96 - NUTRITION FOR TEENS OF STATE AGRESTE ALAGOAS

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Introduction

In the last decades in Brazil has found a nutritional transition (decline of malnutrition and rising obesity levels), this is attributed to numerous factors such as: urban life in modern societies, improvement in living conditions, access to information hygienic measures and health and increased consumption of calorie foods (Pinheiro et al., 2004; Coutinho et al., 2008).

Given the high prevalence of overweight, there is an increased incidence of morbidity associated with this disorder, for example, diabetes, hypertension, hypercholesterolemic, cardiovascular diseases. Furthermore, being overweight in children may result in orthopedic complications such as musculoskeletal discomfort, fractures, and mobility difficulties (BALABAN et al., 2005).

Can cause metabolic, psychosocial and respiratory complications, decreased quality of life (Krinski et al., 2011). What's more, interferes directly in the development process and human growth (Diniz et al., 2008).

Continuous monitoring of the nutritional status of school children is a practical and cost-effective way, as your changes may occur at any age, from the first years of life. For school children, nutritional surveillance serves as an evaluation tool of intervention measures, such as school meals (Campos et al., 2006).

In this sense, childhood and adolescence are important periods in the control and prevention of the excessive accumulation of body fat, preventing the emergence and development of obesity through diet control and active physical behavior (BALABAN et al., 2005).

For this reason, the school is the place to develop physical activity through physical education classes and providing assessments of population nutritional status, especially schoolchildren.

However, the nutritional assessment of children and adolescents from municipal and state schools in the harsh region of the state of Alagoas, is little explored in the literature.

In view of the above and the importance of the topic, this study aims to assess the nutritional status of schoolchildren enrolled in public schools teaching the Alagoas harsh.

Methodology

Study design

It is a cross-sectional study, in which there is only one measurement for later analysis, research feature which measures the current state of the sample (THOMAS & NELSON, 2002).

Location of the study

The Estrela de Alagoas municipality is located in Alagoas harsh, to about 130 km from Maceio. The Municipal Human Development Index (HDI) is 0.534. According to the Brazilian Institute of Geography and Statistics, Estrela de Alagoas has a land area of 259.606 km2, and its population is estimated at 17,251 inhabitants whom 38.69% in urban areas and the other 61.31% in rural areas; the population is mostly made up of women.

The city has 08 schools: being 07 municipal and 01 state. In 2012, there were 2,853 enrollments for primary education. The illiteracy rate reaches 55.90% of the population - one of the highest in the country, according to data provided by the school census conducted by the state Department of Education Alagoas (state Department of Education - SEE/AL, 2014).

Population and sample

The sample consisted of 610 students of both sexes, the age group 9-14 years, with 302 male and 308 female, chosen randomly among students duly enrolled in seven schools in urban and rural in public schools Star teaching of Alagoas - AL, in 2012.

Procedures and instruments

For the data collection process has been applied for authorization of the Municipal Star Education of Alagoas, directors. Students involved in research and their respective guardians voluntarily signed a free and informed consent, in which they were informed about the objectives of the study and informed about the methods used, being assured the participants anonymity and the right to withdraw from the study at any time.

Exclusion criteria were as follows: individual's refusal to participate in the study; identification of physical problems or health impediments to participate in the assessment; Failure to submit the informed consent signed by legal guardian.

Data were collected by students of the Physical Education Course - Degree from the Federal University of Alagoas - UFAL - Campus Arapiraca, linked to Kinanthropometry Laboratory, Physical Activity and Health Promotion - (LACAPS), previously trained in order to maintain standardization collection.

To determine body mass, it used a scale Techline BAL-150PA®, properly calibrated and tested, the accuracy is 100 grams and the scale ranging from 0 to 150 kg. In assessing the stature we used the stadiometer Sanny® compact portable model, graduated in cm. The measures were taken following protocol proposed by Alvarez and Pavan (2003).

