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Epidemiology of Low Birth Weight in the Lake Areas of Cotonou (Benin Republic)

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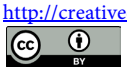

Abstract

Introduction: Low birth weight is a significant public health problem worldwide, particularly in low-and-middle-income countries. This study aimed to investigate the epidemiology of low birth weight in the lake areas of Cotonou. **Methods:** A cross-sectional analytical study included 931 records of women who gave birth in 2022 in the Cotonou 1-4 health zone. Completed maternity records were included in this study, except for premature births and congenital malformations. Birth weight was the dependent variable. Sociodemographic, obstetrical, preventive care and child-related data were collected using a digitized form. These data were analyzed using SPSS software to determine the prevalence and factors associated with low birth weight using multiple logistic regression analysis. **Results:** The prevalence of low birth weight was 16.30%. Factors related to this prevalence were non-use of mosquito nets during pregnancy (OR = 2.72; CI: 1.275 - 5.805), twin pregnancy (OR = 9.97; CI: 3.869 - 25.696), previous abortion (OR = 1.61; CI: 1.034 - 2.515), low number of pregnancy (OR = 3.97; CI: 1.276 - 12.393), trimester of first antenatal visit (OR = 3.47; CI: 1.821 - 6.638) and birth size less than 45 cm (OR = 5.98; CI: 2.965 - 12.083). **Conclusion:** The prevalence obtained from this study justifies the need to support pregnant women in this health zone. It is, therefore, essential to strengthen communication and health promotion strategies for women before, during, and after pregnancy.

Keywords

Low Birth Weight, Pregnant Women, Lake Areas, Cotonou

1. Introduction

Defined by the World Health Organization (WHO) as a birth weight of less than

2500 g, low birth weight (LBW) continues to represent a significant public health problem worldwide [1]. More than 20 million babies born in 2019 had a low birth weight, *i.e.*, one in seven [2]. Regional estimates of LBW prevalence are 9% in Latin America, 13% in sub-Saharan Africa, and 28% in South Asia [1]. Over 80% of the 2.5 million newborns who die each year worldwide are born with LBW [2]. Low birth weight is not only a significant predictor of perinatal mortality and morbidity, but LBW babies who survive are at greater risk of stunted growth, poor cognitive development, and physical health problems later in life, including chronic diseases such as diabetes and cardiovascular disease [1]. In adulthood, they are less productive and become burdens for the family and the state, as the long-term consequences are costly to manage [2]. Data from five long-term prospective cohort studies in Brazil, Guatemala, India, the Philippines, and South Africa had shown that maternal and infant undernutrition indices (maternal size, birth weight, intrauterine growth retardation, and weight, size and body weight, mass index at two years according to the new WHO growth standards) were linked to adult outcomes (height, schooling, income or assets, offspring birth weight, body mass index, glucose concentrations, blood pressure) [3].

In Benin, the prevalence of low birth weight was 12.5%, according to the final report of the 2014 Multiple Indicator Cluster Survey (MICS) [4]. In 2018, the trend dropped slightly to 12%, according to the results of the fifth Demographic and Health Survey (EDS-V) [5]. This downward variation in prevalence became significant in 2020, when it reached a rate of 8.9%, with non-negligible take by the health department. The highest rate was observed in the lakeside locality (13.3%), which has remained constant since 2019 [6]. However, the Cotonou 1-4 health zone is the most severely affected area on the lakeside, with a rate close to double the national rate (17.4%) [7].

Energy and micronutrient deficiencies are common among women in developing countries [8]. According to several studies, the mother's nutritional status at conception and during pregnancy is crucial to fetal growth [9]. Nutritional education and counseling (NEC) focusing on dietary modification is widely used in healthcare settings to improve women's nutritional status during pregnancy [10]. However, the probability of benefiting from adequate health care and nutrition is lower in groups with precarious socio-economic situations [11].

Based on this information on low birth weight and its consequences, our study aims to investigate the epidemiology of low birth weight in Cotonou health zones 1 to 4 to elucidate the probable reasons for the increase in prevalence in these zones and to take appropriate action through specific, nutrition-sensitive interventions.

2. Study Method

2.1. Type of Study and Study Population

This is a descriptive and analytical cross-sectional study that included records of

women who had given birth during the year 2022 in two public health centers (CS Ahouansori and CS Aïdjedo) and two private ones (John Holt Clinic and Confiance Clinic) in the Cotonou 1-4 health zone. Records were included in the study on the condition that they were legible and provided information on the child's birth weight. Women's files were selected using the exhaustiveness technique. All files meeting the selection criteria were included. A total of 931 files were included, constituting the sample size.

