Original Article

Precautionary Baby Weight Related To Pregnancy And Delivery Style Of Life

Dr Ramling Mali[1],Dr Nootan R Mali[2]

1-Principal Cum Professor,Institute Of Nursing Education And Paramedical Sciences,Dombivali (Maharashtra State)
2- Vice Principal Cum Professor,Institute Of Nursing Education And Paramedical Sciences,Dombivali (Maharashtra State)
Email.id-ramlingmali@gmail.com
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Abstract

In this context, the infant's birth weight is considered to be one of the most reliable and significant health markers for assessing the infant's overall health. Low birth weight is one of the most prevalent health issues in the world today, as defined by the World Health Organization (WHO), which identifies it as occurring in infants with a birth weight of less than 2,500 grammes. The research on women's lifestyles during pregnancy and their influence on the weight of their babies at birth was carried out using a variety of different materials and methods. The primary goals of the study were to determine how women's lifestyles change during pregnancy and how much of an impact lifestyle has on the weight of newborns. The design of the study was a retrospective one. The approach of purposive sampling was utilised in order to pick seventy-five moms who had normal deliveries at Krishna Hospital in Karad. The information was gathered by conducting interviews according to a predetermined schedule. The analysis of the data included both descriptive and inferential statistical methods. Results: There was a significant association found between eating a diet that included meat and other animal products, the number of meals eaten in a day, the frequency of eating food from outside, the number of times going outside with relatives, and the number of visits to friends' homes, all of which were related to the birth weight of the baby (P 0.0001). The researchers came to the conclusion that the way of life of pregnant women has an effect on the amount of weight their babies are born weighing.

Keywords: Life style, pregnancy, birth weight, women, baby, relationship.

INTRODUCTION: Birth weight is one of the most dependable and essential health indicators that may be used to evaluate an infant's overall health, as well as the health of people and society as a whole [1]. Low birth weight (LBW) is a term that is used to describe infants that weigh less than 2500 g when they are born, as stated by the World Health Organization [2].

LBW infants have a higher risk of developing conditions such as cerebral palsy, mental retardation, neurological disabilities, respiratory diseases, sudden infant death syndrome, and complications related to being hospitalised in the intensive care unit [3-8]. Normal birth weight infants have a lower risk of developing these conditions. When compared to the costs associated with hospitalising and treating other infants, the cost of caring for these infants is six times higher [9].

There is a complex interplay of risk variables that contribute to LBW. According to the findings of one study, the factors that contribute to LBW can be broken down into four categories: foetal, placental, environmental, and maternal. There are a number of factors that contribute to LBW [10]. The maternal factors (demographic, socioeconomic, and medical) are the most influential of these reasons, and they affect birth weight through both biological and non-biological (medical and non-medical) mechanisms [11]. Other factors have less of an effect on birth weight.

LBW is still quite common and has even increased in some countries [12], despite the significant efforts that have been made over the past two decades to control the biological factors. As a result of these efforts, many health indicators, including child mortality, have decreased; however, LBW is still quite common. Because of this, it is imperative that attention be paid to non-biological aspects, particularly social factors and tactics connected to the

promotion of health [13]. The findings of research conducted over the course of the past few decades at reputable scientific centres located all over the world indicate that social variables are more powerful than other health determinants. Social determinants structure, which include education, income, sex, and race; social determinants intermediate, which include lifestyle, access to food, psychosocial factors, and behavioural factors; and underlying factors of socioeconomic policies, which include macroeconomic and social policies (labour market, housing, culture, and social values) [14]. These key health determinants are education, income, sex, and race. These determinants have an effect not only on one another but also on health as a whole [14]. According to this, lifestyle is an intermediate determinant [15], which is regarded a significant predictor of general and reproductive health [16,17]. Based on this, lifestyle is a determinant [15].

McDonald proposes that a lifestyle can be broken down into seven categories: diet; use of tobacco, alcohol, and drugs; physical activity; occupational variables; social ties; self-care and stress; and stress [18]. From a biological point of view, some studies have attempted to explain the effects of factors such as nutrition and weight growth during pregnancy, inappropriate health behaviours (such as the use of tobacco and alcohol), ethnicity, age, and area of residency on the prevalence of LBW [9,19-22]. In spite of this, researchers in India have looked into the connection between the lifestyles of mothers and low birth weight babies from the point of view of the socioeconomic factors that influence health.