The body mass index (BMI) was calculated as the ratio of body weight (kg) by the square of height (m 2). Children and adolescents were classified as normal weight, overweight (EP) and obesity (OB) according to BMI/age, according to the limits proposed by Conde and Monteiro (2006). The children and adolescents who had results below the 5th percentile of BMI/age were classified as underweight (BP).

Results and discussion

Prior to the presentation and discussion of results it should be noted that this study has a limitation: (a) the fact of it

having taken into account the maturational stages, eating habits and physical activity levels of the individuals.

They evaluated 610 schoolchildren of both sexes, aged between 9 and 14 years, with 302 male and 308 female, enrolled in schools in urban and rural public schools of Star Alagoas-AL.

Table 1 are the percentages of well-nourished children and adolescents, underweight, overweight and obesity in the group of schoolchildren. The excess and obesity, together, reached 14.90% boys and 20.13% girls.

To verify the results of the prevalence exposed in Table 1, it is observed that 81.79% of male students and 73.70% of female students are classified as normal weight for age and sex, according to the national proposals references by Conde and Monteiro (2006). However, boys aged 09 years presented prevalence of 10.94% for low birthweight (LBW), already at the age of 11 years showed 19.15% prevalence for overweight (12.77%) and obesity (6.38%).

Analyzing the nutritional status of girls aged 11 years was evident that they had a 26.92% prevalence for overweight (23.07%) and obesity (3.85%). These findings are consistent with prevalence studies carried out with samples of children and adolescents of the northeastern and southeastern Brazil (Krinski et al, 2011; Silva et al, 2015.).

Table 1 - Nutritional status of school aged 09 to 14 years of Alagoas Star of municipal school system according to BMI/age (Conde and Monteiro, 2006).

		Nutritional Status					
		09 years	**10 years**	**11 years**	**12 years**	**13 years**	**14 years**
Male	**BP**	07 (10,94%)	01 (2,86%)	00 (0,00%)	01 (1,92%)	01 (1,75%)	01 (2,13%)
	EU	47 (73,44%)	31 (88,57%)	39 (82,98%)	45 (86,54%)	57 (82,46%)	38 (80,85%)
	EP	09 (14,06%)	02 (5,71%)	06 (12,77%)	04 (7,69%)	08 (14,04%)	06 (12,77%)
	OB	01 (1,56%)	01 (2,86%)	03 (6,38%)	02 (3,85%)	01 (1,75%)	02 (4,26%)
Female	**BP**	06 (11,32%)	02 (3,51%)	02 (3,85%)	02 (3,85%)	07 (14,89%)	00 (0,00%)
	EU	36 (67,93%)	43 (75,44%)	36 (69,23%)	39 (75,00%)	33 (70,21%)	40 (85,11%)
	EP	06 (11,32%)	10 (17,54%)	12 (23,07%)	08 (15,38%)	03 (6,39%)	07 (14,89%)
	OB	05 **(9,43%)**	02 (3,51%)	02 (3,85%)	03 (5,77%)	04 (8,51%)	00 (0,00%)

(Legend: BP - Low Birth Weight, EU- Eutrophic EP - Overweight, OB - Obesity, BMI)
Source: Data of the research itself, in 2012.

In this sense, it can be seen that the results obtained in this study corroborate the findings in the study by Silva et al. (2012) with school in 1634, aimed to identify overweight and obesity levels in children and adolescents in the municipal Arapiraca-AL teaching, showing that 79.66% of boys and 72.88% girls in the sample They had BMI within the normal range.

Overweight prevalence (18.62%) and obesity (2.76%) among children and adolescents were similar to those presented in schools in the Northeast and the Southeast (NETTO-Oliveira et al, 2010; Silva et al., 2015). Similarly Sune et al. (2007) after evaluating one school residents sample in a town south of the country, aged between 11 and 13 years, registered a rate of 24.8% of overweight and obesity.