2.2. Inclusion and Non-Inclusion Criteria

Women had to have given birth in one of the selected health centers or clinics to be eligible for this study. Only women whose maternity records were complete and legible were included. However, we excluded all women who had delivered a stillborn or malformed baby and those who had delivered a premature baby. Women with incomplete or poorly completed records were also excluded from the study.

2.3. Study Variables

Birth weight in grams (g) was the study's dependent variable. It was dichotomized into normal and underweight. Thus, a newborn was considered to have low birth weight when weighed less than 2500 g. The independent variables were divided into four categories: sociodemographic factors of the mother and father, obstetrical factors, health promotion and prevention factors, and child-related factors. This last group of factors is the child's birth size, sex, APGAR score, early breastfeeding, and newborn resuscitation.

2.4. Collection Techniques and Tools by Target Group

A documentary search was carried out using a data processing form to collect the information in the records of women who have given birth. The latter was digitized using kobo-collect software and deployed on Android tablets and smartphones to facilitate data collection and reduce reporting errors frequently encountered during data entry.

2.5. Data Processing and Analysis

A rigorous daily check of the forms sent in by the surveyors was carried out to ensure the completeness and accuracy of the data collected. SPSS version 21 software was used for statistical analysis. Quantitative variables were presented by their mean, followed by the standard deviation. Qualitative variables were presented as proportions. Some categorized quantitative variables were also represented by proportions or figures. The Chki2 test was used to compare ratios. A simple logistic regression analysis was performed to find the association between birth weight and each independent variable at the 20% threshold. Multivariate analysis was performed by introducing variables with a significance level of 20% or less into the logistic regression model using the Wald method (stepwise as-

cending) to determine the explanatory variables for low birth weight. The significant variables in the multivariate analysis were all assessed at 5%.

2.6. Ethical Aspects

For this work, we received the favorable opinion of the health authorities of the Cotonou 1-4 zone, in this case, the zone coordinating physician and the chief physician. Similarly, the study was approved and registered under decision number 003-2023/CER-SS by the health sciences research ethics committee. We respected the confidentiality of the data by anonymizing the records of the women who gave birth.

3. Results

3.1. Description

3.1.1. Sociodemographic Characteristics of Mothers and Fathers of Children

Nine hundred thirty-one records of women who had given birth were included in the four health centers selected for the survey. The John Holt clinic had the highest number of records (47.8%). The average age of the women recorded in the files was 26.57 ± 5.64 years, with a predominance of women aged fewer than 25 (39.1%). The fathers' and mothers' most predominant occupations were crafts (41.1%) and trading (46.3%). The women's average number of children was 1.63 ± 1.43, and almost ¾ of the women had some children less than or equal to 2. Table 1 presents additional characteristics of the children's parents.

3.1.2. Obstetrical Characteristics of Women Who Gave Birth

Analysis of obstetrical data revealed that 97.3% of women had a single pregnancy, and 6.2% had given birth by Caesarean section. The stripped abortion rate was 23.5%. Nearly 45% of women had their first consultation in the first trimester. The average number of pregnancies and parity of women were 3.11 ± 1.753 and 1.82 ± 1.594, respectively. Moreover, 63.5% of women had some pregnancies of less than or equal to 3. Oxytocin application was observed in 92.4% of women during delivery, while 17.1% had undergone natural delivery. Assisted delivery and uterine massage during pregnancy concerned 90.0% and 90.7% of women, respectively (Table 2).

3.1.3. Preventive Parameters during Pregnancy

Data on preventive parameters showed that 66.1% of women had undergone incomplete vaccination, while 21.4% had not done so at all. Regarding malaria prevention with Sulfadoxine-Pyrimethamine, more than half (56.6%) had poor treatment ranging from 1 to 3 doses. The number of antenatal visits made by most of the population (55.6%) ranged from 1 to 3, while the average number was 3.93 ± 2.58. Systematic deworming was observed in 80.3%, and the % of women who slept under an impregnated mosquito net was 89.5% (Table 3).

Table 1. Sociodemographic characteristics of women and fathers in childbirth.

