72 - OVERWEIGHT AND OBESITY IN SCHOOL HALL OF EDUCATION NETWORK ARAPIRACA - AL

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doi: 10.16887/85.a1.72
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INTRODUCTION

The prevalence of obesity in overweight children and adolescents has increased more significantly around the world, a fact that prompted the World Health Organization to classify this situation as an epidemic (WHO, 1998; Kosti et al., 2006; Campos et al., 2007). This increase occurred in all age groups, both in developed and in those developing countries (Silva et al, 2005;. Rech et al., 2010).

In the United States, obesity affects 20 to 27% of children and adolescents (Shonfeld WARDEN et al., 1997). In Brazil, Monteiro et al. (1995) reported prevalence of obesity in children under five years ranged from 2.5% among children from lower income category to 10.6% in the most economically favored group.

In recent decades, has been given great emphasis to the study of body fat in children and adolescents because of its association with the development of numerous diseases, representing a risk factor for health, when in excess (Assis et al., 1999).

Overweight in childhood can lead to complications such as orthopedic musculoskeletal discomfort, fractures and mobility difficulties (Taylor et al., 2006). Can cause metabolic, psychosocial and respiratory complications, decreased quality of life and cardiovascular disease (Hughes et al., 2007). Additionally, directly interferes in human growth and development (Diniz et al., 2008) process.

All phases of childhood are important for the study of obesity, however, adolescence is a critical period for development of overweight. At this stage of growth, the individual acquires approximately 25% of their adult height and 50% of their body mass (HEALD, 1999). Should also be considered that the risk of an obese teenager remain so into adulthood reaches approximately 80% (GUO et al., 1999).

The etiology of obesity is multifactorial, being involved socioeconomic factors, sexual maturation, sociodemographic, behavioral, environmental and genetic (BIASSIO et al, 2004; Snore et al, 2005; Guedes et al, 2010; PASQUARELLI et al, 2010; Rech et al, 2010).

Sedentary behavior (number of hours watching television) and dietary quality (number of meals, consumption of breakfast or not) seem to be the likely causative agents of excess fat, but also, conversely, obesity seems to lead the individual to a decrease in levels of physical activity (NEUTZING et al., 2003).

The juvenile stage is characterized by several body changes, among them the accumulation of subcutaneous fat in both sexes occurs. If this buildup is not controlled, the child becomes predisposed to obesity and its comorbidities. From the point of view of primary health care, there is need for improving the prognosis and diagnosis from the body evaluation performed for control over the appearance of excessive body fat, and predisposition to cardiovascular disease and systemic imbalances (DANIELS et al., 2005).

In this sense, childhood and adolescence are important in the control and prevention of excessive accumulation of body fat, preventing the emergence and development of obesity through dietary control and physically active behavior.

Given this context, the school environment presents itself as a place for you to develop physical activity through physical education classes, providing practical motor activities for children and teens. Physical abilities (strength, muscular endurance, flexibility, and cardiorespiratory fitness) when approached from the perspective of health promotion to favor reduced levels of physical inactivity and consequently the levels of body fat (Radominski et al., 2000).

Considering the importance of the topic and given the increasing change in the nutritional status of populations present study aims to identify the levels of overweight and obesity in school children from municipal schools of the municipality Arapiraca/ Alagoas, in order to outline the situation present in our region.

Methodology

Model Study

It is a cross-sectional study, in which only one measurement for further analysis, characteristic of research that assesses the current state of the sample (Thomas & Nelson, 2002) occurs. The study was approved by the Ethics Committee of the Federal University of Alagoas with protocol number 003 360/2011-75.

Population and Sample

The sample consisted of 1378 schoolchildren of both sexes, with ages 9-13 years, with 671 males and 707 females, chosen at random among students properly enrolled in four urban schools in municipal school Arapiraca - AL, in 2010.

Instruments and procedures

The guardians of the sample members signed a consent form authorizing the participation of individuals in this study.

Exclusion criteria were the following: the individual's refusal to participate in the study; identifying impediments to participate in the assessment or physical health problems; Failure to submit the consent form signed by the legal guardian.

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

The body mass index (BMI) was calculated as the ratio of body mass (kg) by the square of height (m2).

To classify BMI for age and gender proposed by Conde and Monteiro (2006) reference table was used. The students who showed increased values were classified as overweight and obesity.

Statistical treatment

In order to characterize the study sample statistic of central tendency (mean and standard deviation) was used.

