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Eating Habits, Nutritional Status in Pregnant Women and Weight of Newborns, La Libertad - Peru

Susana Edita Paredes-Díaz[1*]

Cinthya S Neglia-Cermeño[1]

Elvira del P. Vidal-Cabrera[1]

Lurdes G. Lescano-Pereda[2]

Mónica Elisa Meneses-La-Riva[1]

Maricelys Jiménez Barrera[3]

[1]Universidad César Vallejo, Av. Larco 1770,
Trujillo 13001, Peru
[2] Red de Salud Sánchez Carrión,
La Libertad, Peru
[3]Universidad Católica del Ecuador,
Av. Chone Km 2, Santo Domingo 230203,
Ecuador
*Corresponding Author

Abstract

Objective: To determine the relationship between eating habits (EH) and nutritional status (NS) of pregnant women in the third trimester and the weight of their newborns (NB) attended at the C.S. Chugay in Sánchez Carrión, La Libertad, Peru, 2017. Material and methods: Quantitative, correlational, cross-sectional and non-experimental study. The population consisted of a sample of 30 pregnant women and their newborns. The data were collected during delivery and puerperium, applying instruments such as the research form (Alpha coefficient: 0.74) that identified the indicators (considering pre-gestational BMI, hemoglobin level and gestational weight gain in the third trimester), and the weight of the newborn. In addition, the questionnaire that assessed EH was used (Coefficient Alpha: 0.86). Kendall's Tau-b coefficient and the Chi-square test were used to determine the relationship between the ordinal variables. Results: 76.7% and 83.4% of the pregnant women had inadequate NS and EH, respectively; of the latter, 26.7% had low-birth weight newborns. Additionally, 50% had only primary school education and 70% were between 18 and 29 years old. Conclusions: There is no relationship between the variables EH and NS (Kendall's Tau-b coefficient = -0.035', p=1,) nor EH with birth weight of their newborns (Kendall's Tau-b coefficient = 0.067, p=1). It is therefore necessary to promote preventive promotional activities that encourage improved eating habits and nutritional status during pregnancy, as they play a determining role in health, which ensures the future quality of life of the mother and the NB.

Keywords: Eating habits, nutritional status, newborn weight, pregnant woman

1.   Introduction

The World Health Organization (WHO) indicates that in 2015 around 303,000 women died for reasons related to pregnancy, 2.7 million infants died within 28 days of birth and the number of stillbirths reached 2.6 million (Organización Mundial de la Salud. Mortalidad materna, 2019). This is a public health problem that has become an alarming and high-risk situation, due to statistics that continue to rise, as corroborated by the 40% of pregnant women worldwide who suffer from anemia, which makes them vulnerable to various health risks (Organización Mundial de la Salud, 2014). It should be noted that pregnancy is a critical and complex period, where the new being will continue to develop over the nine months, maturing morphologically, gaining functional capacity and increasing cell mass. Likewise, pregnancy brings together a number of factors that imply the failure of a future life or the partial or total success of its birth (Sánchez-Muniz et al., 2013).

International findings reveal the existence of factors and behaviors that affect the living conditions of the mother-child binomial. In this regard, studies indicate the high prevalence of dietary insecurity in pregnant women, which is associated with health problems such as hyperglycemia and hypertension (Oliveira et al., 2017). In addition, inadequate nutritional status continues to increase over time and reinforces the importance of a broader approach to the problem of pregnant women (Schiavetto and Tavares, 2018). These dietary problems undermine the health of the pregnant woman and infant, due to excess gestational weight and the presence of metabolic comorbidities associated with the birth of infants with GIG, and insufficient gestational weight gain associated with the birth of newborns with SGA (Oliveira et al., 2018).

Likewise, in Colombia, a study by Rincón-Pabón, González-Santamaría & Urazán-Hernández showed that pregnant adolescents have an incidence of anemia or iron deficiency malnutrition (haemoglobin< 11 g/dL and ferritin< 12 μg/L), with 11.0% (IC 95% = 9.7-12.6).

The most significant incidences were in females with no education (19.4%; IC 95% = 8.0-33.3), socio-economic status (12.7%; IC 95% = 10.3-14.9), with residence in the Caribbean or Atlantic territory (16.0%; IC 95% = 12.0-20.4 and 12.7%; IC 95% = 8.3-17.1), and females of African-Colombian descent (18.6%; IC 95% = 12.1-23.9) (Rincón-Pabón et al., 2019).