The birth of a child is recognised as a significant moment in one's life. Rural women in developing nations like India face a heavy physical workload, consisting of both farm labour and domestic tasks. This is especially the case in rural communities. Therefore, energy expenditure may be a significant component that affects the connection between maternal nutrition and birth weight [23]. Indirectly affecting birth weight was a person's social ties, which, in turn, reduced overall levels of stress and increased levels of self-care. Occupational lifestyle has an indirect effect on birth weight because it has an effect on the stressful condition. Educational level is considered to be the most fundamental socioeconomic factor because it affects future occupational opportunities and income. Occupational lifestyle has an indirect effect on birth weight. This factor has the ability to minimise unfavourable outcomes of pregnancy by providing the individual with educational experiences and abilities, such as enhancing the quality of their home environment and nutrition [24].

There are a number of factors that can lead to low birth weight and premature birth, but one of the most critical risks is prenatal exposure to smoking, which can include mother smoking as well as exposure to passive smoke. There is a correlation between low birth weight and increased morbidities and mortalities in newborns. Even before conception, a person's way of life might already have an effect on the health of their future child. Because the developing baby will be completely dependent on their mother's body for nourishment and protection, it is prudent for women to make changes to their lifestyle prior to becoming pregnant in order for them to eliminate any bad habits or risk factors that may compromise their health while they are pregnant [25].

The health of the mother throughout pregnancy can have an effect on the total weight of the baby at delivery. Monitoring pregnancies and screening for difficulties are both part of what is known as antenatal care (ANC), which can help lower the health risks for both women and their babies [26]. Intrauterine growth and development is one of the most susceptible processes in the human lifecycle, and abnormalities in this process can have long-lasting and dramatic effects on subsequent stages of life. Intrauterine growth has traditionally been evaluated in the setting of underdeveloped countries by looking at the newborn's birth weight. The weight of an infant at delivery is not only a reliable index of intrauterine growth but also a sensitive predictor of a newborn's chances of survival, growth, and long term physical and psychological development.

MATERIALS AND METHODS: In order to determine the lifestyle of the mother throughout pregnancy and the weight of the infant at birth, a quantitative approach and a retrospective study design were utilised. The data was acquired from 75 moms who had normal deliveries by employing the technique of purposive sampling. These mothers had registered at a prenatal clinic and were planning to deliver their babies in the labour room at Krishna Hospital in Karad. The study was carried out in India. The information was gathered by conducting interviews according to a predetermined schedule. For the purpose of assessing the mothers, selected anthropometric maternal measurements such as height in centimetres, weight in kilogrammes (kg) at registration, weight gain during pregnancy, lifestyle and dietary history by recall method, and laboratory parameter of blood haemoglobin in the third trimester were collected from each mother. During pregnancy, lifestyle factors such as physical activity, nutrition, social relationships, and behaviours served as the study's independent variables. The weight of the baby at birth served as the dependent variable in this study. The ethics committee at KIMS granted permission to proceed, which was achieved. Considered to be Karad for the University. After obtaining legal approval from the hospital authorities and obtaining informed consent from each respondent, the data was collected. The data that was acquired were examined in light of the aims and purposes of the study. Under the direction of the statistician, a plan for data analysis was formulated and established. SPSS version 16 was utilised to perform both descriptive and inferential statistical analyses on the gathered data. Frequency, proportion, and inferential statistics are all examples of descriptive statistics. A 2 test was done to determine whether or not there was a correlation.

RESULTS:

Table 1: Physical activities during pregnancy and Birth weight of baby: [N=75]

Physical activities during pregnancy	**Birth weight**		**Chi-Square**	**P-value**
	< 2.5 (kg)	**≥ 2.5 (kg)**		
1. Hours (h) of work:				
2-3	0	50(78.1%)	133.6	<0.0001
3-4	0	5(7.8%)		
5	0	9(14%)		
> 5	11(100%)	0		
Total	**11 (100%)**	**64(100%)**		
2. Hours (h) of watching TV:				
< 1	11(100%)	5(7.8%)	53.969	<0.0001
1-2	0	59(92.18%)		
3-4	0	0		
> 4	0	0		
Total	**11 (100%)**	**64(100%)**		
3. Rest at night: Hours (h):				
5	0	0	95.572	<0.0001
6	11(100%)	0		
7	0	5(7.8%)		
8	0	59(92.18%)		
Total	**11 (100%)**	**64(100%)**		
4. Rest at day: Hours (h)				
½	1(100%)1	0	108.93	<0.0001
1	0	0		
1 ½	0	9(14%)		

