

A Cohort study on exploring the consequences associated with psychosocial, nutritional and maternal health in neonates of low birth weight

Authors:

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Article Received: 10-April-2024, Revised: 01-May-2024, Accepted: 21-May-2024

ABSTRACT:

Introduction: According to UNICEF approximately 20.5 million babies worldwide suffer from low birth weight, and estimates from the WHO show that one in seven live births result in low-birth-weight babies there are numerous established risk factors. [1] Low birth weight can have several reasons and is influenced by a combination of sociodemographic and biological factors, still IMR (infant mortality rate) in India is significantly higher than in the neighbouring countries of Sri Lanka, Bangladesh, and Nepal. To gain a better understanding of the risk factors for low birth weight in neonates and the difficulties that are still associated with this condition a cohort study was carried out. [2] **Material and methods:** A cohort study was carried out in department of paediatrics, government general hospital, for a period of 6 months i.e., 2022 to 2023 after obtaining approval from institutional ethics committee. The patients were screened based on inclusion and exclusion criteria. The data was collected in designed data collection forms. **Results:** Our study revealed a High Incidence of LBW complications and the maternal risk Factors. Women with Low Age of Marriage (62%) (< 20 Years), Low Literacy Rate where 71% are in the group of (5th To 10th Class), Haemoglobin Levels (< 7 G/Dl), Gestational Age (< 37 Weeks), and The Maternal Disease Conditions Like (Anaemia (33%), Thyroid(6%), Fibroid(1%), HTN(11%), DM(5%), Oligohydramnios (7%), Fever With Rash(4%), Covid (1%), Epilepsy(1%), Psychosocial Factors which shows the high levels of some Stress (79%) And Mild Anxiety Levels (57%), Diet Consuming Low Amount of protein diet and Vitamins, are The Independent Risk Factors Associated with Low Birth Weight. While A Higher Risk of Complications Like Respiratory Distress (69%), Acute Renal Failure, HIE (Hypoxic Ischemic Encephalopathy) (4%), CHD (1%), Stroke (1%), Spina Bifida (2%), Necrotizing Enterocolitis (1%), Haemolytic (1%), Cellulitis (1%) and Deaths (11%) Were Independent Outcome of Low Birth Weight. **Conclusion:** Our study has revealed that significantly associated risk factors for the birth weight of a new-born vary according to the consequences associated with psychosocial, nutritional and maternal health While a higher risk of complications. Preventing LBW by Implementing Comprehensive Strategies and Reducing the Impact of Risk Factors, can Create a Healthier Future for Most Vulnerable Children.

Keywords: Low birth weight, Maternal Risk Factors, LBW Complications, infant mortality rate.

INTRODUCTION:

In developing countries like India, low birth weight is a serious problem for public health. Low birth weight was given emphasis in the 29th World Health Assembly in 1976. Unfortunately, the IMR (infant mortality rate) in India is significantly higher than in the neighbouring countries of Sri Lanka, Bangladesh, and Nepal. [1] The World Health Organisation (WHO) has determined that a birth weight of less than 2500 g

(5.5 pounds) qualifies as low birth weight. [2] Three categories best describe low birthweight. Under 2500 g (5 1/2 pounds) is considered to be low birthweight. Less than 1500 g (3 1/3 pounds), or very low birthweight, is considered. 1500–2499 g is considered a somewhat low birth weight. [3]

These new-borns had a higher risk of dying during the first month of life, and those who did survive had to face with lifelong consequences like a higher risk of

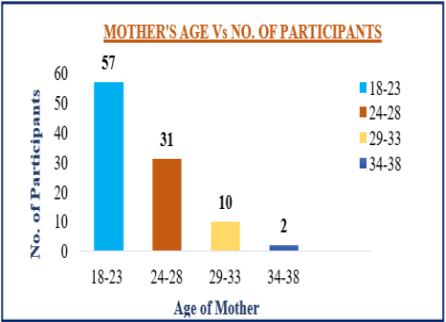
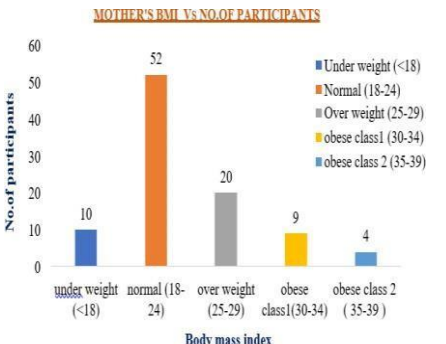

stunted development, a lower IQ, and adult-onset chronic disorders. Preeclampsia, gestational diabetes, inadequate prenatal care, poor nutrition, iron deficiency anaemia, smoking, and maternal behaviours are some of the factors that lead to LBW, which raises infant mortality and morbidity.^[4] Although low birthweight does not necessarily cause infant mortality, it can be an indication of a number of distinct pathophysiologic problems.^[5] We intend to gain a better understanding of the risk factors for low birth weight in neonates and the difficulties that are still associated with this condition by analysing the socioeconomic, demographic, and health data from the mother and baby in the population. Within one month of birth, by obtaining the mother's prior medical background and the future health of the baby.^[6] In order to have a healthy pregnancy and child, mothers need to receive enough prenatal care, have a clean environment, eat well, rest, and sleep. Together, these elements of a healthy pregnancy can help in

preventing, identifying, and treating the conditions that cause low birthweight.^[7]

