EVALUATION OF OVERWEIGHT AND CARDIOVASCULAR RISK INDICATORS IN CHILDREN WITHIN A SOCIAL PROJECT IN THE PUBLIC EDUCATION NETWORK

EVALUACIÓN DE INDICADORES DE SOBREPESO Y RIESGO CARDIOVASCULAR EN NIÑOS DE UN PROYECTO SOCIAL EN LA RED DE EDUCACIÓN PÚBLICA

AVALIAÇÃO DE INDICADORES DE SOBREPESO E RISCO CARDIOVASCULAR EM CRIANÇAS DE UM PROJETO SOCIAL NA REDE DE EDUCAÇÃO PÚBLICA

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Abstract

Objective: The objective of this study was to evaluate the anthropometric profile focusing on indicators of cardiovascular risk, body mass index (BMI), waist to height ratio, waist circumference over height(WC/H) and skin fold sickness of students in a surf social project, registered in the city public education network in Rio de Janeiro. **Method:** 109 students from the city public education network in Rio de Janeiro (aged between 7 and 17), participating in a social surf project (73 boys and 36 girls). The following groups were made up: female and male 7-12 years old and female and male 13-17 years old. Variables measured: body mass, height, waist circumference (WC), body fat percentage, BMI, and WC/H. Percentage frequencies were used for statistical analysis. Pearson's Chi-square Test was used to compare groups inside, adjusted to comparisons with peers (Bonferroni's correction). Significance level was 95%.

Results: Only BMI showed significance when comparing groups (Total IMC of the sample/ overweight: group 7-12 years old> group 13-17 years old p=0.027); GIRLS with BMI/normal: group aged 7-12> group aged 13-17 p=0.046); (BOYS with BMI/normal: group aged 7-12> group aged 13-17 p=0.002); (BOYS with BMI / risk of overweight: group 7-12 > group 13-17 p = 0,002); (BOYS with BMI / overweight: group 7-12 > group 13-17 p = 0,002).

Conclusion: There was low prevalence of obesity according to the anthropometric variables used, and according to the analysis on BMI in the study sample, there is a tendency towards weight loss as age increases. This is an important fact since the sample shows regular physical activity. Therefore, initiatives to promote health through social and sport projects in the context of eating habits and physical activity are important to encourage a healthy lifestyle in all age groups in the population.

Key words: obesity; students; physical activity.

Resumen

Este estudio tuvo como objetivo evaluar el perfil antropométrico con enfoque en indicadores de riesgo de enfermedad cardiovascular, índice de masa corporal (IMC), relación cintura / talla, (CC/T) índice de ahusamiento y pliegues cutáneos de estudiantes de un proyecto de surf social, inscritos en la red pública de docencia del municipio. de Río de Janeiro.
Metodología: 109 estudiantes (entre 7-17 años), de un proyecto de surf social (73 niños y 36 niñas) estudiantes de la red de educación municipal de Río de Janeiro. Se conformaron los siguientes grupos: femenino y masculino de 7-12 años y femenino y masculino de 13-17 años. Variables medidas: masa corporal, talla, perímetro de cintura (CC), porcentaje de grasa corporal, IMC y CC/T. Para el análisis estadístico se utilizaron frecuencias porcentuales. Para comparar grupos dentro, se utilizó la prueba Chi-cuadrado de Pearson, ajustada para comparaciones entre pares (corrección de Bonferroni). El nivel de significancia fue del 95%.
Resultados: Solo el IMC mostró significación en la comparación entre grupos (IMC total de la muestra / grupo con sobrepeso 7-12 años> grupo 13-17 años p = 0,027); (NIÑAS con IMC / normal el grupo 7-12 años> 13-17 años p = 0,046); (NIÑOS con IMC / normal el grupo 13-17 años> 7-12 años p = 0,002); (NIÑOS con IMC / grupo de riesgo de sobrepeso 7-12 años> 13-17 años p = 0,002); (NIÑOS con IMC / sobrepeso el grupo 7-12 años> 13-17 años p = 0,002).
Conclusión: Hubo una baja prevalencia de obesidad según las variables antropométricas utilizadas, y según el análisis del IMC de la muestra en este estudio, una tendencia hacia la reducción de peso con el aumento de la edad. Este hecho es importante porque la muestra es actividad física regular. Por tanto, los incentivos para promover la salud a través de proyectos sociodeportivos en el contexto de los hábitos alimentarios y las prácticas de actividad física son importantes para promover un estilo de vida saludable para todos los grupos de edad de la población.

Palabras clave: obesidad; estudiantes; actividad física.