The results of this study allow us to check and confirm that Brazil, in the last two decades has undergone profound changes in the nutritional profile of its population, especially in the juvenile stage, the result of a process known as nutritional transition. Several studies have found a rapid decline in malnutrition rates in children and adolescents and elevation, at a faster pace, the prevalence of overweight/obesity (ABRANTES et al, 2002;. BRAZIL et al, 2007; Krinski et al, 2011).

Despite the changes in the epidemiological situation of the disease in the country, it is observed in this study still underweight prevalence (14.89%) among girls aged 13 years and boys aged 09 years the prevalence of (10, 94%). These results are similar to those reported by Fields et al. (2006) in a recent study conducted in northern Brazil, it was found that there was a reduction of 39% to 23% of malnutrition in children and adolescents in recent decades, but this prevalence is thought to be increased on improving living conditions of the population.

In this discussion it is also necessary to point out that studies of secular BMI trend conducted with children and adolescents in Brazil, China, Russia and the United States have shown an increase in BMI levels in this population (Wang et al, 2002;. BERGMANN et al., 2007; BERGMANN et al., 2009). These scientific evidence confirms that obesity is not restricted to adults, there is also a substantial increase in its prevalence in children of preschool age and in children and adolescents aged 6 to 17 years obesity (BALABAN et al., 2005; BRAZIL et al., 2007).

It should be noted that the apparent increase in overweight and obesity levels among children and adolescents, has led to a series of health problems that can be noticed in the short and long term. In the first term complications include orthopedic disorders, respiratory disorders, diabetes, hypertension and dyslipidemia, in addition to psychosocial disorders (BERGMANN et al, 2009; Tassitano et al., 2009). In the long term, it has been reported increased mortality from various causes, particularly from coronary heart disease in adults who were obese during childhood and adolescence (BALABAN et al., 2005; Tassitano et al., 2009).

Conclusion

From the results obtained in this study can be concluded that as many boys as girls, most of them had normal BMI for age. However, it is noteworthy that found high overweight and obesity prevalence in school the wild Alagoas region.

The fact that the students of this study have not been classified according to the biological maturation levels, may also have contributed to the greater association between excess weight and age. Even considering these limitations, other studies have been conducted with the same design and are important for the diagnosis and epidemiological control of reality and changes at a given time.

The increasing prevalence of overweight and obesity among children and youth has been reported in papers published in different regions of the country, constitutes an important warning sign for health officials, as BMI above the normal range They are associated with the development of many diseases, as at early ages, among them inadequate levels of blood pressure, dyslipidemia and type 2 diabetes; already in old age has been reported increased mortality from various causes, including from coronary diseases.

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NUTRITION FOR TEENS OF STATE AGRESTE ALAGOAS

ABSTRACT

The monitoring of nutritional status is an important living conditions of children and adolescents, besides allowing that check the health status over certain periods of a given population. This study aimed to evaluate the nutritional status of schoolchildren enrolled in public schools teaching the Alagoas harsh. The sample consisted of 610 students of both sexes, the age group 9-14 years, with 302 male and 308 female, chosen randomly among students duly enrolled in four schools in the municipal Star of Teaching Alagoas - AL, in 2012. For data collection was used: one Sanny® stadiometer and balance Techline BAL-150PA®. Children and adolescents were classified as normal weight, overweight (EP) and obesity (OB) according to BMI / age, according to the limits proposed by Conde and Monteiro. For the treatment of the data to central tendency and dispersion statistical values was used. It can be concluded that as many boys as girls, mostly showed normal BMI for age. However, it is noteworthy that found high overweight and obesity prevalence in school the wild Alagoas region.

KEYWORDS: Nutritional status; BMI; School.