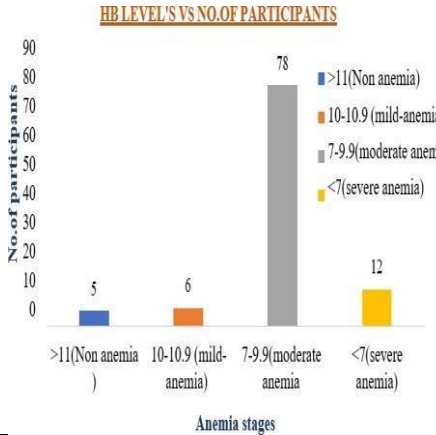
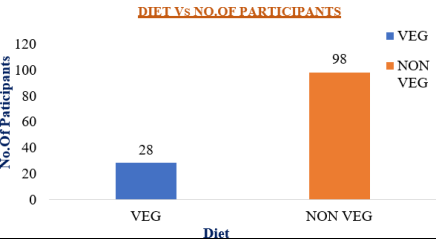
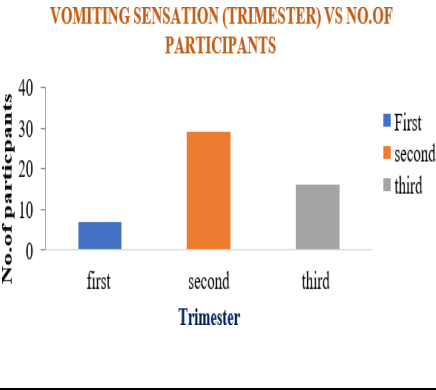
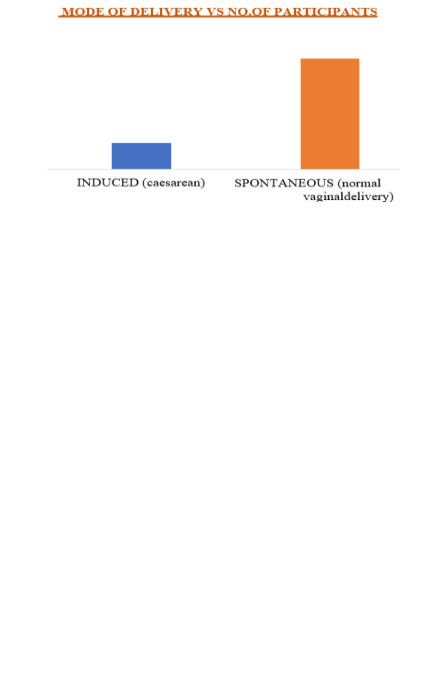
METHODOLOGY:

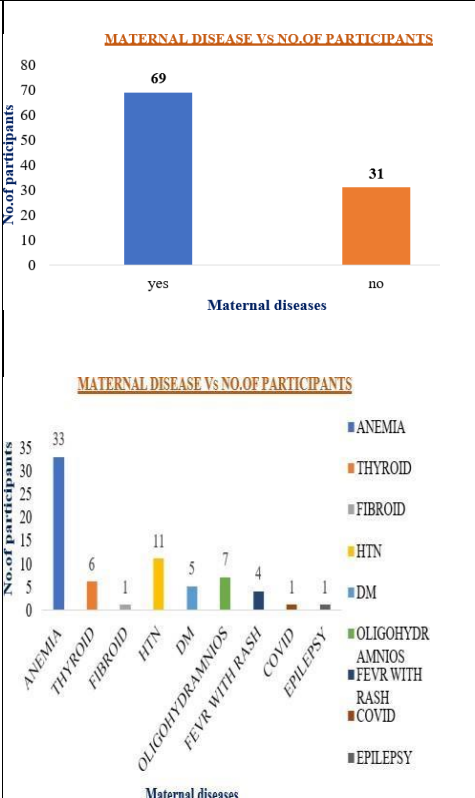
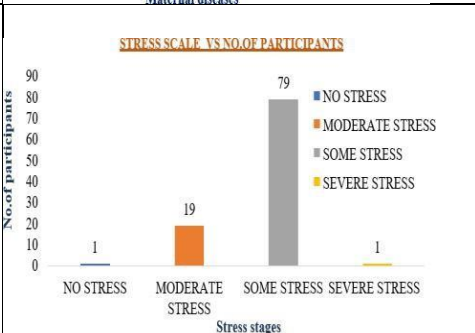
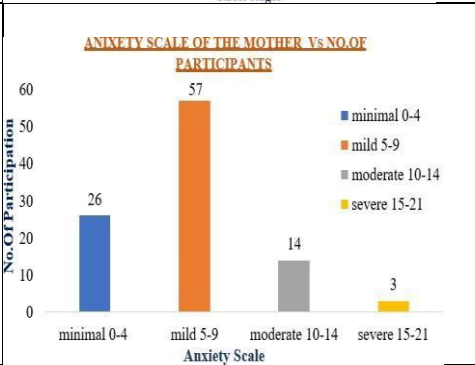
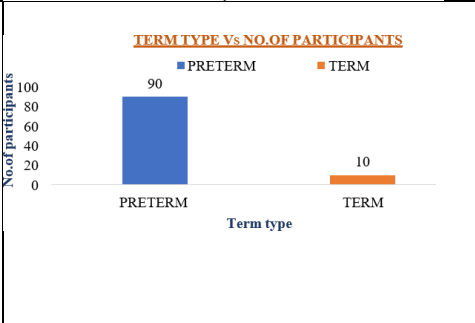
A cohort study was carried out in department of paediatrics, government general hospital, for a period of 6 months i.e., 2022 to 2023 after obtaining approval from institutional ethics committee. The patients were screened based on inclusion and exclusion criteria. Patients who satisfy criteria were included in the study after obtaining informed consent. The data was collected in designed data collection forms. The low birth weight was assessed based on weight of the new born. These are categorized into 3 groups i.e., 1) Extreme LBW <1000 2) very LBW<1500 3) LBW<2500. The self- designed and validated questionnaire was used to assess the risk factors associated with low birth weight and the complications of low-birth- weight baby.