2	0	55(85.9%)		
Total	**11 (100%)**	**64(100%)**		
5. Type of exercise:				
Aerobic	0	47(73.4%)	85.550	<0.0001
Anaerobic	0	5(7.8%)		
Both	0	0		
None	11(100%)	12(18.75%)		
Total	**11 (100%)**	**64(100%)**		

The table 1 reveals that babies whose mothers had a birth weight of less than 2.5 kilogrammes were delivered to mothers who worked more than five hours a day, watched less than one hour of television, slept for six hours at night, and took only half an hour's rest during the day. These mothers also did not engage in any form of physical activity while pregnant. There was a statistically significant association found between the amount of hours spent working, the amount of time spent watching television (in hours), the amount of time spent resting during the night (in hours), the amount of time spent resting during the day (in hours), and the amount of exercise that was done during pregnancy (P 0.0001).

Table 2: Nutrition during pregnancy and Birth weight of baby: [N=75]

Nutrition during pregnancy	Birth weight		**Chi-Square**	**P-value**
	< 2.5 kg	**≥ 2.5 kg**		
1.Eating non-vegetarian diet: in (w)				
Once in a (w)	0	64(100%)	75.000	< 0.0001
Once in a three (w)	0	0		
Once in a month (m)	11 (100%)	0		
Once in a two month (m)	0	0		
Total	**11 (100%)**	**64(100%)**		
2.Number of meals in a day:				
2 times	11 (100%)	0	150.00	< 0.0001
3 times	0	5(7.8%)		
4 times	0	12(18.75%)		
> 4times	0	47(73.4%)		
Total	**11 (100%)**	**64(100%)**		
3. Frequency of having food from outside: in (w)				
Never	11 (100%)	7(10.9%)	101.96	< 0.0001
One time in a (w)	0	47(73.4%)		
Two times in a (w)	0	10(15.6%)		
More than two times in a (w)	0	0		
Total	**11 (100%)**	**64(100%)**		
4. Number of times drinking tea in a day (d):				
Never	1(9%)	9(14%)	3.362	0.4992
1time/d	2(18%)	9(14%)		
2times/d	8(72.7%)	46(71.8%)		
≥3times/d	0	0		
Total	**11 (100%)**	**64(100%)**		

Hour (h), (w) = week. Day = (d), months (m), ** Significant

According to the data presented in the table above, mothers who fed their babies a non-vegetarian diet at least once a month, ate two meals per day, and refrained from consuming any food from outside sources while they were pregnant were more likely to have babies with birth weights lower than 2.5 kilogrammes. The birth weight of newborns was found to have a statistically significant association with eating non-vegetarian food once a month, eating two meals a day, and not consuming food from outside sources while pregnant (P 0.0001), all of which were determined to be important factors.

There was not a statistically significant association established between the number of cups of tea consumed in a day while pregnant and the birth weight of newborns (P 0.0001; statistical significance level d).).

Table 3: Social relationship during pregnancy and Birth weight of baby: N=75

Social relationship during pregnancy	Birth weight		Chi-Square	P-value
	<2.5 kg	≥2.5 kg		
1. Times of going outside with relatives in (w):				
Never	11 (100%)	3(4.6%)	101.38	<0.0001
Once in a (w)	0	51(79.6%)		
Twice in a (w)	0	5(7.8%)		
More than twice (w)	0	5(7.8%)		
Total	**11 (100%)**	**64(100%)**		
2.Hours (h) spend with neighbour:				
<1	3	36(56.2%)	7.688	0.1037
1-2	8	21(32.8%)		
2-3	0	7(10.9%)		
>3	0	0		
Total	**11 (100%)**	**64(100%)**		
3. Participation of any social functions:				
Marriage	3(32.8%)	36(56.2%)	6.668	0.1545
Religious functions	8	22(34.3%)		
Birthday functions	0	6(9.3%)		
Festivals	0	0		
Total	**11 (100%)**	**64(100%)**		
4. Visits of friend's house:				
Never	0	64(100%)	75.000	<0.0001
Once	11 (100%)	0		
Twice	0	0		
More than twice	0	0		
Total	**11 (100%)**	**64(100%)**		

Hour (h), (w) = week. ** Significant

According to the data presented in the table above, all of the babies whose mothers delivered throughout their pregnancies weighed less than 2.5 kilogrammes at birth if the mothers never went outside with relatives or friends during their pregnancies. There was a statistically significant correlation established between the number of times pregnant women went outside with their relatives and visited a friend's house at least once during the course of their pregnancy and the birth weight of their babies (P 0.0001).