Variables	Numbers	Percentages
Collection centers		
John Holt Clinic	445	47.8
Confiance Clinic	51	5.5
CS Ahouansori	239	25.7
CS Aidjedo	196	21.1
Profession of mothers of children		
Craftswoman	207	22.2
Trading	431	46.3
Student	39	4.2
Civil servant	80	8.6
Housewife	174	18.7
Father of profession		
Craftsman	383	41.1
Trading	287	30.8
Driver	55	5.9
Student	24	2.6
Civil servant	182	19.5
Mothers' age (years)		
<25	364	39.1
25 - 29	284	30.5
30 - 35	220	23.6
>35	63	6.8
Number of living children		
≤2	690	74.1
3 - 4	205	22.0
>4	36	3.9

3.1.4. Infant Characteristics

Newborn characteristics after birth showed mean weight and height of 2940.52 ± 475.525 g and 48.74 ± 2.81 cm, respectively. The majority of newborns were male (51%). Almost all (96.0%) children had an APGAR score greater than or equal to 7. Low birth weight affected 16.30% of children in the zone. The prevalence distribution by collection center showed that the John Holt clinic was the most prevalent (18.2%) (Table 4).

Table 2. Distribution of women delivered according to obstetrical characteristics.

Variables	Numbers	Percentages
Natural delivery		
NO	847	91.0
YES	84	9.0
Artificial delivery		
NO	872	93.7
YES	78	6.3
Assisted delivery (AMTSL[1])		
NO	93	10.0
YES	838	90.0
Uterine massage		
NO	87	9.3
YES	844	90.7
Oxytocin application		
NO	71	7.6
YES	860	92.4
Delivery hemorrhage		
NO	901	96.8
YES	30	3.2
Number of pregnancy		
≤3	591	63.5
4 - 6	291	31.3
>6	49	5.3
Parity		
≤2	642	69.0
3 - 5	266	28.6
>5	23	2.5
1st RPC[2] of Trimester		
Trimester 1	413	44.4
Trimester 2	278	29.9
Trimester 3	240	25.8
Type of pregnancy		
Twin pregnancies	25	2.7
Single pregnancy	906	97.3
Cesarean delivery		
NO	873	93.8
YES	58	6.2
Abortion		
NO	712	76.5
YES	219	23.5

[1]AMTSL: Active Management of the Third Stage of Labor; [2]RPC: Refocused Prenatal Consultation.

Table 3. Description of preventive parameters during pregnancy.

Variables	Numbers	Percentages
Vaccination		
None	200	21.5
Incomplete	615	66.1
Complete	116	12.5
IPT/SP		
NO	131	14.1
YES	800	85.9
Number of treatments IPT/SP[3]		
No dose	131	14.1
1 - 3 doses	527	56.6
≥3	273	29.3
Number of prenatal visits		
1 - 3	518	55.6
4 - 6	190	20.4
>6	223	24.0
Sleeping under LLIN[4]		
No	98	10.5
Yes	833	89.5
Iron administration		
No	79	8.5
Yes	852	91.5
Foldin administration		
No	79	8.5
Yes	852	91.5
Deworming		
No	183	19.7
Yes	748	80.3
Nutritional advice		
No	115	12.4
Yes	816	87.6
Medical history		
No	898	96.5
Yes	33	3.5

[3]IPT/SP: intermittent preventive treatment with Sulfadoxine-Pyrimethamine; [4]LLIN: long-lasting impregnated net.

Table 4. Description of child-related characteristics.

Variables	Numbers	Percentages
Newborn size (cm)		
<45	41	4.4
≥45	890	95.6
Newborn resuscitation		
No	844	90.7
Yes	87	9.3
Gender of child		
Female	456	49.0
Male	475	51.0
Early breastfeeding		
NO	57	6.1
YES	874	93.9
APGAR[5] score		
≤7	894	96.0
>7	37	4.0
Birth weight		
Weight ≥ 2500 g	779	83.7
Weight < 2500 g	152	16.3

[5]APGAR: Appearance, Pulse, Grimace, Activity, Respiration scores.

3.2. Prevalence of Low Birth Weight in Cotonou 1-4 Health Zone

Our results show that 16.30% of children in the zone suffer from low birth weight. Table 5 below shows the distribution of low birth weight by health center and gender. Analysis of the table shows that the John Holt Clinic and the Ahouansori health center had the highest prevalence of low birth weight. However, the proportion of children suffering from low birth weight did not differ from one center to another (p = 0.300), nor did the gender variable (p = 0.090).

3.3. Identification of Factors Associated with Low Birth Weight

3.3.1. Univariate Analysis

The association between birth weight and each sociodemographic variable revealed only one variable significant at the 20% threshold. This was precisely the collection center (p = 0.141) (Table 6).