NUTRITION DES JEUNES D'ETAT AGRESTE ALAGOAS

RÉSUMÉ

La surveillance de l'état nutritionnel est une des conditions de vie importants des enfants et adolescents, en plus de permettre que vérifier l'état de santé au cours de certaines périodes d'une population donnée. Cette étude visait à évaluer l'état nutritionnel des écoliers inscrits dans les écoles publiques d'enseignement du Alagoas dure. L'échantillon était composé de 610 élèves des deux sexes, la tranche d'âge 9-14 ans, avec 302 hommes et 308 femmes, choisis au hasard parmi les étudiants régulièrement inscrits dans quatre écoles dans le Star municipale de l'enseignement Alagoas - AL, en 2012. Pour la collecte de données a été utilisé: un stadiomètre Sanny® et équilibrer Techline BAL-150PA®. Enfants et adolescents ont été classés comme un poids normal, en surpoids (EP) et l'obésité (OB) fonction de l'IMC / âge, selon les limites proposées par Condé et Monteiro. Pour le traitement de ces données à la tendance centrale des valeurs statistiques et dispersion a été utilisée. Il peut être conclu que plus de garçons que de filles, la plupart ont montré IMC normal pour l'âge. Cependant, il est à noter que l'on trouve une forte prévalence surpoids et l'obésité à l'école de la région sauvage Alagoas.

MOTS-CLÉS: état nutritionnel; IMC; Ecole.

NUTRICIÓN PARA ADOLESCENTES DE ESTADO AGRESTE ALAGOAS

RESUMEN

El seguimiento del estado nutricional es un importante las condiciones de vida de niños y adolescentes, además de permitir que comprobar el estado de salud durante ciertos períodos de una población dada. Este estudio tuvo como objetivo evaluar el estado nutricional de los escolares matriculados en las escuelas públicas de enseñanza del Alagoas dura. La muestra estuvo constituida por 610 estudiantes de ambos sexos, el grupo de edad de 9-14 años, con 302 hombres y 308 mujeres, elegido al azar entre los estudiantes debidamente matriculados en cuatro escuelas en el Star municipal de Enseñanza Alagoas - AL, en 2012. Para la recolección de datos se utilizó: un estadiómetro Sanny® y equilibrar teléfono técnico BAL-150PA®. Los niños y adolescentes fueron clasificados como de peso normal, sobrepeso (EP) y la obesidad (OB) de acuerdo con el IMC / edad, de acuerdo con los límites propuestos por Conde y Monteiro. Para el tratamiento de los datos a la tendencia central y los valores estadísticos de dispersión se utilizó. Se puede concluir que a medida que más niños que niñas, en su mayoría mostraron IMC normal para la edad. Sin embargo, cabe destacar que se encontró una alta prevalencia de sobrepeso y obesidad en la escuela la región salvaje Alagoas.

PALABRAS CLAVE: Estado nutricional; IMC; School.

ESTADO NUTRICIONAL DE CRIANÇAS E ADOLESCENTES DO AGRESTE ALAGOANO

RESUMO

O monitoramento do estado nutricional é um importante das condições de vida da população infanto-juvenil, além de possibilitar que se verifique o estado de saúde ao longo de determinados períodos de uma dada população. O presente estudo teve como objetivo avaliar o estado nutricional de escolares matriculados em escolas da rede municipal de ensino do agreste alagoano. A amostra foi constituída de 610 escolares de ambos os sexos, com a faixa etária de 9 a 14 anos, sendo 302 do sexo masculino e 308 do sexo feminino, escolhidos aleatoriamente entre alunos devidamente matriculados em quatro escolas na rede municipal de ensino de Estrela de Alagoas – AL, no ano de 2012. Para coleta dos dados utilizou-se: um estadiômetro Sanny® e balança Techline BAL-150PA®. As crianças e adolescentes foram classificados como eutróficas, com excesso de peso (EP) e obesidade (OB) de acordo com o IMC/idade, segundo os limites propostos por Conde e Monteiro. Para o tratamento dos dados foi utilizada a estatística de tendência central e valores de dispersão. Pode-se concluir que tantos os meninos quanto as meninas, em sua maioria, apresentaram valores normais de IMC para idade. Porém, cabe ressaltar que foram encontradas elevadas prevalências de excesso de peso e obesidade nos escolares da região agreste alagoano.

PALAVRAS-CHAVE: Estado nutricional; IMC; Escolares.