On the other hand, the body fat indicator throughout the gestational process was associated with the weight and height levels of the infants (Forero Torres et al., 2018). In another study in Cuba, normal results were found in body mass indexes, showing no body adiposity, which triggers cardiometabolic accidents in the person (Orozco et al., 2018). Subsequently, another study in the same country reported that overweight and obesity are disorders that are associated with excessive elevation of normal or ideal weight, increasing the circumstances of risk during pregnancy and that are detrimental to health due to the high incidence of hypertension during the gestational period and newborns with low weight (Digournay et al., 2019).

In Peru, Bendezú, et al. revealed that pregnancy has high difficulties and risks, and that it is necessary to implement health policies that guarantee health and sexual education for the population (Bendezú, et al., 2016). Medina confirms that high birth weight is associated with increased neonatal morbidity (Medina, 2019). De Sousa, et al. report that differentiated prenatal care for pregnant women requires effective, timely and efficient care to help prevent health hazards to the mother-child binomial (De Sousa et al., 2013). Finally, it is necessary to maintain a permanent control and follow-up of the mother-to-be, with an adequate monitoring of her diet to avoid an increase in BMI and contribute to a better health condition of the embryo and the infant (Forero Torres et al., 2018).

There is no doubt that pregnant women require a balanced diet that provides adequate nutrients to the new being to ensure the development and growth of a future infant, reduce the risk of suffering from anemia and guarantee high levels of energy during pregnancy, childbirth, the puerperium and even breastfeeding. Nutritional recommendations during pregnancy have changed over time. Initially, women during pregnancy were encouraged to gain weight in a moderate way by means of a low-calorie diet. Later, they were motivated to eat for two, which generated excessive weight gain and increased abnormal risks for the mother and the fetus. Today there is a need to

promote proper nutrition, which is accompanied by a balanced diet and key nutrients to ensure the growth and development of the baby during pregnancy, knowing that the basic functions of the organism through the consumption of different nutrients are necessary during this period. However, the particularities of the area or region where the pregnant woman lives must be known as well (Díaz et al, 2013).

During the period of pregnancy and breast-feeding, events involving fetal development and nutritional requirements increase, and changes in the woman's structure and metabolism change during this phase. Therefore, the diet of the pregnant woman should always include sufficient energy to ensure a good nutritional status of the mother-to-be and the newborn after childbirth (Díaz et al, 2013). The diet of a pregnant woman can have a substantial impact on the well-being of the fetus, the newborn and even the pregnant woman herself. The lack of micronutrients in the diet, such as vitamin A, iron, calcium or iodine, can have negative consequences for the mother, health hazards, complications during pregnancy and future risks for the infant. An increase in the weight of the pregnant woman due to an inadequate diet increases the risk of premature births with low body weight and congenital complications (Black et al, 2013; Bhutta et al.,2013).

The importance of nutritional evaluation of the pregnant woman and timely education are necessary elements and frequent activities that should be associated with obstetric care, because they are tools that serve to optimize the circumstances of pregnancy, the postpartum period, and the newborn. The assessment of healthy nutritional practices is desirable in order to highlight in advance behaviors that can be corrected and have a positive impact on the nutritional level of the mother and the newborn. Any observation of nutritional deficiencies in the prospective mother requires strategies to determine whether they are the result of inadequate eating habits or problems of food accessibility. In this regard, specialists recommend accompanying pregnant women and counseling through guidelines and proposals led by the Ministry of Health (MINSA), which is the regulatory entity in Peru, since the shortcomings are due to difficulties in accessing supplies and it is necessary to establish the management of articulated networks that use all available resources: educational programs about food and nutrition, and social activities for the population to promote quality of life (Ministerio de Salud de la Nación, 2012; Instituto Nacional de Estadística e Informática (INEI), 2014).

In this regard, Cereceda and Quintana stated that nutrition plays an essential role during maternity and during breast-feeding, as it favors the good development of the newborn (Cereceda and Quintana, 2014); in turn, Saidman, et al. indicated that it is important to carry out specialized nutritional education interventions on healthy eating during the prenatal care period (Saidman, 2012). Izquierdo also emphasized the need to guide future mothers on the type of food and care they should take during pregnancy (Izquierdo, 2016). On the other hand, Medina demonstrated in his study that there is no association between nutritional habits and nutritional status, nor the socioeconomic conditions of pregnant women (Medina, 2015).