In Table 7, it was found that gestational age, trimester of first prenatal visit, type of pregnancy, and abortion were the only variables associated with birth weight at the 20% level. However, the type of pregnancy (p = 0.000) and previous abortion (p = 0.033) were significant at a threshold of less than 5%.

Table 5. Variation in the prevalence of low birth weight by the health center and child sex.

	Weight ≥ 2500 g	Weight < 2500 g	p-value
Health centers/clinics			
John Holt Clinic	81.8% (364)	18.2% (81)	0.300
Confiance Clinic	90.2% (46)	9.8% (5)	
CS Ahouansori	83.7% (200)	16.3% (39)	
CS Aïdjedo	86.2% (169)	13.8% (27)	
Gender			
Female	81.6% (372)	18.4% (84)	0.090
Male	85.7% (407)	14.3% (68)	

Table 6. Association between child weight and sociodemographic characteristics of mothers and fathers of newborns.

variables	OR	IC	p-value
Collection centers			
Confiance Clinic	1		
CS Ahouansori	1.794	0.670 - 4.802	0.245
CS Aidjedo	1.470	0.536 - 4.029	0.454
John Holt Clinic	2.047	0.789 - 5.314	0.141*
Mother of professions			
Civil servant	1		
Craftswoman	1.186	0.551 - 2.556	0.662
Shopkeeper/vendor	1.451	0.715 - 2.946	0.303
Student	1.273	0.426 - 3.799	0.666
Housewife	1.577	0.734 - 3.392	0.243
Father of profession			
Civil servant	1		
Shopkeeper	0.774	0.470 - 1.275	0.315
Driver	1.260	0.600 - 2.648	0.542
Student	0.903	0.289 - 2.817	0.861
Craftsman	0.855	0.537 - 1.363	0.511
Mother's age (years)			
<25	1.608	0.732 - 3.531	0.237
25 - 29	1.160	0.515 - 2.613	0.720
30 - 35	1.257	0.550 - 2.873	0.588
>35	1		
Number of living children			
≤2	1.305	0.497 - 3.426	0.588
3 - 4	0.940	0.337 - 2.628	0.907
>4	1		

(*): variables significant at the 20% threshold.

Table 7. Association between child weight and obstetrical characteristics.

Variables	OR	IC	p-value
Natural delivery			
No	0.945	0.599 - 1.490	0.806
Yes	1		
Artificial delivery			
No	1		
Yes	1.133	0.618 - 2.078	0.686
Assisted delivery			
No	1		
Yes	0.784	0.447 - 1.374	0.395
Uterine massage			
No	1		
Yes	0.784	0.447 - 1.374	0.395
Application of oxytocin			
No			
Yes	0.778	0.422 - 1.436	0.422
Delivery hemorrhage			
No	1		
Yes	0.783	0.269 - 2.276	0.653
Number of pregnancy			
≤3	2.402	0.846 - 6.826	0.100*
4 - 6	2.004	0.686 - 5.853	0.204
>6	1		
Parity			
≤2	2.291	0.530 - 9.909	0.267
3 - 5	1.591	0.357 - 7.083	0.542
>5	1		
1st quarter RPC			
Quarter 1	1.307	0.821 - 2.082	0.259
Quarter 2	1.805	1.116 - 2.920	0.016*
3rd trimester	1		
Type of pregnancy			
Twin pregnancy	10.065	4.359 - 23.239	0.000*
Single pregnancy	1		
Cesarean delivery			
No	1		
Yes	1.366	0.706 - 2.644	0.355
History of abortion			
No	1		
Yes	1.520	1.034 - 2.234	0.033*

Following univariate analysis of preventive parameters, it was found that, at the 20% level, vaccination, the number of doses of intermittent treatment of malaria with Sulfadoxine Pyrimethamine, the use of long-acting impregnated mosquito nets, the administration of iron and foldin, deworming and the fact of having received nutritional advice or not was significant. On this list of variables, it was found that the significance thresholds for the variables, administration of iron and foldin, use of impregnated mosquito nets, and systematic deworming were lower, at less than 5% (Table 8).

Table 8. Association between child weight and preventive parameters during pregnancy.