Resumo

Esta pesquisa teve como objetivo avaliar o perfil antropométrico com foco nos indicadores de risco para doenças cardiovasculares, índice de massa corporal (IMC), relação cintura/talha, índice de afilamento (CC/T) e dobras cutâneas de estudantes de um projeto de surf social, inscritos na rede pública de ensino do municipio do Rio de Janeiro.
Metodologia: 109 alunos (entre 7-17 anos), de um projeto social de surf (73 meninos e 36 meninas), estudantes da rede municipal de ensino do Rio de Janeiro. Foram organizadas as seguintes turmas: feminino e masculino de 7 a 12 anos e feminino e masculino de 13 a 17 anos. Variáveis medidas: massa corporal, talha, circunferência da cintura (CC), percentual de gordura corporal, IMC e CC/T. Frequências percentuais foram utilizadas durante a análise estatística. Para comparação intragrupos, foi utilizado o teste X-quadrado de Pearson, ajustado para comparações pareadas (correção de Bonferroni). O nível de significância

foi de 95%. **Resultados:** Apenas o IMC apresentou significância na comparação entre as turmas (IMC total da amostra / turma com sobrepeso 7-12 anos> turma 13-17 anos p = 0,027); (MENINAS com IMC/turma normal 7-12 anos > 13-17 anos p = 0,046); (MENINOS com IMC/turma normal 13-17 anos > 7-12 anos p = 0,002); (MENINOS com IMC/turma de risco de sobrepeso 7-12 anos > 13-17 anos p = 0,002); (MENINOS com IMC/sobrepeso da turma 7-12 anos > 13-17 anos p = 0,002)-
Conclusão: Houve baixa prevalência de obesidade de acordo com as variáveis antropométricas utilizadas, e de acordo com a análise do IMC da amostra neste estudo, uma tendência à perda de peso com o aumento da idade. Este fato é importante porque a amostra é atividade física regular. Portanto, os incentivos à promoção da saúde por meio de projetos sócio-esportivos no contexto dos hábitos alimentares e práticas de atividade física são importantes para promover um estilo de vida saudável para todas as faixas etárias da população.

Palavras-chave: obesidade; estudantes; atividade física.

Introduction

The results of the Vigitel 2006 and 2016 survey report that there was a significant increase in Brazilian individuals aged 18 years and over who were overweight (43.2% to 53.8%) and obese (11.6% to 18.9%) within 10 years. In this period of research, it was suggested a higher prevalence of overweight among men, in the two years of the studies, and a higher prevalence of obesity among women. However, what is noteworthy is that in the 10 years, both the increase in the prevalence of overweight and the increase in the prevalence of obesity were higher among women (1).

Currently, due to the lifestyle of our technological society, which reinforces the low level of physical activity combined with the intake of high-calorie foods, they end up causing a higher incidence of overweight and obesity, thus increasing cardiovascular risks, and this factor is already considered a problem since childhood and adolescence (2-4). Overweight children have a high chance of developing cardiovascular disease in adulthood (5).

Also about childhood obesity, Garcia and Paiva (6) in their review study that analyzed the bibliography from 2005 to 2020 on the situation of obesity in children and adolescents in Brazil concluded that the vast majority of works were about quantitative surveys conducted with schoolchildren, mainly in the Southeast region, with the prevalence of overweight ranging from 13.3% to 35.5% and obesity from 1.9% to 21%. Thus representing a serious public health problem.

Prevention is an effective way to counter this, and many areas of health encourage ways to assess risks early. Therefore, Physical Education has revealed important tools in the assessment and analysis of characteristics of obesity-related disease indicators.

Based on these analysis tools, professionals can intervene, especially in early age groups, developing studies to measure and prevent these risk factors. The development of overweight and obesity can be associated with four critical periods in life stages: intrauterine life, childhood, adipose tissue recovery period (5 to 7 years) and adolescence (7). The study by Godinho, Gonçalves (8) , which carried out an integrative literature review, points out several problems that are contributing to the increase in obesity in this period of life, the main factors for the development of overweight and obesity among children are related to: Inadequate nutrition; Physical inactivity; Electronic equipment; Socioeconomic factors; Family influence.

To assess the risk of overweight in childhood, some guidelines can be used, including the calculation of body mass index (BMI) as one of the most used methods of analyzing obesity and overweight (9). Three other measurement guidelines are the calculation of the waist-to-height ratio, the conicity index, and the skin folds, which together can help to determine excess fat distribution in the body regions where risks increase, using tables as

references of classification according to the respective age groups (10).

