				
Less than 5	4	18.2	18	81.8
5-10	52	47.3	58	52.7
More than 10	105	48.2	113	51.8
	161	46	189	54
Birth spacing				
Less than 2 years	91	50.3	90	49.7
More than 2 years	66	41	95	59
Total	157	45.9	185	54.1
Daily activity change during pregnancy				
Unchanged	66	46.8	75	53.2
Less	71	44.1	90	55.9
More	24	50	24	50
Total	161	46	189	54

Discussion

The research was performed at PMCH Nawab Shah. This study reflects that 46% of LBW among C/S deliveries are from city Nawabshah. The infants in Pakistan are 32%, and 19.3% of LBW infants are in Sindh province.[15]

In this research if a woman is having number of children more than five delivered so 56.9% LBW. Women who have three to five children delivered is 46.4% LBW. The women who have less than three children delivered 38.2% LBW babies The associated risk factor of LBW was high in women having more than five children is 56.5%, similar results having prevalence of LBW is 56.9% in those women who have more than five children and 38.2% in those women who have less than three babies.[16, 17]

If the number of family members is more than ten then the LBW examined 48.2%. The 47.2% LBW in those who have family members are 5 to 10. The 48.2% LBW babies in those families who have more than 10 family members and 18.2% LBW babies in those families who have less than 5 members.

Women who have birth spacing is less than two year delivered 50.3% low birth weight babies and women who have birth spacing more than two years delivered 41.% low birth weight babies and the women who have primi-gravida delivered 52.6% LBW. According to PDHS 2017-18[18]the birth spacing < 2 years is 18.6% and more than 2 years is 19.8% babies LBW as the birth order of children increases, a minor increase percentage of LBW baby's birth order is less than four 38.2%, birth order more than four is 39.2% Few current studies proved that in Pakistan, the fertility rate has declined, and the contraceptive prevalence rate is also going to be improved but still more than 50% of the population requires more than 2 children with baby boy preference.[19]

Women with low socio-economic status are 58.7%.This study shows that 58.7% of lower-class women, 48.1% in middle-class women who delivered LBW babies and 22% upper class women delivered low birth weight babies.Therefore, according to PDHS 2017-18, 24.6% and 18% LBW babies delivered by lower- class middle-class women accordingly.[20] Pakistan has a very low literacy rate and poor socioeconomic status, especially in rural areas. Education and healthy environment perform an important role in women's life and remains helpful in decision-making moments. Various studies showed that education, socioeconomic status, and cultural habits are the main factors associated with LBW deliveries.This study shows that 58.7% of lower-class women, 48.1% in middle-class women who delivered LBW babies, 48.2% LBW in those who have family members which are 5 to 10. It is observed that if the mother is unable to take proper diet during pregnancy such as milk, vegetable, meat, and fruits, etc. due to poor socioeconomic conditions different taboos, culture, customs, liking/disliking of food is also main cause of LBW and it is also proved by research studies. Therefore, according to PDHS 24.6% and 18% LBW babies delivered by lower- classmiddle-class women accordingly.[21]

The women who have any food restriction delivered 46.7% LBW babies and women who have no food restriction delivered 45.7% LBW.It is observed that if the mother is unable to take proper diet during pregnancy such as milk, vegetable, meat, and fruits, etc. due to poor socioeconomic conditions different taboos, culture, customs, liking/disliking of food is also main cause of LBW and it is also proved by research studies.[22] In Pakistan, there is a trend of restriction from some food items like fish, egg, meat, and few green vegetables which are the rich source of iron from the mother-in-law, mothers, or some elder person of family and society in term to prevent abortion and congenital anomalies. Also, there is Taboo that food which is injurious to the health of pregnant women according to them. Women have also restricted themselves due to nausea and vomiting or some other adverse or allergic effects they suffered in the past.

Prevalence of low birth weight babies is 50% in those women who have daily activity is more during pregnancy. The low birth weight are 46.8% in those women who have unchanged work load during pregnancy and 44.1% LBW in those women who have work less during pregnancy.In our study, 76.9% of LBW babies delivered by those women who have a history of others' work including housework (Table-6). Therefore, 44.1% of LBW are delivered by those women with less workload, 46.8% with unchanged workload (Table-6). According to PDHSs 2016, the percentage of LBW is higher for working women 23.6% while non-working women 17.7%,that shows that more rest is required when a woman is pregnant relatively normal routine life. [19]

CONCLUSION

The prevalence of Low Birth Weight was high in women having more than five children who is current age is below 20 years, mothers who do not receive any antenatal visit. Low birth weight observed more in illiterate mother, women with low socio-economic status, having food restriction, in more than ten family members' homesand in women with birth spacing less than 2 years. Proper intervention in health education to limit the number of children, so to improve the nutritional status and government should take initiatives to decrease the poverty and improve socio-economic conditions of the common people as to decrease the magnitude of LBW. The government should take the steps to improve the socio-economic conditions of the public so, the delivered baby's health maintained as child growth distract to the faultless approach.

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