It should be noted that nutritional habits encompass a series of repetitive behaviors assumed by the person, which are related to the choice, preparation and consumption of nutrients. They are also linked to the socio-economic, cultural and idiosyncratic reality of each region, town or community (Martínez, 2014). The composition and consumption of a balanced diet is conditioned by the availability of food resources or products, which in turn are subject to the quality of the soil, temperature and geomorphological conditions of each area; also to historical, social, cultural, political, religious, ideological and economic factors (Sánchez and De la Cruz, 2011). Although it is necessary to consume a variety of foods daily, some individuals restrict or avoid the consumption of some foods, due to various circumstances such as health, religious, moral or other problems, causing damage to health, because an inadequate diet leads to deficits in the health of the person (Gómez, 2010).

An adequate and balanced diet, which allows specialists to establish a diagnosis and, likewise, to formulate an adequate treatment, is necessary. This is called interpretation of data, which is derived from biochemical, anthropometric and clinical examinations that are used to establish the consumption and quality of food products in subjects and populations (Monge, 2007).

Anthropometric measurement is a control mechanism that considers three data to make a calculation: the height of the individual, the actual and pre-gestational weight and the body composition index. These measurements are recorded from the beginning of pregnancy and are used to assess the dietary process of the expectant mother (Pajuelo, 2014; Grados et al, 2003).

Some research claims that one in eight pregnant women is overweight and one in three pregnant women suffers from obesity. In addition, two out of five pregnant women are underweight and one out of five parturient women are very overweight, which has a strong impact on the diagnosis of the newborn. The first variable is related to low birth weight and the other to premature birth, macrosomia and fetal death, preeclampsia and cesarean section. Undoubtedly, a diet with nutritional quality and an adequate lifestyle for women, before and during pregnancy, are essential factors for the pregnant woman to maintain a good diet and have an ideal weight, which is related to the levels of perinatal morbidity and mortality (Aguilar and Lázaro, 2019; Contreras-Rojas, 2012).

In the context of reality, specifically in the Chugay district, according to statistical information collected from ENDES-INEI, 2014, 24.3% of women living in rural areas had anemia and only 38.4 of them consumed iron during their diet for more than 90 days, during the stage of pregnancy (Instituto Nacional de Estadística e Informática (INEI), 2014). In view of this evidence, the following hypothesis was proposed: There is a relationship between eating habits and the nutritional status of the pregnant woman in the third trimester and the weight of her newborn. In addition, it is known that pregnancy is a space for the growth of a new life, not a time of energy prohibitions. Therefore, it is of crucial importance to know this reality in a timely manner in order to improve maternal and newborn wellbeing, which are key to health and that of future generations.

Likewise, having timely knowledge about eating habits and how these are related to the nutrition of the pregnant woman and her future child will allow us to propose timely promotion strategies, with real knowledge of the situation of pregnant women, which will be effective in the solution and prevention of current and future problems. The proposal of the present research is valid to the extent that nutritional status can contribute to or prevent perinatal maternal complications and maternal and perinatal health, which are currently regional health research priorities. For this reason, the general objective was to determine the relationship between eating habits and the nutritional status of the pregnant women in the third trimester and the weight of their newborn attended.

2. Methodology

The present study was a quantitative, correlational, non-experimental, transectional approach (Hernández-Sampieri and Mendoza Torres, 2018). The research developed the main variables: eating habits, nutritional status of the pregnant woman in the third trimester, and weight of the newborn. The secondary variables were: age, academic level, civil registry and place of origin. The population consisted of 30 patients who attended delivery care at the Chugay Health Center or the annexed health facilities during September-November, 2021, who voluntarily agreed to participate in the study. Likewise, information recorded in the clinical history, such as hemoglobin levels at the beginning and end of pregnancy and the height and weight of the newborn, was also available. Patients with hypertension, pregestational obesity, gestational diabetes, mental problems and/or problems with effective communication were excluded.

