CONSUMPTION OF FRUITS, GREEN VEGETABLES AND LEGUMES BY PREGNANT ADOLESCENTS

Consumo de frutas, verduras e legumes por gestantes adolescentes

Consumo de frutas, verduras y legumbres de adolescentes embarazadas

Original Article

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ABSTRACT

Objective: To determine the nutritional status and the factors associated with dietary intake of fruits, green vegetables and legumes by pregnant adolescents attending a public service of reference for prenatal care. **Methods:** Analytical cross-sectional study, with 73 pregnant adolescents aged between 10 and 19 years, attended to at the Service Center for Adolescents (NASA) of the Mother and Child Hospital, in São Luís, Maranhão. The study used the Food Frequency Questionnaire (FFQ), anthropometric measurements (weight, height, pregravid and gestational body mass index), and a socioeconomic questionnaire. The dependent variable was the consumption of fruits, green vegetables and legumes, and the independent variables were level of education, civil status, race, income, demographic status, pregnancy and anthropometric data. **Results:** It was observed that 39.7% had pregravid BMI of malnutrition, 50.7% were eutrophic, and less than 10% were overweight or obese. For the gestational BMI, the values changed, with 27.4% of undernourished pregnant women, 57.5% eutrophic and 15.1% overweight. The highest percentages of adequacy for consumption of fruits, green vegetables and legumes were observed in adolescents who were married or in a stable union (65.4%), did not work (92.3%), and had family income below one minimum wage (84.62%). However, the only positive association found with the consumption of fruits, green vegetables and legumes was the beginning of prenatal care. **Conclusion:** The major part of the evaluated pregnant adolescents was eutrophic, although about one fourth presented low weight during pregnancy. Moreover, they did not consume a balanced diet, with an intake of fruits, green vegetables and legumes below the recommended. Among the factors related to better consumption of these foods, the beginning of prenatal follow-up in the first trimester stands out.

Descriptors: Adolescents; Pregnant women; Food Consumption.

RESUMO

Objetivo: *Determinar o estado nutricional e os fatores associados ao consumo alimentar de frutas, verduras e legumes por gestantes adolescentes atendidas em um serviço público de referência para assistência pré-natal.* **Métodos:** *Estudo transversal e analítico, com 73 gestantes adolescentes de 10 a 19 anos, atendidas no Núcleo de Assistência ao Adolescente (NASA) do Hospital Materno Infantil, em São Luís, Maranhão. Utilizou-se o Questionário de Frequência de Consumo Alimentar (QFCA), medidas antropométricas (peso, altura, índice de massa corporal - IMC - pré-gravídico e gravídico) e questionário socioeconômico. As variáveis dependentes foram o consumo de frutas, verduras e legumes, e as independentes foram escolaridade, estado civil, raça, renda, situação demográfica, dados gestacionais e antropométricos.* **Resultados:** *Observou-se que 39,7% apresentaram IMC pré-gestacional de desnutrição, 50,7% de eutrofia, e menos de 10% sobrepeso ou obesidade. Para o IMC gestacional, os valores se alteraram, com 27,4% das gestantes desnutridas, 57,5% eutróficas e 15,1% com sobrepeso. Observou-se que os maiores percentuais de adequação para o consumo de frutas, verduras e legumes foram em adolescentes casadas ou em união estável (65,4%), que não trabalhavam (92,3%) e com renda familiar menor que 1 salário mínimo (84,62%). Entretanto, a única associação positiva encontrada com o consumo de frutas,*

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verduras e legumes foi o início do pré-natal. **Conclusão***: A maior parte das gestantes avaliadas apresentou-se eutrófica, apesar de cerca de um quarto apresentar baixo peso durante a gestação. Além disso, elas não consumiam uma dieta balanceada, com uma ingestão abaixo do recomendado de FVL. Entre os fatores relacionados a um melhor consumo de FVL destaca-se o início do acompanhamento pré-natal no primeiro trimestre.*