RESULTS AND GRAPHS:

S. No	Category	Graphs	Percentages (%)	Statistical analysis												
1.	Figure 1: Depending On Mother's Age	 <table border="1"> <caption>MOTHER'S AGE Vs NO. OF PARTICIPANTS</caption> <thead> <tr> <th>Age of Mother</th> <th>No. of Participants</th> </tr> </thead> <tbody> <tr> <td>18-23</td> <td>57</td> </tr> <tr> <td>24-28</td> <td>31</td> </tr> <tr> <td>29-33</td> <td>10</td> </tr> <tr> <td>34-38</td> <td>2</td> </tr> </tbody> </table>	Age of Mother	No. of Participants	18-23	57	24-28	31	29-33	10	34-38	2	Among 100 patients 57 were observed in The Age Group of Between 18-23 Years (57%) Followed by 31 (31%) Subjects in the Age Group of 24-28, 10(10%) Patients in the Age Group Of 29-33, 2 (2%) Subjects in the Age Group of 34-38 Years.	Mean= 25 And P = 0.02822		
Age of Mother	No. of Participants															
18-23	57															
24-28	31															
29-33	10															
34-38	2															
2.	Figure 2: Depending On Mother's BMI	 <table border="1"> <caption>MOTHER'S BMI Vs NO. OF PARTICIPANTS</caption> <thead> <tr> <th>Body mass index</th> <th>No. of participants</th> </tr> </thead> <tbody> <tr> <td>under weight (<18)</td> <td>10</td> </tr> <tr> <td>normal (18-24)</td> <td>52</td> </tr> <tr> <td>over weight (25-29)</td> <td>20</td> </tr> <tr> <td>obese class 1 (30-34)</td> <td>9</td> </tr> <tr> <td>obese class 2 (35-39)</td> <td>4</td> </tr> </tbody> </table>	Body mass index	No. of participants	under weight (<18)	10	normal (18-24)	52	over weight (25-29)	20	obese class 1 (30-34)	9	obese class 2 (35-39)	4	The Normal Weight (18-24) Followed by 20 (20%) in the Overweight (25-29) Group, 10 (10%) in the Underweight (<18), 9 (9%) in the Group of Obese Class 1 (30-34), 4 (4%) in the Group of Obese Class 2.	Mean = 23.699, Standard. Deviation = 5.4948, F-Value = 224,78242, P-Value = <0.00001.
Body mass index	No. of participants															
under weight (<18)	10															
normal (18-24)	52															
over weight (25-29)	20															
obese class 1 (30-34)	9															
obese class 2 (35-39)	4															
3.	Figure 3: Depending On Age of Marriage	 <table border="1"> <caption>AGE OF MARRIAGE VS NO. OF PARTICIPANTS</caption> <thead> <tr> <th>Age of marriage</th> <th>No. of participants</th> </tr> </thead> <tbody> <tr> <td>13 - 15</td> <td>5</td> </tr> <tr> <td>16 - 20</td> <td>52</td> </tr> <tr> <td>21 - 25</td> <td>27</td> </tr> <tr> <td>26 - 30</td> <td>10</td> </tr> </tbody> </table>	Age of marriage	No. of participants	13 - 15	5	16 - 20	52	21 - 25	27	26 - 30	10	58 (58%) in the Age Group of 16-20 Years Followed by 27 (27%) in the Age Group of 21-25, 10 (10%) in the Age Group of 26-30.	Mean = 31.66667, P-Value = 0.685935.		
Age of marriage	No. of participants															
13 - 15	5															
16 - 20	52															
21 - 25	27															
26 - 30	10															