For the Physical Education professional, it is important to enabling quality of life and health maintenance while the individual is still in childhood and adolescence. Participating in social sports projects can be a good choice to apply this knowledge, promoting the use of scientific foundations that help you to plan for a more appropriate class or training, whether they are related to overweight and obesity, or even characteristics contraries such as low weight. Thus, this study aimed to evaluate the anthropometric profile with a focus on risk indicators for cardiovascular diseases, body mass index, waist/height ratio, taper index, and skinfolds of students from a social surfing project enrolled in the public school system residents of the west zone of the city of Rio de Janeiro.

Methods

Ethical procedures

The study was submitted and approved by the Ethics Committee for Research with Human Beings of the State University of Rio de Janeiro (UERJ) as it met all the requirements of Resolution 196/96 of the National Health Council, for studies involving Human Beings, and the authorization for the participation of the children was given by their parents or guardians, after reading, explaining and signing the Informed Consent Term (FICF), with parents or children themselves having the right to anonymity of their data, knowledge, and interpretation of their results obtained with the study, as well as abandoning the study, if they so wished, at any time without prejudice of any kind.

Subjects and sample selection

109 students aged between 7 and 17 years enrolled in the following periods: morning and afternoon, of both genders, belonging to a social surfing project (CADES), being 73 males and 36 females, all of them, voluntarily participated in the study. The students belong to the municipal education system in the city of Rio de Janeiro. The criteria adopted for the exclusion of any student were as follows: (a) refusal to participate in data collection; (b) non-authorization of parents or guardians; (c) any physical problem that prevents you, temporarily or permanently, from performing the measurements; and (d) absence from classes on the day set for data collection. The chronological age of the subjects was determined in years, by comparing the dates of birth and data collection. For data analysis, two age groups were formed: 7-12 years old female and male and 13-17 years old female and male.

Routine of activities developed in the social surfing project

The sequence of activities developed consisted of 2 weekly classes each lasting 90 minutes, as follows: 1. a 30-minute warm-up (stretching and functional exercises for surfing); 2. The main part of the activity lasting 60 minutes, being 20 minutes of swimming in the sea, 20 minutes of surfing and 20 minutes of free recreation.

Methodological procedure and data collection

This is a cross-sectional study. The procedures, protocols, and recommendations for completing the anthropometric measurements were presented to standardize data collection.

The body mass, regarding the procedure, the evaluator stands in front of the measurement scale; the individual in the standing position climbs onto the platform, carefully, placing one foot at a time and positioning himself in the center of the platform, shoulders relaxed and arms loose laterally (11). The material used was a scale with a precision of 100 grams from the brand Filizola.

To assess the height, the person evaluated in the standing position, barefoot and together, trying to put in contact with a measuring instrument the posterior surfaces of the heel, pelvic girdle, shoulder girdle, and occipital region, with the head oriented in the Frankfurt plane. The cursor or square, at an angle of 90º about the scale, touches the highest point of the head at the end of an inspiration, where the reading is carried out in meters (11).

The material used was a Filizola brand stadiometer attached to a scale with a scale in centimeters.

Waist circumference (WC) has the following procedure: the evaluator positions himself facing the subject (orthostatic position), the measuring tape is passed around the subject, taking care to keep it in the horizontal plane. It is obtained in the smallest curvature located between the ribs and the iliac crest with a flexible and inelastic measuring tape without compressing the tissues. When it was not possible to identify the smallest curvature, the measurement was obtained 2 cm above the umbilical scar (12). The material used was a Sanny brand tape measure.

For skinfold thickness measurements, the Lange® skinfold caliper was used, using the Guedes two-fold protocol (SB; TR) to calculate the body fat percentage for both genders, taking as a reference Lohman's adapted table. And the BMI was calculated considering the ratio between body weight and the square of height (kg/m2) according to the WHO classification (13,14).

Statistical analysis

For the tabulation and organization of the data, the program Microsoft Office Excel 2010 was used. In the analysis of the variables, basic descriptive statistics will be used: mean, standard deviation, and percentage; the data were presented as absolute and relative values, through tables. To verify the behavior of the samples studied about the prevalence of overweight and obesity, the percentage frequencies observed about the reference indicators were used. To compare the study interest groups within the variables, Pearson's Chi-square test was used, where the test was adjusted for comparisons between pairs in one line of each innermost sub table using Bonferroni correction. The accepted significance level was 95%.

Results

Table 1 shows the sample characterization data according to the measurements and results obtained in the variables height (m), body weight (kg), body mass index (kg/m²), waist-to-height ratio (m), index of conicity, and percentage of fat (%) through the mean and standard deviation distributed by males and females where the total sample of the group is also characterized.