Descritores: *Adolescente; Gestantes; Consumo de Alimentos.*

RESUMEN

Objetivo: *Determinar el estado nutricional y los factores asociados al consumo alimentario de frutas, verduras y legumbres por adolescentes embarazadas asistidas en un servicio público de referencia para asistencia prenatal.* **Métodos:** *Estudio transversal y analítico con 73 embarazadas adolescentes entre 10 y 19 años asistidas en el Núcleo de Asistencia al Adolescente (NASA) del Hospital Materno Infantil de São Luís, Maranhão. Se utilizó el Cuestionario de Frecuencia de Consumo Alimentario (QFCA), las medidas antropométricas (peso, altura, índice de masa corporal - IMC - pre-gravidico y gravidico) y cuestionario socioeconómico. Las variables dependientes fueron el consumo de frutas, verduras y legumbres y las independientes fueron la escolaridad, el estado civil, la raza, la renta, la situación demográfica, los datos de la gestación y antropométricos.* **Resultados:** *Se observó que el 39,7% presentaron IMC pre-gestacional de desnutrición, el 50,7% de eutrofia y menos del 10% de sobrepeso u obesidad. Los valores se alteraron para el IMC gestacional con el 27,4% de las embarazadas desnutridas, el 57,5% de eutróficas y el 15,1% de sobrepeso. Se observó que los mayores porcentuales de adecuación para el consumo de frutas, verduras y legumbres fueron en adolescentes casadas o con pareja de hecho (65,4%), que no trabajaban (92,3%) y tenían renta familiar menor que 1 sueldo mínimo (84,62%). Sin embargo, la única asociación positiva encontrada con el consumo de frutas, verduras y legumbres fue el inicio del prenatal.* **Conclusión:** *La gran mayoría de las embarazadas evaluadas estaba eutrófica aunque el alrededor de un cuarto de ellas tuvo bajo peso durante el embarazo. Además, ellas no tenían una dieta balanceada con una ingestión abajo del recomendado de FVL. De entre los factores relacionados al mejor consumo de FVL se destaca el inicio del seguimiento del prenatal en el primer trimestre.*

Descriptores: *Adolescente; Mujeres Embarazadas; Consumo de Alimentos.*

INTRODUCTION

Pregnancy during adolescence is regarded, in some countries, a public health problem, as it can lead to obstetric complications with repercussions for the mother and the newborn, as well as psychosocial and economic problems. In Brazil, an increase in pregnancy incidence in adolescence has been reported, ranging from 14 to 22%[1].

The fertility rate in the group of women between 10 and 19 years old has increased considerably in the last four decades in Brazil. In 1980, the fertility of women aged 15 to 19 years accounted for 9.1% of the country's total fertility. In 2000, this percentage increased to 19.4%. Of the country's total number of live births, 0.9% represented live births of mothers between 10 and 14 years of age and 22.4% were identified as live births of mothers aged between 15 and 19 years[2].

During gestation, there is an increase in the nutritional needs and, in the adolescent pregnant, this increase is even greater because the demands related to the mother's growth and those regarding the fetus development[3] become superposed. In result, the nutritional status is among the risks associated with this type of pregnancy[4].

In addition to the increased needs, research studies have documented that the eating habits of these pregnant women are inadequate. There is a high energy intake associated with the deficiency of essential nutrients[5], such as calcium, iron, folate, zinc and fiber, and an excessive consumption of fats[6], being guided by the choice of more attractive, available, practical and cheap foods[5,7].

Several epidemiological studies have suggested the importance of fruit and vegetable consumption in health promotion and prevention of chronic noncommunicable diseases, such as cardiovascular diseases, cancer, diabetes and obesity[8]. However, only a minority of the population meets the recommended daily consumption of fruits and vegetables (minimum of 400 grams per day), especially younger individuals, among whom such consumption is even lower[9,10].

Therefore, the proper intake of the different components of the diet will ensure a healthy development for the mother and the fetus. If the dietary intake is insufficient and the nutrient stocks of the pregnant woman are low, the fetus will resort to the preconceptional reserves to be supplied, thus causing compromise of the maternal-fetal binomial[11].

The eating behavior of the pregnant adolescent tends to undergo few modifications when compared to the period prior to the pregnancy. The lack of knowledge about healthy eating on the part of pregnant women is reflected in their food choices, which are influenced by factors such as hunger, desire, increased taste sensitivity, convenience, food availability, and cultural and family influences[3].