4.	Figure 4: Depending On Consanguinity Marriage	<p>CONSAUQUINITY MARRIAGE Vs NO.OF PARTICIPANTS</p> <table border="1"> <thead> <tr> <th>Consanguinity marriage</th> <th>No. of participants</th> </tr> </thead> <tbody> <tr> <td>consanguinity</td> <td>11</td> </tr> <tr> <td>non consanguinity</td> <td>89</td> </tr> </tbody> </table>	Consanguinity marriage	No. of participants	consanguinity	11	non consanguinity	89	100 Patients nearly 89 (89%) subjects in The Group of Non- Consanguinity and Followed by 11 (11%) in The Group of Consanguinity.	MEAN = 50, STD.DEV = 39.				
Consanguinity marriage	No. of participants													
consanguinity	11													
non consanguinity	89													
5.	Figure 5: Depending On Parity (Gravida)	<p>GRAVIDA (PARITY) VS NO.OF PARTICIPANTS</p> <table border="1"> <thead> <tr> <th>Parity</th> <th>No. of participants</th> </tr> </thead> <tbody> <tr> <td>single parity 1</td> <td>61</td> </tr> <tr> <td>multiple parity >1</td> <td>39</td> </tr> </tbody> </table>	Parity	No. of participants	single parity 1	61	multiple parity >1	39	61 (61%) Was observed in the Single Parity and Followed by the 39 (39%) in the Group of Multiple Parity.	MEAN = 50, STD.DEV = 11				
Parity	No. of participants													
single parity 1	61													
multiple parity >1	39													
6.	Figure 6: Depending On Live Birth.	<p>GRAVIDA (PARITY) VS NO.OF PARTICIPANTS</p> <table border="1"> <thead> <tr> <th>Parity</th> <th>No. of participants</th> </tr> </thead> <tbody> <tr> <td>single parity 1</td> <td>69</td> </tr> <tr> <td>multiple parity >1</td> <td>39</td> </tr> </tbody> </table>	Parity	No. of participants	single parity 1	69	multiple parity >1	39	69 (69%) Was Observed in the 1 Group and Followed by the 25 (25%) in the Group2, 6 (6%) in the Group 3.	MEAN = 33.33, STD.DEV = 26.3				
Parity	No. of participants													
single parity 1	69													
multiple parity >1	39													
7.	Figure 7: Depending On Abortions	<p>ABORTION VS NO.OF PARTICIPANTS</p> <table border="1"> <thead> <tr> <th>Abortions</th> <th>No. of participants</th> </tr> </thead> <tbody> <tr> <td>Zero</td> <td>82</td> </tr> <tr> <td>One</td> <td>17</td> </tr> <tr> <td>Two</td> <td>1</td> </tr> </tbody> </table>	Abortions	No. of participants	Zero	82	One	17	Two	1	82(82%) Was Observed with Zero Abortions and Followed by the 17(17%) in the Group of One, 1(1%) in the Group of Two.	MEAN = 33.33, STD.DEV = 42.8991		
Abortions	No. of participants													
Zero	82													
One	17													
Two	1													
8.	Figure 8: Depending On Gestational Weeks	<p>GESTATIONAL WEEKS Vs NO.OF PARTICIPANTS</p> <table border="1"> <thead> <tr> <th>Gestational weeks</th> <th>No. of participants</th> </tr> </thead> <tbody> <tr> <td>24-28</td> <td>25</td> </tr> <tr> <td>29-33</td> <td>35</td> </tr> <tr> <td>34-38</td> <td>33</td> </tr> <tr> <td>39-43</td> <td>7</td> </tr> </tbody> </table>	Gestational weeks	No. of participants	24-28	25	29-33	35	34-38	33	39-43	7	Among 100 patients 35 (35%) In the Group of 29-33 Followed by 33 (33%) in the Group of 34-38, 25 (25%) in the Group of 24-28, 7 (7%) in the Group of 39-43	MEAN = 27.04, STD.DEV = 4.1113, F-Value = 316.134, P-Value = <0.0001.
Gestational weeks	No. of participants													
24-28	25													
29-33	35													
34-38	33													
39-43	7													
9.	Figure 9: Depending On Antenatal Visits	<p>ANTENATAL VISTS VS NO.OF PARTICIPANTS</p> <table border="1"> <thead> <tr> <th>Antenatal vists</th> <th>No. of participants</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>6</td> </tr> <tr> <td>2</td> <td>35</td> </tr> <tr> <td>3</td> <td>22</td> </tr> <tr> <td>4</td> <td>37</td> </tr> </tbody> </table>	Antenatal vists	No. of participants	1	6	2	35	3	22	4	37	Among 100 Subjects It Was Found out that 40 (40%) in the Group of 1 Followed by 37 (37%) In the Group of Two, 22 (22%) in the Group of Three, 1 (1%) in the Group of One.	MEAN = 25, STD.DEV = 12.34.
Antenatal vists	No. of participants													
1	6													
2	35													
3	22													
4	37													
10.	Figure 10: Depending On Mother's Education	<p>EDUCATION VS NO.OF PARTICIPANTS</p> <table border="1"> <thead> <tr> <th>Education</th> <th>No. of participants</th> </tr> </thead> <tbody> <tr> <td>5th to 10th</td> <td>71</td> </tr> <tr> <td>inter</td> <td>23</td> </tr> <tr> <td>degree</td> <td>5</td> </tr> <tr> <td>PG</td> <td>1</td> </tr> </tbody> </table>	Education	No. of participants	5th to 10th	71	inter	23	degree	5	PG	1	71(71%) in the Group of 5 th to 10 th Class Followed by 23(23%) in the Inter, 5(5%) in the Degree, 1(1%) in the PG	MEAN = 25, STD.DEV = 27.12.
Education	No. of participants													
5th to 10th	71													
inter	23													
degree	5													
PG	1													