There was not found to be a statistically significant association between the amount of time spent with neighbours or participation in any social activities during pregnancy and the birth weight of babies (P 0.0001).

Table 4: Questions related to pregnancy and Birth weight of baby: [N=75]

Questions related to pregnancy	Birth weight		Chi-Square	P-value
	<2.5 kg	≥2.5 kg		
1. Craving:				
Yes	11(100%)	59(92.1%)	18.277	<0.0001
No	0	5(7.8%)		
Total	**11 (100%)**	**64(100%)**		
2. Interval between two pregnancy: in years (y):				
< 1	11(100%)	0	122.85	<0.0001
1-2	0	52(81.2%)		
3-4	0	8(12.5%)		
> 5	0	4(6.2%)		
Total	**11 (100%)**	**64(100%)**		
3. Number of visits in ANC clinic:				
<2	0	0	58.401	<0.0001
3-6	11(100%)	12(18.7%)		
7-10	0	0		
≥10	0	52(81.2%)		
Total	**11 (100%)**	**64(100%)**		
4. Hb level in 3rd trimester (g/dl):				
10-14	0	55(85.9%)	108.93	<0.0001
8.5-10	0	55(7.8%)		
6.5-8	0	4(6.2%)		
<6.5	11(100%)	0		
Total	**11 (100%)**	**64(100%)**		
5. Weight gain in (kg):				
< 6	11(100%)	0	127.85	<0.0001
6-10	0	51(79.68%)		
11-12	0	13(20.31%)		
>12	0	0		
Total	**11 (100%)**	**64(100%)**		
6.Birth order of baby:				
1st	11(100%)	50(78.1%)	58.727	<0.0001
2nd	0	4(6.2%)		
3rd	0	5(7.8%)		
>3rd	0	5(7.8%)		
Total	**11 (100%)**	**64(100%)**		
7.Help of husband in household work:				
Yes	1	8(12.5%)	3.529	0.1713
No	10	56(87.5%)		
Total	**11 (100%)**	**64(100%)**		

Year(y), Kilogram (kg), Hb gram per 100ml (g/dl) ** Significant

According to the data presented in the table above, only mothers who craved 11 times or more during their pregnancies, had an interval of less than one year between their pregnancies, and went to an ANC clinic between three and six times while pregnant had babies who weighed less than 2.5 kilogrammes at birth. There was a statistically significant

correlation discovered between cravings experienced during pregnancy, having an interval of less than one year between pregnancies, visiting an ANC clinic between three and six times while pregnant, and the birth weight of newborns (P less than 0.0001).

DISCUSSION: It is generally agreed that leading a healthy lifestyle is one of the most important factors in having a healthy and happy pregnancy. There is growing recognition in the research community [27–29] of the significance of maternal lifestyle factors such as nutrition and physical activity in relation to the outcomes of childbirth. When it comes to assisting health professionals in guiding women towards adopting a healthy lifestyle, there is a rising respect for interventions that include aspects of health psychology and behaviour change methods (BCTs). These are also utilised to educate and encourage expectant mothers to lead healthier lifestyles throughout their pregnancies, which leads to healthier birth outcomes [30].

According to the findings of this study, those mothers 11 (100%) worked more than five hours a day, watched less than an hour of television, slept for six hours at night, slept for half an hour during the day, did not engage in physical activity, consumed non-vegetarian food once a month, consumed two meals a day, did not purchase food from outside sources, did not go outside with relatives, went to a friend's house only once, experienced cravings during pregnancy, had an interval of less than Between three and six pregnancies resulted in the delivery of babies weighing less than 2.5 kilogrammes at birth. There was a statistically significant association found between the number of hours spent working during pregnancy, the number of hours spent watching television, the number of hours spent sleeping at night, the number of hours spent sleeping during the day, exercising during pregnancy, consuming a diet that included meat products, the number of meals consumed daily, the frequency with which one purchased food from a restaurant, and the number of times one went outside with relatives. House calls on friends and acquaintances The time that passes between pregnancies, The total number of patients who visited the ANC clinic and The average weight of newborns at birth (P 0.0001)

According to the findings of a study that was carried out by Shobha Rao and colleagues [23], higher levels of maternal activity during early as well as mid-gestation were connected with lower levels of mean birth weight.