The topic of adolescent mother's eating has been little explored, therefore, there is a shortage of research studies on this subject in the literature, and most of them were carried out in the United States. Knowing this group of women's habitual consumption of food may be useful to guide gestational programs of weight gain control and to promote healthy eating among these young women, in

addition to generating quality of life for the pregnant woman and the newborn. In view of the above, this study aimed to determine the nutritional status and the factors associated with food consumption of fruits, green vegetables and legumes by pregnant women attended to at a public prenatal referal service.

METHODS

This is a cross-sectional and analytical study performed with pregnant adolescents, aged between 10 and 19 years, attending the Adolescent Assistance Center (*Núcleo de Assistência ao Adolescente - NASA*) of the Mother and Child Hospital of the city of São Luís, Maranhão, from September to December 2015.

This study included pregnant women with up to 19 years of age, menarche above two years and who accepted to participate in the study by signing the Assent Form and signing of the Informed Consent Form (ICF) by those responsible.

Patients with special needs rendering it impossible the understanding and completion of the questionnaires, or the accomplishment of anthropometric measurements, and those who did not live in the city of São Luís, MA were not not included in the study. Sample selection was thus made by convenience and totaled 73 patients.

Initially, a questionnaire containing questions with demographic and gestational data, such as date of birth, schooling (> 8 years of studies and ≤ 8 years of schooling), and prenatal care entry timing (1st, 2nd and 3rd trimesters) were applied. The questionnaire also brought questions for socioeconomic classification (race, marital status, occupation, income and religion). For standardization of the instrument application technique, the questions were read by the researcher for all patients in the waiting room for consultation with the obstetrician, regardless of the educational level.

To evaluate food consumption, a previously validated, semi-quantitative, Food Consumption Frequency Questionnaire (FFQ) was used, consisting of a 24-food list and including standardized portions for each item, for instance: for rice, the standard portion was "3 full tablespoons"; for pasta, "one tong"; for cassava flour, "one soup spoon"; for bread, "a French bread"; for beans, "a ladle". In this questionnaire, the consumption frequency options were as follows: more than 3 times a day, 2 to 3 times a day, once a day, 5 to 6 times a week, 2 to 4 times a week, once per week, 1 to 3 times a month, and never or almost never prior to gestation[12].

The FFQ food list was obtained on the basis of questionnaires used in population-based assessment of food consumption[12]. Cassava flour, whose consumption is considered frequent among adolescents in the city of São Luís, was added to that list. In the questionnaire validation phase, it was observed, through the regional consumption, that banana and orange were the only fruits reported by the adolescents. Therefore, only these two fruits were included in the questionnaire. The consumption of fruits, green vegetables and legumes was considered adequate when meeting the recommendation of 4 to 5 daily servings[13].

To assess the nutritional status, the current body weight and height were measured during the consultation and the pregestational weight was self-reported or the same presented in the first trimester, according to recommendation[14]. For weight measurement, a portable digital scale, platform type, Kratos®, brand, with 150-kilogram capacity and 50-gram sensitivity was used. The height was measured using the Alturaexata® anthropometer, with a maximum height of 2.13 meters and a 1-milimeter precision. Pre-gestational nutritional status was determined through pre-gestational BMI, by having weight (kg) divided by the square of height (m^2).

Pre-gestational BMI was classified according to the following cutoff points: low weight (BMI<19.8 kg/m^2), eutrophy (BMI 19.8-26 kg/m^2), overweight (BMI 26-29 kg/m^2), and obesity (BMI>29 kg/m^2)[15].

For the current nutritional evaluation of the pregnant women, the study employed the chart adopted by the Ministry of Health[9], which uses the current BMI and the gestational age. Obtaining these cutoff points: low weight, eutrophy, overweight and obesity. Gestational age was calculated from the last day of the pregnant women's menstrual period[16].

The normality of the quantitative variables was analyzed by the Shapiro-Wilk test. Data were presented as mean and standard deviation (mean ± SD) for the quantitative variables, and the qualitative ones, as frequency and percentage. The Poisson regression model was used to identify the factors associated with the consumption of fruits, green vegetables and legumes. The significance level adopted was 5%; however, the independent variables presenting p-value under 0.20 were considered in the multivariate regression model. The selection of the variables was performed by using the stepwise method, through elimination, and a significance level of 5% was used. The data was analyzed in the statistical program STATA 12.0.