11.	Figure 11: Depending On Haemoglobin (Hb) Levels	 <table border="1"> <caption>HB LEVEL'S VS NO.OF PARTICIPANTS</caption> <thead> <tr> <th>Anemia stages</th> <th>No. of participants</th> </tr> </thead> <tbody> <tr> <td>>11(Non anemia)</td> <td>5</td> </tr> <tr> <td>10-10.9 (mild-anemia)</td> <td>6</td> </tr> <tr> <td>7-9.9(moderate anemia)</td> <td>78</td> </tr> <tr> <td><7(severe anemia)</td> <td>12</td> </tr> </tbody> </table>	Anemia stages	No. of participants	>11(Non anemia)	5	10-10.9 (mild-anemia)	6	7-9.9(moderate anemia)	78	<7(severe anemia)	12	Among 100 Patients It Was found the 79 (79%) of Subjects Fall in The Moderate Anaemia group (7-9) Followed by 12 (12%) of subjects fall in The Severe Anaemia <7, 5(5%) Of Subjects Fall in the Group of Non-Anaemia >11, 4(4%) Of Subjects Fall in The Group of Mild Anaemia 10-10.9.	MEAN = 8.353, STD.DEV = 1.2509, F=112.039 , P-value = < 0.0001.
Anemia stages	No. of participants													
>11(Non anemia)	5													
10-10.9 (mild-anemia)	6													
7-9.9(moderate anemia)	78													
<7(severe anemia)	12													
12.	Figure 12: Depending On Dietary Factors	 <table border="1"> <caption>DIET VS NO.OF PARTICIPANTS</caption> <thead> <tr> <th>Diet</th> <th>No. Of Participants</th> </tr> </thead> <tbody> <tr> <td>VEG</td> <td>28</td> </tr> <tr> <td>NON VEG</td> <td>98</td> </tr> </tbody> </table>	Diet	No. Of Participants	VEG	28	NON VEG	98	98(98%) In the Group of Non-Veg Followed by the 28(28%) In the Veg	MEAN = 63, STD.DEV = 35.				
Diet	No. Of Participants													
VEG	28													
NON VEG	98													
13.	Figure 13: Depending On vomiting's.	 <table border="1"> <caption>VOMITING SENSATION (TRIMESTER) VS NO.OF PARTICIPANTS</caption> <thead> <tr> <th>Trimester</th> <th>No. of participants</th> </tr> </thead> <tbody> <tr> <td>first</td> <td>7</td> </tr> <tr> <td>second</td> <td>29</td> </tr> <tr> <td>third</td> <td>16</td> </tr> </tbody> </table>	Trimester	No. of participants	first	7	second	29	third	16	Calculated among 100 Patients 52 subjects had the Vomiting Sensation, 48 Subjects Didn't Complain any Vomiting Sensations. Nearly 7 (7%) in the Group of 1 st trimester Followed by 29(29%) In the Group of 2 nd trimester, 16 (16%) In The 3 rd trimester	MEAN = 17.33, P-Value = 0.0014.		
Trimester	No. of participants													
first	7													
second	29													
third	16													
14.	Figure 14: Depending On Mode of Delivery	 <table border="1"> <caption>MODE OF DELIVERY VS NO.OF PARTICIPANTS</caption> <thead> <tr> <th>MODE OF DELIVERY</th> <th>No. of participants</th> </tr> </thead> <tbody> <tr> <td>INDUCED (caesarean)</td> <td>19</td> </tr> <tr> <td>SPONTANEOUS (normal vaginal delivery)</td> <td>81</td> </tr> </tbody> </table>	MODE OF DELIVERY	No. of participants	INDUCED (caesarean)	19	SPONTANEOUS (normal vaginal delivery)	81	Among 100 Subjects Nearly 81(81%) In the Group of Spontaneous (NVD) Followed By 19 (19%) In the Group of Induced (Caesarean)	MEAN = 50, STD.DEV = 43.8406.				
MODE OF DELIVERY	No. of participants													
INDUCED (caesarean)	19													
SPONTANEOUS (normal vaginal delivery)	81													