The survey and documentary exploration were the techniques used to collect information. The instrument used was the questionnaire that corresponds to the author Medina (2015). (Annex 1) (Alpha coefficient: 0.86), which consisted of two parts: In the first part, general data such as age, level of education, civil registry and place of birth are enquired. In the second part, eating habits were evaluated by means of questions according to a Likert scale with scores from 1 to 5, to categorize them as adequate, moderately adequate and inadequate eating habits. The information on feeding and weight of the newborn was obtained by means of a research card (Alpha coefficient: 0.74), divided into the following parts (Annex 2): The first part included basic information, such as medical

history of the pregnant woman, date, card number. The second part evaluated the nutritional status considering three aspects: Nutritional status of the pregnant woman, verifying anthropometry and body fat (BMI), as established by the World Health Organization (WHO) and used by the Ministry of Health (MINSA) (Contreras-Rojas, 2012). Hemoglobin level was recorded in the pregnant woman's medical history to assess pre-gestational weight gain and at the time of admission to the obstetric center for delivery care. At the end, an observation and evaluation of the three requirements of feeding status (hemoglobin, BMI, weight) was made, establishing as optimal if the three requirements had adequate parameters. It was inadequate feeding if one of the three requirements had inefficient measures. The third part recorded the infant's weight by checking the clinical history.

The collection of information included the identification of the pregnant woman, the unit of analysis for the review of her perinatal clinical history after delivery, taking explicit care in the accuracy of recording the evidence. Finally, the patients, who were already postpartum, were invited to attend a workshop on healthy eating, where they were given a questionnaire with a record of general data and dietary habits with questions evaluated according to the Likert level, after signing the informed consent form.

Finally, the information obtained was analyzed seeking to fulfill the objectives proposed in this research. Data processing was performed according to the SPSS V-22.0 statistic. The derivations were recorded by means of double-entry tables, in numerical-percentage frequencies. To determine the connection between the variables considered, the Kendall's Tau-b factor and the Chi-square test were used, which proved the significance of $p<0.05$. The ethical aspects were based on the proposal of the Declaration of Helsinki.

3. Results

Table 1: Eating habits related to the nutritional status of the third-trimester pregnant woman treated at Centro de Salud Chugay, Sánchez Carrión Province, July-September 2021.

EATING HABITS	NUTRITIONAL STATUS				TOTAL		Significance	Kendall's Tau-b coefficient
	Inadequate		Adequate					
	N°	%	N°	%	N°	%		
Inadequate	19	63.4	6	20	25	83.4		
Moderately adequate	4	13.3	1	3.3	5	16.6	1.00	-0.035
TOTAL	23	76.7	7	23.3	30	100		

Source: Information gathering instrument. Adequate eating habits were not considered because none of the pregnant women surveyed had them.

Table 2: Eating habits related to newborn weight in third trimester pregnant women attended at Centro de Salud Chugay, Sánchez Carrión Province, July-September, 2021

EATING HABITS	NEWBORN WEIGHT				TOTAL		Significance	Kendall's Tau-b coefficient
	Low weight		Normal					
	N°	%	N°	%	N°	%		
Inadequate	8	26.7	17	56.7	25	83.4		
Moderately adequate	0	0	5	16.6	5	16.6	1.00	0.067
TOTAL	8	26.7	22	73.3	30	100		

Source: Information gathering instrument. Adequate eating habits were not considered because none of the pregnant women surveyed had them, nor did any of them have an overweight newborn.

Table 3: Eating habits according to age, education level, marital status and origin of pregnant women in the third trimester attended at Centro de Salud Chugay, Sánchez Carrión Province, July-September, 2021.

	CHARACTERISTICS	EATING HABITS				TOTAL	
		Inadequate		Moderately adequate			
		N°	%	N°	%	N°	%
Age	Younger than 16	0	0	0	0	0	0
	From 16 to 17	3	10	2	6.7	5	16.7
	From 18 to 29	21	70	2	6.6	23	76.6
	Older than 30	1	3.4	1	3.3	2	6.7
Level of education	Illiterate	3	10	0	0	3	10
	Primary school	15	50	4	13.3	19	63.3
	Secondary school	7	23.4	1	3.3	8	26.7
	Higher education	0	0	0	0	0	0
Marital status	Single	2	6.7	0	0	2	6.7
	Married	3	10	0	0	3	10
	Live-in partner	20	66.7	5	16.6	25	83.3
	Divorced	0	0	0	0	0	0
Origin	Urban	1	3.3	0	0	1	3.3
	Urban marginal	23	76.7	5	16.6	28	93.4
	Rural	1	3.4	0	0	1	3.3
	TOTAL	25	83.4	5	16.6	30	100

Source: Information gathering instrument. Adequate eating habits were not considered because none of the pregnant women surveyed had them.