Variables	OR	IC	p-value
Vaccination			
Complete	1		
Incomplete	1.292	0.721 - 2.315	0.390
None	1.579	0.827 - 3.017	0.166*
IPT/SP			
No	1.325	0.828 - 2.118	0.241
Yes	1		
Number of treatments IPT/SP			
No dose	1.442	0.836 - 2.487	0.188*
1 - 3 doses	1.136	0.756 - 1.707	0.540
>3 doses	1		
Number of prenatal visits			
1 - 3	1.152	0.756 - 1.754	0.511
4 - 6	0.680	0.385 - 1.203	0.185*
>6	1		
Sleeping under LLIN			
No	2.426	1.510 - 3.898	0.000*
Yes	1		
Iron administration			
No	2.258	1.344 - 3.795	0.002*
Yes	1		
Foldin administration			
No	1.993	1.170 - 3.395	0.011*
Yes	1		
Deworming			
No	2.034	1.374 - 3.010	0.000*
Yes	1		
Nutritional advice			
No	1.507	0.931 - 2.440	0.095*
Yes	1		
Medical history			
No	1.431	0.496 - 4.130	0.508
Yes	1		

Child-related data included height, sex, early breastfeeding, APGAR score, and whether or not the child was resuscitated. All variables were significant at 20% at the end of the association. Child size and early breastfeeding had a p-value of less than 5% (Table 9).

3.3.2. Multivariate Analysis

Table 10 below shows the results of the multivariate analysis with the variables pre-selected at 20%. At the end of the research, the non-use of impregnated mosquito nets (OR = 2.72; p = 0.010) is a risk factor for low birth weight. Women who had not slept under an LLIN during pregnancy were almost three times more likely to have low-birth-weight babies than those who had. Similarly, women with twin pregnancies (OR = 9.97 p = 0.000) were around ten times more likely to have an LBW child than singleton pregnancies. Having a history of abortion appears in this study to be a risk factor for low birth weight. Indeed, women who have had at least one abortion (OR = 1.61; p = 0.035) have a significantly higher risk of low birth weight than women who have never had an abortion. Considering the last trimester as the reference modality, women who came for their first consultation from the second trimester onwards (OR = 3.47; p = 0.000) were more than three times more likely to have a low birth weight child.

Similarly, fewer confirmed pregnancies increased the risk of low birth weight. Women with three or fewer gestations were almost four times more likely to have low birth weight children than mothers with six or more pregnancies. Children born underweight were characterized by a height of less than 45 cm. Children born shorter than 45 cm were more likely to be born underweight (OR = 5.98; p = 0.000).

Table 9. Association between birth weight and child-related data.

Variables	OR	IC	p-value
Newborn size			
<45 cm	7.538	3.957 - 14.359	0.000*
≥45 cm	1		
Newborn resuscitation			
No	1		
Yes	1.494	0.869 - 2.566	0.146*
Gender of child			
Female	1.352	0.953 - 1.916	0.091*
Male	1		
Early breastfeeding			
No	2.549	1.416 - 4.589	0.002*
Yes	1		
APGAR score			
≥7	1		
<7	1.961	0.929 - 4.141	0.077*

Table 10. Multivariate analysis.

Variables	OR	IC	p-value
Quarter 1 RPC			
Quarter 1	3.086	1.617 - 5.889	0.001*
Quarter 2	3.477	1.821 - 6.638	0.000*
Quarter 3	1		
Type of pregnancy			
Single pregnancy	1		
Twin pregnancy	9.971	3.869 - 25.696	0.000*
Abortion			
No	1		
Yes	1.613	1.034 - 2.515	0.035*
Sleeping under an LLIN			
Yes	1		
No	2.721	1.275 - 5.805	0.010*
Iron administration			
Yes	1		
No	2.206	0.944 - 5.153	0.068
Newborn height (cm)			
<45	5.986	2.965 - 12.083	0.000*
≥45	1		
Number of pregnancy			
≤3	3.976	1.276 - 12.393	0.017*
4 - 6	2.703	0.860 - 8.501	0.089
>6	1		

(*): variables significant at the 5% threshold.

4. Discussion

The objectives of this study were to determine the prevalence of low birth weight in the Cotonou Lake zone and to identify the factors contributing to it. At the end of the study, the data collected showed a prevalence of 16.30%, slightly lower than that observed in the same area in 2020 (17.4%). Explanatory factors for prevalence were the non-use of impregnated mosquito nets, twin pregnancies, antecedent abortion, low gestational age, trimester of first consultation, and height under 45 cm. This information justifies the achievement of the work objectives set and reflects the situation of low birth weight in the intervention zone.