This study was approved by the research ethics committee of the University Hospital of the Federal University of Maranhão, under opinion no. 1,175,244, according to Resolution no. 466/2012 of the National Health Council.

RESULTS

A total of 73 adolescents were evaluated, with mean age of 16.7 ± 1.3 years. A majority had more than eight years of schooling (74%, n=54), were black/brown (82.2%, n=60), married/stable union (53.4%, n=39). The major part of the pregnant adolescents did not work (94.5%, n=69), had a family income of one to three minimum wages (71.2%, n=52), with 4 or more residents in the household (60.3 %, n=44) (Table I).

When the pre-gestational nutritional status was evaluated, according to pre-gestational BMI, 49.3% (n=36) presented a nutritional risk classification (malnutrition, overweight and obesity). Of these, malnutrition (39.7%, n=29) accounted for the most expressive percentage.

When the BMI was assessed according to the gestational age, a less expressive percentage for nutritional risk was found (42.5%, n=31), when compared to the pre-gestational BMI. Values for malnutrition decreased to 27.4% (n=20). The number of eutrophic pregnant women increased to 57.5% (n=42), as did the number of overweight pregnant women (15.1%, n=11). Moreover, obesity was non-existent. This demonstrates that the gestational weight gain is more important than the nutritional status prior to gestation.

It was verified that 35.6% (n=26) of the pregnant women presented an adequate consumption of fruits, green vegetables and legumes (Table I) and, among the foods consumed at a higher daily frequency, stand cereals (rice and bread), milk and margarine. Sugar and banana also appear with a frequency of expressive consumption, especially

Table I - Socioeconomic, demographic and fruits, green vegetables and legumes consumption characteristics of pregnant adolescents attended to at a public prenatal referral service. São Luís, Maranhão, 2015.

Variables	Number of pregnant adolescentes	%
Schooling		
< 8 years	19	26
> 8 years	54	74
Civil status		
Single	34	46.6
Married/stable union	39	53.4
Race		
White	13	17.8
Black/brown	60	82.2
Number of residents at home		
1	2	2.7
2 to 3	26	35.6
4 or more	44	60.3
Pregnant woman works		
Yes	4	5.5
No	69	94.5
Religion		
Catholic	39	53.2
Protestant	18	24.7
Others	14	19.2
Income		
< minimum wage	13	17.8
1 to 3 minimum wages	52	71.2
> 3 minimum wages	8	11.0
Consumption of fruits, green vegetables and legumes		
Suitable	26	35.6
Inadequate	47	64.4

Table II - Daily and weekly prevalence of food consumption by pregnant adolescents attended to at a public prenatal referral service. São Luís, Maranhão, 2015.