4. Discussion

The study allowed us to reflect on the influence of healthy nutrition during pregnancy, because food provides the necessary nutrients, plays a transcendental role in the health of the mother-to-be and her child, reduces risks and ensures a healthy life (Melo Bastidas et al., 2018; Ramírez-Martínez and Restrepo-Mesa, 2021; Tonietti et al., 2022). Eating habits have changed over time, affecting the good nutritional status of the population and, in this case, of pregnant women. For this reason, the present study emphasizes the social and health characteristics, mainly in mothers and pregnant women (San Gil Suárez, Clara Irania, et al., 2021; Plan EFA; Mataix and Aranda, 2009).

In relation to the evaluation of eating habits related to the nutritional status of the pregnant woman during the third trimester, it was found that none of the pregnant women in the study had adequate eating habits, 16.6% were moderately adequate and 83.4% were inadequate. Therefore, 76.7% of them had an inadequate nutritional status and only 23.3% had an adequate nutritional status. These results showed that there is no relationship (p=1, Kendall's Tau b Coefficient= -0.035) between the proposed variables, denying the proposed hypothesis.

Results that coincide with those of Medina (2015), who found an inadequate nutritional status (89.6%) and regularly adequate eating habits (50%) in parturient women at the Instituto Materno Perinatal (Perinatal Maternal Institute), Lima, with no relationship between the two variables.

The results can be explained by the similarity of the percentages obtained, since the socio-cultural traits of the units of the survey and the gestation period have a direct correlation with the care of the mother and the safety of the infant, requiring a series of cares that are based on a balanced diet (Plan EFA). Eating habits are healthy behaviors achieved during the stages of life, because they have a direct influence on careful eating, considering the characteristics of the population and cultural patterns, which is eminently agricultural and where the most cultivated product is the potato. In this regard, Canna (2013) maintained that eating practices are conditioned by the cultural, economic, educational, religious, labor, well-being and ease of cooking contexts, among others. This

explains why eating habits were basically inadequate in the study, due to their serious repercussions on the nutritional methods evidenced in the pregnant women.

A detailed comparison of the dietary routines of expectant mothers shows that 50% eat five or more times a day and 40% eat three or more times; only 40% eat three servings of protein-rich foods a day, whereas 33% do so only once a day; 43% of parturient women eat two portions per day, including tubers, 53% only two portions with fruit, 60% include food rich in iron once or twice a week, 33% once or twice a month, 7% of pregnant women never include food rich in iron and 10% never consume folic acid. Worse still, 70% never included foods with essential acid (fish, peanuts, hazelnuts, pecans, etc.). However, 20% consume junk food once to twice a week and 47% did so once or twice a month; 67% and 17% of pregnant women sometimes or commonly add salt to prepared food. This is explained in what was reported by Pajuelo (2014), who advises that the diet during pregnancy should be rich in saturated fat, rich in sugars, natural salts and low in calories.

In reference to the nutritional status during pregnancy, the assessment is of utmost importance due to the problems it causes in the health status of the pregnant woman and the future baby; even more so when nutrition is currently being modified according to people's lifestyles, which are either healthy or sedentary (Tonietti et al., 2022; San Gil Suárez, Clara Irania, et al., 2021; Plan EFA). This assertion reveals the indicators that allowed verification of the nutritional status of the parturient women in the study, considering the pre-gestational body index (17%), weight and obesity (3%) respectively; results similar to those found by Mancilla, et al. (2012), showing that 16.3% of pregnant women were overweight. However, Munares (Munares-García et al., 2011) reported higher percentages of pregnant women before pregnancy with overweight (46.8%) and obesity (16.1%), probably because it was a study with a larger population (Mancilla et al., 2012).

The nutritional status in the present study was evaluated by means of three indicators: pregestational BMI, hemoglobin level and maternal weight, showing 80% of pregnant women with a normal pregestational BMI, none had anemia, but 60% were underweight in relation to the weight gain according to their gestational age, which indicates a high level of inadequate nutritional status (76.7%). The results demand the need for appropriate prenatal attention, with surveillance and care in food and nutrition, in order to identify risk situations in a timely manner and propose intervention strategies, such as adequate education for the improvement of dietary practices, taking advantage of the natural resources of the area, as reported by Medina (2015), who stated that inadequate nutritional status is not conditioned to the socioeconomic level of the person but to the practice of erroneous care that is assumed on a daily basis; a context that motivated the conclusion of the present research with a workshop on healthy nutrition in the population under study.