Results and discussion

Of 1,378 schoolchildren between 9-13 years old, 671 were male (48.70%) and 707 females (51.30%). The members of the sample were separated taking into account gender and chronological age. The classification and results are shown in Tables 1 and 2 below.

Table 1 - Classification of BMI for male schoolchildren according to age (Conde and Monteiro, 2006).

GENRE MASCULINE					
	09 years	10 years	11 years	12 years	13 years
BP	05 (3,78%)	08 (5,44%)	02 (1,61%)	01 (0,63%)	05 (4,54%)
NO	102 (77,27%)	117 (79,6%)	105 (84,67%)	135 (85,44%)	89 (80,91%)
EP	22 (16,66%)	18 (12,24%)	14 (11,29%)	18 (11,40%)	14 (12,72%)
OB	03 (2,27%)	04 (2,72%)	03 (2,42%)	04 (2,53%)	02 (1,82%)

(Legend: BP - Underweight, NO - Normal, EP - Overweight, B - Obesity). Source: own survey data, in 2010.

When analyzing the results of prevalence shown in Table 1 and 2, it is observed that 81.67% of male students and 73.26% of female students had BMIs classified as normal for age and sex, according to national benchmarks proposed by Conde and Monteiro (2006). However, checking the results between both sexes and at different ages, it is observed that 16.98% of boys and 21.64% girls are classified as overweight (EP) and obesity (OB).

In this sense, it can be observed that the results obtained in this study corroborate the findings in the study conducted in the southern region by Sune et al. (2007) with children and adolescents between the ages of 11 and 13 years old, showing that 75.20% of the individuals in the sample had BMI within the normal range.

Snore et al. (2005) found the set of all age groups in the prevalence rates of overweight and obesity in both boys (19.7% and 17.5%, respectively) and in girls (17.3% and 9.3%, respectively) of high socioeconomic status in Londrina. Other studies also highlight the influence of socioeconomic status to overweight and obesity (BALABAN et al., 2001; Oliveira et al. 2003; Silva et al, 2005;. Guedes et al., 2006; Campos et al., 2006; RICARDO et al., 2009).

Table 2 - Classification of BMI of school females according to age (Conde and Monteiro, 2006).

GENRE FEMALE					
	09 years	10 years	11 years	12 years	13 years
BP	09 (6,33%)	14 (9,86%)	12 (8,27%)	09 (5,80%)	06 (4,88%)
NO	100 (70,42%)	103 (72,54%)	102 (70,34%)	117 (75,48%)	96 (78,05%)
EP	22 (15,50%)	16 (11,27%)	27 (18,62%)	21 (13,55%)	15 (12,20%)
OB	11 (7,75%)	09 (6,34%)	04 (2,76%)	08 (5,16%)	06 (4,88%)

(Legend: BP - Underweight, NO - Normal, EP - Overweight, B - Obesity) Source: own survey data, in 2010.

In Table 2, checking for girls aged 11 years has shown that these have prevalence rates of 21.38% for overweight (18.62%) and obesity (2.76%). These findings are consistent with prevalence studies conducted with samples of Brazilian children and adolescents (GERBER & Zielinsky, 1997; Guedes et al., 2006).

In recent decades, Brazil has been observed profound changes in the nutritional profile of its population, including children and teenagers, the result of a process known as nutritional transition (Rissin BATISTA & SON, 2003). Several studies have shown a rapid decline in the prevalence of malnutrition in children and adolescents and elevation, at a faster pace, the prevalence of overweight/obesity (Abrantes et al., 2002; BALABAN et al, 2005. BRAZIL et al, 2007 ; Krinski et al, 2011).

The etiology of obesity is multifactorial, with genetic and environmental factors involved. Between environmental, highlight the excessive energy intake and decreased physical activity (BALABAN et al., 2005).

Is also worth noting in this discussion that studies on secular trends in BMI conducted with children and adolescents in Brazil, China, Russia and the US have demonstrated increased levels of BMI 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, and 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 (Abrantes et al., 2002; BALABAN et al, 2005;. BRAZIL et al, 2007).

However, it should be noted that the apparent increase in overweight and obesity levels among children and adolescents, has led to a host of health problems that can be noticed in the short and long term. In the first group are 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 (Fonseca et al, 1998; BALABAN et al, 2005; Tassitano et al, 2009).