Foods	Daily	5 to 6/w	2 to 4/w	1/w	Occasionally
	n (%)	n (%)	n (%)	n (%)	n (%)
Rice	71 (97.3)	2 (2.7)	0 (0.0)	0 (0.0)	0 (0.0)
Sugar	66 (90.4)	0 (0.0)	2 (2.7)	0 (0.0)	5 (6.9)
Margarine	62 (84.9)	1 (1.4)	4 (5.5)	1 (1.4)	5 (6.8)
Bread	56 (76.7)	4 (5.5)	6 (8.2)	0 (0.0)	0 (0.0)
Milk	55 (71.4)	0 (0.0)	8 (11.0)	4 (5.5)	6 (8.2)
Banana	31 (42.4)	7 (9.6)	18 (24.7)	6 (8.2)	11 (15.1)
Natural juices	27 (37.0)	3 (4.1)	16 (21.9)	7 (9.6)	20 (27.4)
Flour	26 (35.6)	2 (2.7)	6 (8.2)	7 (9.6)	32 (43.9)
Salty cracker	25 (34.3)	4 (5.5)	15 (20.5)	8 (11.0)	21 (28.7)
Orange	23 (31.5)	3 (4.1)	21 (28.8)	10 (13.7)	16 (21.9)
Green vegetables / legumes	22 (30.2)	8 (11.0)	22 (30.0)	3 (4.1)	18 (24.7)
Bean	17 (23.3)	4 (5.5)	39 (53.4)	10 (13.7)	3 (4.1)
Soda	15 (20.6)	3 (4.1)	18 (24.7)	11 (15.0)	26 (35.6)
Chocolate	12 (16.5)	1 (1.4)	16 (21.8)	6 (8.2)	38 (52.1)
Egg	11 (15.3)	2 (2.7)	23 (32.0)	12 (16.7)	24 (33.3)
Salty snacks	10 (13.7)	1 (1.4)	16 (22.9)	13 (17.8)	33 (44.2)
Beef	6 (8.2)	10 (13.7)	46 (63.0)	4 (5.5)	7 (9.6)
Chicken	5 (6.8)	10 (13.7)	43 (59.0)	6 (8.2)	9 (12.3)
Cheese	5 (6.8)	0 (0.0)	11 (15.1)	14 (19.2)	43 (58.9)
Spaghetti	4 (5.4)	2 (2.7)	28 (38.4)	18 (24.7)	21 (28.8)
Vienna Sausage / sausage	3 (4.1)	0 (0.0)	9 (12.3)	14 (19.2)	47 (64.4)
Pizza	2 (2.8)	0 (0.0)	5 (6.9)	9 (12.3)	57 (78.0)
Fish	2 (2.7)	2 (2.7)	24 (33.0)	19 (26.0)	26 (35.6)

w: week.

when compared to green vegetables, legumes and fruits, which had a much reduced consumption. Egg was also poorly reported, being a food consumed eventually or 2 to 4 times per week. The data on the frequency of ingestion of the foods consumed are described in Table II.

By comparing the pregnant adolescents' dietary intake of fruits, green vegetables and legumes with the socioeconomic characteristics found (Table III), it was observed that the highest percentages of adequacy were in adolescents with civil status married or in a stable union 65.4% (n=17), who did not work 92.3% (n=24), and with family income of less than 1 minimum wage 84.62% (n=22).

Table IV shows that there was a positive association between the beginning of prenatal care and the consumption of fruits, green vegetables and legumes; among those who consume fruits, green vegetables and legumes, 69.2% (n=51) initiated prenatal care in the first trimester, that is, pregnant women who started prenatal care earlier presented a better intake of fruits, green vegetables and legumes.

Table III - Unadjusted analysis of the association between the consumption of fruits, green vegetables and legumes and the socioeconomic characteristics of pregnant adolescents attended to at a public prenatal referral service. São Luís, Maranhão, 2015.

Variables	Consumption		PR (CI 95%)	p-value
	Suitable n (%)	Inadequate n (%)		
Schooling				0.127
> 8 years of study	16 (61.5)	38 (80.9)	1.00	
≤ 8 years study	10 (38.5)	9 (19.1)	0.67 (0.41; 1.12)	
Civil status				0.131
Single	9 (34.6)	25 (53.2)	1.30 (0.92; 1.84)	
Married/stable union	17 (65.4)	22(46.8)	1.00	
Race				0.130
White	7 (26.9)	6 (12.8)	1.00	
Black/brown	19 (73)	41 (87.2)	1.48 (0.80; 2.74)	
Number of residents at home				0.546
1	0 (-)	2 (4.26)	1.00	
2 to 3	9 (34.6)	17 (36.2)	(0.50; 0.87)	
4 or more	17(65.4)	27(57.4)	(0.50; 0.80)	
Pregnant woman works				0.603
Yes	2 (7.7)	2 (4.3)	1.00	
No	24 (92.3)	45 (95.7)	1.30 (0.48; 3.55)	
Family income				0.673
<1 minimum wage	22 (84.62)	38 (80.85)	1.09 (0.72; 1.65)	
> 1 minimum wage	4 (15.38)	9 (19.15)	1.00	
Prenatal care entry timing				
1st trimester	18 (69.2)	24 (51)	1.00	
2nd trimester	8 (30.8)	22 (46.8)	1.28 (0.92; 1.80)	0.152
3rd trimester	0 (-)	1 (2.13)	1.75 (1.34; 2.28)	<0.001
Pre-gestational BMI classification				
Malnutrition	11(42.3)	18 (38.3)	1.00	
Eutrophy	13(50)	24 (51.7)	1.05 (0.72;1.52)	0.817
Overweight	1 (3.9)	3(6.4)	1.21 (0.64; 2.29)	0.561
Obesity	1 (3.9)	2(4.3)	1.07 (0.46; 2.53)	0.870
BMI* Classification				
Malnutrition	5 (19.23)	15(31.9)	1.00	
Eutrophy	16 (61.5)	26 (55.3)	0.83 (0.58; 1.17)	0.282
Overweight	5 (19.2)	6 (12.8)	0.73 (0.40; 1.33)	0.298
Obesity	-	-	-	