15.	<p>Figure 15: Depending On the Maternal Diseases of The Mother</p>	 <p>MATERNAL DISEASE VS NO.OF PARTICIPANTS</p> <table border="1"> <thead> <tr> <th>Maternal diseases</th> <th>No. of participants</th> </tr> </thead> <tbody> <tr> <td>yes</td> <td>69</td> </tr> <tr> <td>no</td> <td>31</td> </tr> </tbody> </table> <p>MATERNAL DISEASE VS NO.OF PARTICIPANTS</p> <table border="1"> <thead> <tr> <th>Maternal diseases</th> <th>No. of participants</th> </tr> </thead> <tbody> <tr> <td>ANEMIA</td> <td>33</td> </tr> <tr> <td>THYROID</td> <td>6</td> </tr> <tr> <td>FIBROID</td> <td>1</td> </tr> <tr> <td>HTN</td> <td>11</td> </tr> <tr> <td>DM</td> <td>5</td> </tr> <tr> <td>OLIGOHYDRAMNIOS</td> <td>7</td> </tr> <tr> <td>FEVR WITH RASH</td> <td>4</td> </tr> <tr> <td>COVID</td> <td>1</td> </tr> <tr> <td>EPILEPSY</td> <td>1</td> </tr> </tbody> </table>	Maternal diseases	No. of participants	yes	69	no	31	Maternal diseases	No. of participants	ANEMIA	33	THYROID	6	FIBROID	1	HTN	11	DM	5	OLIGOHYDRAMNIOS	7	FEVR WITH RASH	4	COVID	1	EPILEPSY	1	<p>Among 100 Patients 69 Subjects had the Past Medical History, 31 Subjects didn't Complain any Past Medical History Nearly 33(33%) in the group of Anaemia followed by 11(11%) in the Group of Hypertension, 7(7%) in The Group of Oligohydramnios, 6(6%) in the Group of Thyroid, 5(5%) in the Group of Diabetes Mellitus 4(4%) in the Group of Fever with Rash 1(1%) in the Group of Covid And 1(1%) in the Group of Epilepsy, 1(1%) in the Group of Fibroid.</p>	<p>MEAN = 7.66, STD.DEV = 9.43.</p>
Maternal diseases	No. of participants																													
yes	69																													
no	31																													
Maternal diseases	No. of participants																													
ANEMIA	33																													
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OLIGOHYDRAMNIOS	7																													
FEVR WITH RASH	4																													
COVID	1																													
EPILEPSY	1																													
16.	<p>Figure 16: Depending On Stress Scale</p>	 <p>STRESS SCALE VS NO.OF PARTICIPANTS</p> <table border="1"> <thead> <tr> <th>Stress stages</th> <th>No. of participants</th> </tr> </thead> <tbody> <tr> <td>NO STRESS</td> <td>1</td> </tr> <tr> <td>MODERATE STRESS</td> <td>19</td> </tr> <tr> <td>SOME STRESS</td> <td>79</td> </tr> <tr> <td>SEVERE STRESS</td> <td>1</td> </tr> </tbody> </table>	Stress stages	No. of participants	NO STRESS	1	MODERATE STRESS	19	SOME STRESS	79	SEVERE STRESS	1	<p>100 Subjects, nearly 79(79%) in the Group of Some Stress Followed by 19 (19%) In the Group of Moderate Stress, 1(1%) In the Group No Stress, 1(1%) In the Group of Severe Stress.</p>	<p>MEAN = 24.5, P-Value = 003638.</p>																
Stress stages	No. of participants																													
NO STRESS	1																													
MODERATE STRESS	19																													
SOME STRESS	79																													
SEVERE STRESS	1																													
17.	<p>Figure 17: Depending On Anxiety Scale</p>	 <p>ANXIETY SCALE OF THE MOTHER VS NO.OF PARTICIPANTS</p> <table border="1"> <thead> <tr> <th>Anxiety Scale</th> <th>No. of participants</th> </tr> </thead> <tbody> <tr> <td>minimal 0-4</td> <td>26</td> </tr> <tr> <td>mild 5-9</td> <td>57</td> </tr> <tr> <td>moderate 10-14</td> <td>14</td> </tr> <tr> <td>severe 15-21</td> <td>3</td> </tr> </tbody> </table>	Anxiety Scale	No. of participants	minimal 0-4	26	mild 5-9	57	moderate 10-14	14	severe 15-21	3	<p>Among 100 Subjects Nearly 57 (57%) in the Group of Mild Followed by 26 (26%) In the Group of Minimal, 14 (14%) in the Group of Moderate, 3(3%) in the Group of Severe.</p>	<p>MEAN = 6.92, STD.DEV = 3.7028, F-Value = 247.5352, P-Value = <0.0001.</p>																
Anxiety Scale	No. of participants																													
minimal 0-4	26																													
mild 5-9	57																													
moderate 10-14	14																													
severe 15-21	3																													
18.	<p>Figure 18: Depending On Term Type</p>	 <p>TERM TYPE VS NO.OF PARTICIPANTS</p> <table border="1"> <thead> <tr> <th>Term type</th> <th>No. of participants</th> </tr> </thead> <tbody> <tr> <td>PRETERM</td> <td>90</td> </tr> <tr> <td>TERM</td> <td>10</td> </tr> </tbody> </table>	Term type	No. of participants	PRETERM	90	TERM	10	<p>100 Subjects nearly 90 (90%) in the Group of Preterm Followed By 10(10%) in the Group of Term.</p>	<p>MEAN = 50, STD.DEV = 40.</p>																				
Term type	No. of participants																													
PRETERM	90																													
TERM	10																													