Regarding the eating habits in relation to the weight of the newborn of the pregnant women in the third trimester attended at the Health Center, 83.4% had inadequate eating habits, only 26.7% had infants with low weight and all had moderately adequate eating habits; 16.6% had infants with standard weight; derivations that confirmed that the two variables had no relationship (p=1, Kendall's Tau-b Coefficient= 0.067). The results of the investigation can be contrasted with Rey (Rey-Vilchez et al., 2013) who reported 40% of pregnant women with unstable and insufficient eating habits and had low birth weight newborns.

Although it is true that 63.4% of pregnant women had inadequate dietary practices (Table 1), a high percentage of underweight newborns was expected, since nutritional care is a determining factor in weight, as shown by other studies. However, the results found can be explained according to the dietary characteristics of the pregnant women in the study, with a predominance of carbohydrates, due to the fact that the population is basically a marginal urban population dedicated to potato cultivation, since the need for provisions is directly influenced by the cultural, social and economic environment of the subjects and their families (Vargas Serna, 2012). This makes it necessary to provide education that values healthy nutrition during the stage or period of pregnancy, because the mother's inadequate eating habits or a decrease in food intake directly affects the development process of the future child. In addition, poor nutrition during pregnancy has persistent effects on the infant's life; but the impact will depend on the level of development where the poor nutrition is

generated, its permanence and durability, as this is determinant to define the degree of effect (UNICEF, 2018).

The above-mentioned justifies the need to carry out complementary research with longer periods and of a mixed nature, in order to understand the results with greater precision. The background information obtained was hampered by time, the distance from the health posts to obtain the information, and inaccurate data in the history, which, although not affecting the importance of the study, makes the need to carry out a better complementation evident.

Likewise, the assessment of eating habits according to age, level of education, marital status and place of residence of the pregnant women attended at the health center, identified 70% of pregnant women being between 18 and 29 years of age; 66.7% were live-in partners; 50% had only primary schooling, and 76.7% lived in marginal urban areas. In addition, 16.6% had moderately inadequate eating habits. In addition, 6.7% were 16 and 17 years old, 13.3% only had primary education, were cohabitants and lived in marginal urban areas. These results are similar to those obtained by Izquierdo[21], who identified that 59.7% of the pregnant women were live-in partners, although most of them had secondary education, probably due to the area under study. The level of education and place of residence of the pregnant women in the study showed that there is a need to propose new forms of maternal and child care based on health education, prioritizing aspects related to nutrition to promote self-care from a humanizing approach (Meneses-La-Riva et al., 2021).

In this sense, the sociocultural characteristics of the future mothers and the results obtained allow us to emphasize the importance of dietary guidance to follow during pregnancy, emphasizing servings per day and the recommended size of each food group, to be able to adapt the nutrients to the needs of their period and to the sole emphasis of the health of the mother and the well-being of the child. 80.6% expressed their desire to receive timely information on nutrition during pregnancy in health facilities. In this regard, it is necessary to reaffirm the determination to continue ensuring the improvement of the healthy environments of pregnant women, with the aim of guiding them towards a healthy and nutritious diet, and promoting eating skills to make better decisions when choosing food (Melo Bastidas et al., 2018; Ramírez-Martínez and Restrepo-Mesa, 2021; Tonietti et al., 2022; 47. García Chávez, 2020).

5. Conclusions

The present investigation has allowed us to show that there is no relationship (p=1, Kendall's Tau-b Coefficient= -0.035) between the variables: eating habits and nutritional status of third-trimester pregnant women attended at Chugay health center in the period July-September, 2017. In addition, there is no relationship (p=1, Kendall's Tau-b Coefficient= 0.067) between feeding practices and the weight of the newborn of third-trimester pregnant women of the analysis unit. 83.4% of pregnant women attended had inadequate eating habits, 70% aged 18 to 29 years, 50% only with primary education, 66.7% were live-in partners and 76.7% lived in marginal urban areas. Likewise, of the 16.6% with moderately inadequate eating habits, 6.7% were between 16 and 17 years old, 13.3% had primary school education, all were live-in partners, and lived in a marginal urban area. Therefore, it is proposed to coordinate with professional obstetricians and nutritionists to carry out promotional preventive activities before, during and after pregnancy, on healthy eating and nutrition, based on the foods typical of the area and their cultural and social aspects, in addition to proposing complementary and mixed research to achieve comprehensive knowledge of food problems in the entire population, with special emphasis on pregnant women and children.

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