According to this study, the social relationship was the factor that had the highest influence on birth weight overall. It was found by Mahmoodi Z etal [24] that lifestyle, career (-0.263), and social interactions (0.248) had the most significant impact on birth weight overall. According to the findings of the analysis of lifestyle factors, each of the lifestyle factors either directly, indirectly, or both affected birth weight. Therefore, in light of the significance of the lifestyle as a factor in determining the weight of the newborn, attention and training interventions during the antenatal period are essential for the purpose of promoting healthy lives.

The most significant factor in determining a baby's birth weight was the mother's level of physical activity. The physical lifestyle of the mother has an indirect effect on the birth weight of her child because it influences the stressful conditions that the mother is exposed to, which in turn leads to incorrect health-related behaviours, nutrition, and weight gain during pregnancy in the mother. In other words, if the mothers' physical conditions are unfavourable, they will be influenced directly by the physical difficulties and indirectly by the danger of increased stress, and they will be more likely to give birth to infants who are below the average birth weight. Therefore, the physical lifestyle is not only a risk factor, but also a highly powerful driver of LBW since it influences birth weight both directly and indirectly, as well as indirectly through other factors that act as intermediaries. According to the findings of earlier studies [31–34], a mother's physical condition and the elements relevant to it were found to have a correlation with the unfavourable outcomes of pregnancy, including low birth weight.

The working conditions are contingent on factors such as the socioeconomic standing of the family, the mother's social level, and the individual's reputation. People from lower social classes or with less education are more likely to be subjected to adverse working conditions. These factors include physical demands, work shifts, exhaustion, lengthy working hours, carrying loads, standing, and heavy physical tasks. The material deprivations and economic

inequalities caused by bad working conditions, such as inadequate nutrition, poverty, improper living conditions, and income inequalities, as well as lifestyle choices [35].

The social relationships of the mother while she was pregnant were another element that had the greatest overall effect on the child's birth weight. Indirectly affecting birth weight was a person's social ties, which, in turn, reduced overall levels of stress and increased levels of self-care. Poor social relations during pregnancy were found to increase the chance of low birth weight kids by as much as four times, according to the research conducted by Soogheh et al. [36]. The regulation of stress and the model of significant effect are the two hypotheses that have been proposed to explain the connection between social relationships and one's physical health. According to the main effect model, social contacts have a direct impact on one's health, both in a protective and preventative capacity. For instance, biological impacts and emotional behaviours that are not expressly recognised to be a supporter help can have a direct impact on one's health. According to the stress-buffering concept, positive social ties (such as feeling happy and content, feeling worthwhile, perceived sympathy and compatibility with others) have an indirect impact on people's physical health. As a result, social relationships can both directly and indirectly impact one's health [37-38].

An inappropriate amount of weight gain during pregnancy is a reflection of a shortage in necessary nutrients for the developing baby. The only source of nourishment for a foetus is the mother, thus if for some reason the mother does not have good nutrition, the foetus will not obtain the vital nutrients it needs for growth. There is a clear association between the weight gain of mothers during pregnancy and the birth weight of their children [39]. This means that an increase in a mother's weight during pregnancy will result in an increase in the birth weight of her child. This variable is affected by a variety of circumstances, one of which is the poor socioeconomic situations of mothers [34]. Researchers Adlshoar et al. [10] discovered that mothers in low-income families did not have good nutrition because they were unable to buy the necessary foods. This circumstance caused the mothers to have difficulty gaining weight during their pregnancies, which led to an increased number of babies being born with low birth weight.

CONCLUSION: According to the findings of the study, a mother's lifestyle can have a significant impact on the amount of weight the baby is born weighing at birth. It is important for the midwife to be aware of the mother's way of life because this will contribute to the improved health of the baby. The aspects of lifestyle demonstrated that either directly or indirectly, or both, affected a baby's birth weight. Therefore, given the importance and role of lifestyle as an important determinant that affects birth weight, attention and training interventions are important to promote healthy lifestyles in pregnant women..

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