The pre-test and the digital tool were used to give the study the strength of a good quality study. However, the low number of cases recorded at private clinic "la Confiance" and the exclusion of mothers who gave birth prematurely could underestimate the prevalence value and be responsible for the drop in prevalence observed compared with the value obtained in 2020. To this end, we would

like to see a subsequent study of significant size, without the exclusion of premature cases, to enable a cross-assessment of the epidemiological situation of low birth weight in the study area.

In explaining the factors associated with low birth weight, the non-use of long-lasting insecticidal nets (LLINs) increases the risk of low birth weight by almost three times compared with use. This suggests that malaria is a danger for pregnant women. According to Gamble *et al.* (2007), LLINs used throughout pregnancy or from mid-pregnancy onwards have a beneficial impact on the birth weight of children. Indeed, compared with no nets, LLINs increased average birth weight by 55 g and reduced low birth weight by 23% [12]. The absence of impregnated mosquito nets would be directly linked to the association of iron supplementation with low birth weight. Malaria has been identified in several research studies as a significant determinant of gestational anemia, which in turn constitutes a risk for the low birth weight observed in newborns [13]. Iron supplementation is therefore recognized as the strategy for combating anemia in pregnant women to reduce the risk of unfavorable outcomes, such as low birth weight [14].

Our work showed that the risk of giving birth to a low-birth-weight baby in women with a history of abortion was significantly higher than in pregnant women who had never had an abortion. These results concur with those observed by Hanxiang *et al.* in 2022. According to this research team, pregnant women with a history of abortion were likelier to have a low-birth-weight baby than women without an abortion [15]. Similarly, the risk comparison carried out in our work between types of pregnancy revealed that twin pregnancy constitutes a risk of low birth weight for pregnant women, increased almost tenfold compared with the single pregnancy type. The literature indicates that the number of fetuses differs from one, predisposing women to having a low-birth-weight child. According to the findings of Kangulu and his team, over 80% of twin births resulted in low birthweight, compared with 11.4% in singleton pregnancies [16].

Considering several pregnancies greater than or equal to six, women with some pregnancies less than or equal to three were almost four times the risk of having a child born with low birth weight. This relationship can be explained by the fact that women who have had several pregnancies had more experience preventing risk factors for low birth weight and promoting healthy maternal nutrition and would have acquired sufficient maternal reserves than other women. These women would have adequate knowledge and skills in promoting health during pregnancy through midwives' advice during prenatal consultations over several years. According to Garcia *et al.* (2014), primiparous mothers were significantly more likely to give birth to low birth weight babies, expressed mainly through intrauterine growth retardation [17].

The trimester of the first prenatal consultation was also found to be a risk factor for women having a low birth weight baby. In addition, women who came for their first prenatal consultation in the first and second trimesters had 3.08

and 3.47 times the risk of low birth weight, adjusted for women who came for their first prenatal consultation in the last trimester. This could be justified by the strict adherence to health workers' recommendations to pregnant women to reduce the risk of adverse birth outcomes, which would have benefitted newborn weight. Over time, women who come for consultations in the first or second trimester may trivialize health recommendations or advice. The last trimester is a critical and particular time during which the woman needs more assistance and compliance with recommendations on stress management, healthy maternal nutrition, and lifestyle [18] [19]. The effects of these monitoring elements are more pronounced at the end of pregnancy [20].

The association between child height and low birth weight is both a non-modifiable factor and a characteristic that increases children's susceptibility to the risk of low birth weight. According to the results of this study, a height of less than 45 cm would be an indicator for identifying children suffering from low birth weight. Indeed, children with a height of less than 45 cm were almost six times more likely to be underweight than children with a height of 45 cm or more.

5. Conclusion

This study enabled us to identify the factors that explain the high prevalence of low birth weight in Lake Areas of Cotonou. The risk of low birth weight was justified by the fact that the women had not slept under a mosquito net while pregnant, had a history of abortion, had carried a twin pregnancy, and had a low number of pregnancies. The explanatory factors obtained from this study justify the need to support pregnant women in this health zone by strengthening communication strategies and health promotion for women before, during, and after pregnancy. Even if our results call into question the first consultation in the first and second trimesters, we strongly encourage women to seek a consultation as early as the first trimester for better monitoring of their pregnancy to avoid the occurrence of unfavorable outcomes after delivery. This relationship would be due to poor compliance with health promotion recommendations for women during pregnancy. We, therefore, suggest a future prospective study to re-evaluate this relationship.

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Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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