PR: Prevalence Ratio; CI 95%: 95% Confidence Interval. *According to gestational age. BMI: body composition index.

Table IV - Adjusted analysis of the association between the consumption of fruits, green vegetables and legumes and the socioeconomic and health characteristics of pregnant adolescents attended to at a public prenatal referral service. São Luís, Maranhão, 2015.

Variables	Consumption		PR (CI 95%)	p-value
	Suitable n (%)	Inadequate n (%)		
Prenatal care entry timing				
1st trimester	18 (69.2)	24 (51)	1.00	
2nd trimester	8 (30.8)	22 (46.8)	1.31 (0.94; 1.83)	0.109
3rd trimester	0 (-)	1 (2.13)	1.61 (1.23; 2.09)	<0.001
Education level				
≥ 8 years of study	16 (61.5)	38 (80.9)	1.00	0.111
<8 years	10 (38.5)	9 (19.1)	0.66 (0.40; 1.09)	

PR: Prevalence Ratio; CI 95%: 95% Confidence Interval.

DISCUSSION

It was verified that the age of the present study sample ranged from 14 to 19 years, with a mean of 16.7 ± 1.3 years. The resulting mean slightly differs from other studies. A survey carried out in Paraná[17] verifying the food consumption of pregnant adolescents attending a basic health unit observed a mean of 17.4 years. The same occurred with regard to the study carried out in São Paulo[18], where the mean was 17.8 years.

It was noticed some precociousness regarding the adolescent mothers' civil unions, a relevant data since more than 50% were married or lived in consensual union. In a study of pregnant adolescents in Pará[19], the percentage of adolescents in stable union was 58.2%. In another study[20], carried out in São Paulo, it was pointed out that 60% of the adolescents were married or lived in a consensual union. Similar data to the present study.

Early pregnancy may become a contributing factor to the delayed schooling of young women, considering that many of them leave school after pregnancy occurs[19]. However, the schooling of a majority of the adolescents in the present study was above 8 years. This variable has been pointed as capable of interfering with the way the population chooses their food, and may be decisive for the quality of self-care and for the ability to interpret information concerning health protection[21].

Thus, it is believed that school education is capable of influencing the knowledge about food and nutrition[22] which, in turn, is related to the nutritional status of individuals[23]. Thus, individuals with less schooling showed less knowledge about healthy eating. This suggests that few years of study can make a difference in one's understanding about health and nutrition[24].

Another important factor observed was the financial instability observed in 71.2% of the pregnant women, who presented family income of 3 minimum wages at maximum. A study that evaluated the food consumption of pregnant adolescents in the city of Fortaleza also found a higher concentration (51.5%) of total household income in the range of one to three minimum wages. Furthermore, 60.3% of the sample shared the house with 4 or more members[25]. The absolute financial dependence on the family or the child's father generates a greater risk of marital instability, the impossibility of establishing a family with full autonomy, self-management and plans for the future[26].

Family income above a minimum wage reported by adolescents was not associated with adequate consumption of fruits, green vegetables and legumes. It was observed that the lower income (less than one minimum wage) had a higher percentage of adequacy. In a study aimed at analyzing the evolution of the reported frequency of beef and vegetables consumption in Brazil, it was observed that the sole increase in the consumer's income is not automatically translated into a greater search for a healthier diet, that is, the increased consumption of vegetables. In order for consumers to seek a healthier diet, they must have, in addition to high income, a high education level[27].