CONCLUSION

The results showed that the prevalence of overweight and obesity in children and adolescents is higher in females. However, analyzing the results between both sexes and in different age groups, it was observed at the age of 9 years old, both boys and girls had a higher prevalence of obesidazde in percentage terms. Have the lowest prevalence was observed in boys age 11 and girls at 13 years of age. It is worth remembering that the cause of obesity comes from several factors: biological

maturation socioeconomic class, gender, age, eating habits and.

The increasing prevalence of obesity in this study highlights the importance and the need for longitudinal studies aiming at the permanent monitoring of children and adolescents and the realization of intervention through social and educational activities and sports.

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OVERWEIGHT AND OBESITY IN SCHOOL HALL OF EDUCATION NETWORK ARAPIRACA- AL

ABSTRACT

Aimed to identify the levels of overweight and obesity in children and adolescents in the municipal schools of Arapiraca-AL. The transversal study had a sample of 1378 students of both genders enrolled in 2010. figures concerning the total body mass and height (to calculate Body Mass Index - BMI) were collected. We used the statistical central tendency. For both genders, the results pointed to a profile within the normal range for both BMI. However, when analyzed by gender, levels of overweight and obesity were 21.64% for females and 16.98% for males. We conclude that students of both sexes showed normal levels of BMI, however by gender, girls reported higher levels of overweight corroborating with the current literature.

KEYWORDS: Overweight; obesity; School.

RÉSUMÉ

Visait à identifier les niveaux de surpoids et d'obésité chez les enfants et les adolescents dans les écoles municipales de Arapiraca-AL. L'étude transversale portait sur un échantillon de 1378 élèves des deux sexes inscrits à 2010. Les chiffres concernant la masse totale du corps et la hauteur (pour calculer l'indice de masse corporelle - IMC) ont été recueillies. Nous avons utilisé la tendance centrale statistique. Pour les deux sexes, les résultats indiquaient une visibilité au sein de la gamme normale pour les IMC. Cependant, lors de l'analyse selon le sexe, le niveau de surpoids et d'obésité étaient de 21,64% pour les femmes et 16,98% pour les hommes. Nous concluons que les étudiants des deux sexes ont des niveaux normaux de l'IMC, cependant selon le sexe, les filles ont rapporté des niveaux plus élevés de surpoids concordantes avec la littérature actuelle.

MOTS-CLÉS: surpoids; L'obésité; School.

RESUMEN

Tuvo como objetivo identificar los niveles de sobrepeso y obesidad en niños y adolescentes en las escuelas municipales de Arapiraca-AL. El estudio transversal tuvo una muestra de 1.378 alumnos de ambos sexos matriculados en 2010. Las cifras relativas a la masa total del cuerpo y la altura (para calcular el Índice de Masa Corporal - IMC) se recogieron. Se utilizó la tendencia central de estadística. Para ambos sexos, los resultados apuntan a un perfil dentro del rango normal, tanto para el IMC. Sin embargo, cuando se analiza por género, los niveles de sobrepeso y obesidad fueron 21,64% para las mujeres y 16,98% para los hombres. Llegamos a la conclusión de que los estudiantes de ambos sexos mostraron niveles normales de IMC, sin embargo por género, las niñas reportaron mayores niveles de corroborar sobrepeso con la literatura actual.

PALABRAS CLAVE: El sobrepeso; obesidad; Escuela.

EXCESSO DE PESO E OBESIDADE EM ESCOLARES DA REDE MUNICIPAL DE ENSINO DE ARAPIRACA – AL

RESUMO

Objetivou-se identificar os níveis de excesso de peso e obesidade em crianças e adolescentes da rede municipal de ensino de Arapiraca-AL. O estudo de caráter transversal teve uma amostra de 1378 escolares de ambos os gêneros matriculados no ano de 2010. Foram coletados valores referentes à massa corporal total e estatura (para cálculo do Índice de Massa Corporal – IMC). Utilizou-se a estatística de tendência central. Para ambos os gêneros os resultados apontaram para um perfil dentro do padrão de normalidade tanto para IMC. Porém, quando analisados por gênero, os níveis de excesso de peso e obesidade foram 21,64% para o gênero feminino, e 16,98% para o gênero masculino. Conclui-se que os escolares de ambos os sexos apresentaram níveis normais de IMC, no entanto por gênero, as meninas apresentaram níveis mais elevados de excesso de peso corroborando com a literatura vigente.

PALAVRAS-CHAVE: Excesso de peso; Obesidade; Escolares.