19.	Figure 19: Depending On Baby body Weight	<p>BABY WEIGHT Vs NO.OF PARTICIPANTS</p> <table border="1"> <thead> <tr> <th>Baby weight</th> <th>No. of participants</th> </tr> </thead> <tbody> <tr> <td>Extreme LBW <1000 GM</td> <td>19</td> </tr> <tr> <td>Very LBW <1500GM</td> <td>37</td> </tr> <tr> <td>LBW <2500GM</td> <td>44</td> </tr> </tbody> </table>	Baby weight	No. of participants	Extreme LBW <1000 GM	19	Very LBW <1500GM	37	LBW <2500GM	44	Among 100 Subjects Nearly 44 (44%) in the Group of Low Birth Weight, Followed by 37 (37%) in Group of Very Low Birth Weight, 19 (19%) in the Group of Extreme Low Birth Weight.	MEAN = 101.159, STD.DEV = 275.2266, F Value = 3405.54663 , P-Value = < 0.00001.														
Baby weight	No. of participants																									
Extreme LBW <1000 GM	19																									
Very LBW <1500GM	37																									
LBW <2500GM	44																									
20.	Figure 20: Depending On the Apgar Score	<p>APGAR SCORE VS NO.OF PARTICIPANTS</p> <table border="1"> <thead> <tr> <th>APGAR score</th> <th>No. of participants</th> </tr> </thead> <tbody> <tr> <td>0-3</td> <td>0</td> </tr> <tr> <td>4-6</td> <td>37</td> </tr> <tr> <td>7-10</td> <td>63</td> </tr> </tbody> </table>	APGAR score	No. of participants	0-3	0	4-6	37	7-10	63	Among 100 Patients, nearly 63(63%) in the Group of 7- 10 Followed by 37(37%) in the Group of 4-6, 0(0%) in the Group of 0-3.	MEAN = 6.64, STD.DEV = 0.732, F- Value = 312.5846, P-Value = <0.00001.														
APGAR score	No. of participants																									
0-3	0																									
4-6	37																									
7-10	63																									
21.	Figure 21: Depending On the Medical Conditions of The Baby	<p>MEDICAL CONDITION OF BABY Vs NO.OF PARTICIPANTS</p> <table border="1"> <thead> <tr> <th>Medical condition</th> <th>No. of participants</th> </tr> </thead> <tbody> <tr> <td>convulsions</td> <td>3</td> </tr> <tr> <td>jaundices</td> <td>5</td> </tr> <tr> <td>bleeding</td> <td>2</td> </tr> <tr> <td>Increased heart rate</td> <td>17</td> </tr> <tr> <td>increased respiratory rate</td> <td>10</td> </tr> </tbody> </table>	Medical condition	No. of participants	convulsions	3	jaundices	5	bleeding	2	Increased heart rate	17	increased respiratory rate	10	17 (17%) in the Group of increased Heart Rate Followed by the 10 (10%) in the Group of Increased Respiratory Rate, 5(5%) in the Group of Jaundices, 3(3%) in the Group of Convulsions, 2(2%) in the Group of Bleeding	MEAN = 78.										
Medical condition	No. of participants																									
convulsions	3																									
jaundices	5																									
bleeding	2																									
Increased heart rate	17																									
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22.	Figure 22: Depending On the Other Complications Of New Born	<p>OTHER COMPLICATIONS VS NO.OF PARTICIPANTS</p> <table border="1"> <thead> <tr> <th>Complications</th> <th>No. of participants</th> </tr> </thead> <tbody> <tr> <td>RESPIRATORY DISTRESS SYNDROME</td> <td>69</td> </tr> <tr> <td>ACUTE RENAL FAILURE</td> <td>1</td> </tr> <tr> <td>HIE</td> <td>4</td> </tr> <tr> <td>CHD</td> <td>1</td> </tr> <tr> <td>STROKE</td> <td>1</td> </tr> <tr> <td>SEPSIS</td> <td>3</td> </tr> <tr> <td>SPINA BIFIDA</td> <td>2</td> </tr> <tr> <td>NECROTIZING ENTEROCOLLITIS</td> <td>1</td> </tr> <tr> <td>HEMOLYTIC</td> <td>1</td> </tr> <tr> <td>CELLULITES</td> <td>1</td> </tr> </tbody> </table>	Complications	No. of participants	RESPIRATORY DISTRESS SYNDROME	69	ACUTE RENAL FAILURE	1	HIE	4	CHD	1	STROKE	1	SEPSIS	3	SPINA BIFIDA	2	NECROTIZING ENTEROCOLLITIS	1	HEMOLYTIC	1	CELLULITES	1	Among 100 Subjects Nearly 69(69%) in the Group of Respiratory Distress Syndrome, 4(4%) in the Group of HIE, 3(3%) in the Group of Sepsis, 2 (2%) in the Group of Spina Bifida, 1(1%) in the Group of Hemolytic, 1(1%) in the Group Cellulites, 1(1%) in the Group of Necrotizing Enter colitis, 1(1%) In the Group of Stroke, 1(1%) in the Group of Acute Renal Failure.	(Chi Square) Test P-Value = 0.07.
Complications	No. of participants																									
RESPIRATORY DISTRESS SYNDROME	69																									
ACUTE RENAL FAILURE	1																									
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HEMOLYTIC	1																									
CELLULITES	1																									

DISCUSSION:

The relatively high rate of complications in new born with Low Birth Weight and the deaths reported in these studies may highlight the significance of Preventing Low Birth weight by putting in place comprehensive policies and lessening the Impact of risk factors. According to UNICEF approximately 20.5 million babies worldwide suffer from Low Birth

Weight, and estimates from the WHO show that one in seven live births result in Low-Birth-Weight babies.[8] Our study has revealed that significantly associated risk factors for the birth Weight of a New born vary according to the consequences associated with Psychosocial, nutritional and maternal Health. A cohort study was carried out in the Government General Hospital, During the Course of The Six-Month

Investigation, 100 Samples of Low-Birth-Weight infants were collected, and 11 of These Infants Succumbed to their Low Birth Weight. The Increased Prevalence of Low Birth Weight Was Linked to Risk Factors of LBW. The Remaining 89 New borns, who had Low Birth Weight, were recovered. This study revealed a high incidence of LBW complications and The Maternal Risk Factors. Women with Low Age of Marriage (62%) (< 20 Years), Low Literacy Rate where 71% are in the group of (5th To 10th Class) , Hemoglobin Levels (< 7 G/Dl), Gestational Age (< 37 Weeks), and The Maternal Disease Conditions Like (Anemia (33%), Thyroid(6%), Fibroid (1%), HTN(11%), DM (5%), Oligohydramnios (7%), Fever With Rash (4%), Covid (1%), Epilepsy (1%), Psychosocial Factors Which Shows The High Levels Of Some Stress (79%) And Mild Anxiety Levels (57%), Diet Consuming Low Amount of Protein Diet and Vitamins, are The Independent Risk Factors Associated with Low Birth Weight.