Among the changes observed in the nutritional status, malnutrition was more prevalent, being observed in 39.7% of the pregnant women in the pre-gestational period and 27.4% in the gestational period. This is a worrying aspect, as it may lead to an increased risk of intrauterine growth delay, perinatal mortality, maternal diseases such as gestational diabetes, and labor complications[28].

A study conducted in Colombia to assess the nutritional status of pregnant adolescents evidenced a percentage of 44.7% for low weight[29]. Another study, carried out in Pará, with pregnant adolescents hospitalized at a referral hospital, showed that the low weight values found were very similar to those of the present study, 41.7%[19].

All research studies evaluating the nutritional status of pregnant women reinforce the importance of an individualized nutritional monitoring during pregnancy. It is noteworthy that, by evaluating the nutritional status of the pregnant woman during prenatal consultations, it is possible to establish the nutrient needs in this period and to guide the nutrition counseling according to each diagnosis.

As regards the food consumption, the data show a very frequent consumption of food of animal origin, highlighting milk and beef, and other foods such as flour, sugar and salty snacks among the pregnant adolescents. In the analysis of daily food consumption, it was found that staple foods such as rice, sugar, margarine and bread were reported by 75% or more of those interviewed. The consumption of green vegetables, legumes and fruits (orange) was less expressive, being mentioned by about 30% of the young women.

These results were consistent with the changes seen in the pattern of diet of the urban Brazilian population in recent years, with increased emphasis on the consumption of meat, dairy products, refined sugar and the reduction of legumes, fruits and green vegetables in the diet[30].

The consumption of fruits, green vegetables and legumes in this study was more appropriate when the pregnant woman reported a stable union. This fact can be justified by the presence and support of the partner during gestation, which provide greater safety to the adolescent and decrease the risks of miscarriage during the gestation period[26].

The low frequency verified on the consumption of fruits, green vegetables and legumes was also found in two

other studies that evaluated the dietary intake of pregnant adolescents. As a consequence of such inadequacies, the possibility of vitamin deficiency was highlighted, mainly A and C[25,3],. The retinoic acid plays an important role in the embryonic period, acting more specifically in the development of the heart, eyes and ears[31]. Vitamin C deficiency in pregnant women is related to the onset of PIH (pregnancy-induced hypertension) and preeclampsia[4].

A diet low in fruits and vegetables and, at the same time, high in fat, may be related to an increased risk of spontaneous abortion, or even be a determinant factor for this risk[32].

Regarding the variable prenatal care entry timing, it was observed that the earlier the prenatal care is started, the greater the odds that the adolescents have adequate nutrition. Pregnant women who started prenatal care in the third trimester present a 61% chance of having inadequate consumption of fruits, green vegetables and legumes when compared to those who started prenatal care in the first trimester of pregnancy.

The early prenatal care entry allows access to diagnostic and therapeutic methods for a variety of pathologies with severe repercussions for the health of the woman and the baby, such as chronic hypertension, non-gestational diabetes, anemia, syphilis, and HIV infection. Moreover, it provides a more accurate estimation of the gestational age, with better monitoring of fetal growth and improved background for decisions related to a possible interruption of pregnancy[33,34].

In the literature, information regarding the association between adolescent feeding and the prenatal care entry timing is scarce. However, it is observed that prenatal care can be a means of dietary guidance and re-education that provides a better understanding of the need for a healthy diet.

It was not possible to establish a causal relationship between the consumption of fruits, green vegetables and legumes and associated factors in pregnant adolescents because this is a cross-sectional study, but an association between these conditions can be inferred.

Thus, it stands out the need for educational actions addressing socioeconomic status and eating habits in order to help these adolescents in the selection of foods compatible with their physiological state. It is also worth noting the role played by prenatal care in the acquisition of adequate dietary habits during pregnancy, early in this life cycle, which can become incorporated into life.

CONCLUSION

Most of the pregnant women evaluated were eutrophic, although about one fourth presented low weight during pregnancy. In addition, they did not consume a balanced diet, with an intake of fruits, green vegetables and legumes found below the recommended. Among the factors related to better consumption of fruits, green vegetables and legumes, the beginning of prenatal follow-up in the first trimester stands out.

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