While a higher risk of Complications like Respiratory Distress (69%), Acute Renal Failure, HIE (Hypoxic Ischemic Encephalopathy) (4%), CHD (1%), Stroke (1%), Spina Bifida (2%),Necrotizing Enterocolitis (1%), Hemolytic (1%), Cellulitis (1%) And Deaths (11%) Were Independent Outcome of Low Birth Weight. Significant Risk Factors of Low Birth Weight.

We performed statistical methods between various factors associated with Low Birth Weight and the Risk Factors are Mother Age, Age of Marriage, BMI, Education Level, Mother's Hemoglobin Levels, Gestational Weeks, Maternal Disease Condition, and Psychosocial Parameters of the Mother (Stress and Anxiety) and the diet followed by the Mother. Low Birth Weight can have several reasons and is influenced by A Combination of Sociodemographic and Biological Factors, According to F. Anjum, T. Javed, M. Afzal,et al. (2011). These actors also have an effect on A Newborn chance of Surviving as Well as Its Potential for Future Development. A Significant Risk Factor for Low Birth Weight in Females Is Maternal Age. The Risk Is Higher for Women Under the Age Of 20years. They Claimed That Mothers Without Education Are More Likely to Deliver Underweight Children.

Likewise, also specified that Antenatal Consultations are crucial because they enable us to monitor the fetal Health and take prompt action to protect the fetus and mother. Less than three prenatal visits are associated with a Considerable risk of Low Birth Weight, According to their Study.

In Addition, Low Financial Position and Close Birth Intervals are Risk Factors for Low Birth Weight.

Furthermore, Primi gravida First-Time Mothers are more likely to deliver Low-Birth-Weight Babies. Low Birth Weight is caused by disorders like Anaemia during Pregnancy. Their Research has demonstrated that factors like as BMI, Pre-Pregnancy Body Weight, and Pregnancy Weight Growth Significantly Affect

Birth Weight.^[6]

Our Study Shows the Significant Values for The Following Risk Factors That Causes The Low Birth Weight

Mother Age Mean = 25, *P Value* = 0.002822

Based On Mothers BMI Mean Value = 23.699, Standard Deviation = 5.4948, F Value =224,78242, *P Value* = <0.00001

Based Upon the Gestational Weeks Mean Value = 27.04, Standard Deviation = 4.1113, F Value= 316.134, *P Value* = <0.0001

Based Upon Haemoglobin of The Mother Mean Value = 8.353, Standard Deviation = 1.2509,F Value = 112.039, *P Value* = <0.0001

Based Upon Vomiting's During Gestation Mean Value = 17.33, *P Value* = 0.0014

Based Upon Anxiety Mean Value = 6.92, Standard Deviation = 3.7028, F Value = 247.5352, *P Value*= <0.00001

Based Upon the Baby Body Weight Mean Value = 101.159, Standard Deviation = 275.2266, F Value = 3405.50663, *P Value*= <0.00001

Based Upon Apgar Score Mean Value = 6.64, Standard Deviation = 0.732, F Value =312.5846, *P Value* = < 0.00001

Based Upon Baby Complications *P Value* = 0.07

CONCLUSION:

This Study Revealed A High Incidence Of LBW Complications And The Maternal Risk Factors.

Women with Low Age of Marriage (62%) (< 20 Years), Low Literacy Rate Where 71% Are In The Group Of (5th To 10th Class) , Haemoglobin Levels (< 7 G/Dl), Gestational Age (< 37 Weeks),And The Maternal Disease Conditions Like (Anaemia (33%), Thyroid(6%), Fibroid(1%), HTN(11%), DM(5%), Oligohydramnios (7%), Fever With Rash(4%), Covid(1%) , Epilepsy(1%) , Psychosocial Factors which show the High Levels of some stress (79%) and Mild Anxiety Levels (57%), Diet Consuming Low Amount of Protein Diet and Vitamins, are The Independent Risk Factors Associated with Low Birth Weight.

While a Higher risk of complications like Respiratory Distress (69%), Acute Renal Failure, HIE (Hypoxic Ischemic Encephalopathy) (4%), CHD (1%), Stroke (1%), Spina Bifida (2%),Necrotizing Enterocolitis (1%), Haemolytic (1%), Cellulitis (1%) And Deaths (11%) Were Independent Outcome Of Low Birth Weight.

Our study has revealed that significantly associated risk factors for the birth weight of a new born vary according to the consequences associated with psychosocial, nutritional and maternal health While a higher risk of complications. Preventing LBM By Implementing Comprehensive Strategies And Reducing The Impact Of Risk Factors, Can Create A Healthier Future For Most Vulnerable Children.

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