Table N°1: Sample characterization through mean and standard deviation

Anthropometric Variables	Total N= 109 MEAN (SD)	Male N=73 MEAN (SD)	Female N=36 MEAN (SD)
Height (m)	1.54 (±0.40)	1.55 (±0.24)	1.52 (±0.30)
Body Weight (Kg)	46.92(±34.22)	47.42 (±22.02)	45.91 (±26.45)
BMI	19.43 (±4.19)	19.37 (±3.03)	19.54 (±4.20)
WHtR	0.43 (±0.01)	0.44 (±0.01)	0.43 (±0.00)
CI	1.13 (±0.06)	1.15 (±0.00)	1.08 (±0.00)
% Fat	16.0 (±3.40)	15.74 (±1.80)	16.54 (±3.68)

Caption: BMI = body mass index; WHtR = waist/height ratio; CI = taper index; % Fat = body fat percentage

Regarding the comparison of body fat percentage distribution between genders, there was a prevalence of 11.11% of girls and 8.21% of boys classified as moderately high. As for fitting into the High percentage of fat classification, boys had a higher prevalence of 15.06% than girls with 5.55%. Despite these results of excess body fat, 55.55% of the female

sample were classified in the low-fat percentage range.
Then, a comparison was made between the age groups of the sample regardless of sex within the study variables. These results are shown in Table 2 below:

Table 2. Comparison of proportions of all volunteers, by sex and age group

Variable	Category	GROUPO_GENER		GROUPO_AGE	
		FEMALE	MALE	(7-12)	(13-17)
BMI	Extreme Low Weight	0.0%	0.0%	0.0%	0.0%
	Low weight	2.8%	12.3%	4.1%	13.3%
	Normal	72.2%	60.3%	59.2%	68.3%
	Overweight Risk	22.2%	17.8%	22.4%	16.7%
	overweight	2.8%	9.6%	14.3%*	1.7%
WHtR	Low risk	94.4%	91.8%	89,8%	95.0%
	High Risk	5.6%	8.2%	10,2%	5.0%
CI	Low risk	91.7%	95.9%	93,9%	95.0%
	High risk	8.3%	4.1%	6.1%	5.0%

Caption: BMI = body mass index; WHtR = waist/height ratio; CI = taper index;
* Significant difference between proportions (P<0.05). Tests are adjusted for all pairwise comparisons in a row of each innermost sub table using Bonferroni correction

Table 3 shows the data for the comparison between the proportions of the age groups stratified by sex within the study variables.

Table N°3: Comparison of proportions by age group within each sex

Sex	Variable	Category	GROUP_AGE	
			(7-12)	(13-17)
FEMALE	BMI	Extreme Low Weight	0.0%	0.0%
		Low weight	0.0%	4.3%
		Normal	92.3%*	60.9%
		Overweight Risk	0.0%	34.8%
		overweight	7.7%	0.0%
MALE	BMI	Extreme Low Weight	0.0%	0.0%
		Low weight	5.6%	18.9%
		Normal	47.2%	73.0%*
		Overweight Risk	30.6%*	5.4%
		overweight	16.7%*	2.7%
FEMALE	WHtR	Low risk	92.3%	95.7%
		High Risk	7.7%	4.3%
MALE	WHtR	Low risk	88.9%	94.6%
		High Risk	11.1%	5.4%
FEMALE	CI	Low risk	92.3%	91.3%
		High risk	7.7%	8.7%
MALE	CI	Low risk	94.4%	97.3%
		High risk	5.6%	2.7%

Caption: BMI = body mass index; WHtR = waist/height ratio; CI = taper index;

* Significant difference between proportions (P<0.05). Tests are adjusted for all pairwise comparisons in a row of each innermost sub table using Bonferroni correction.

Tables 2 and 3 above show that only the BMI variable showed significant differences between the groups compared.

Discussion

A total of 109 children aged between 7 and 17 years of both sexes, from municipal schools in the western zone of the city of Rio de Janeiro participating in the Rio Surf Social Project developed by the Surf Learning and Development Center (CADES) were evaluated. It serves children and adolescents from the neighborhood of Recreio dos Bandeirantes and its surroundings, with the aim of the study being to evaluate the distribution of body fat as an indicator of risk for cardiovascular disease and to compare the results with similar studies in Brazilian schoolchildren.

The findings of this study, which was carried out in a large center in southeastern Brazil, did not identify signs of malnutrition in the individuals in the sample, corroborating the study of Garcia and Roncalli (15) , which affirms a spatial dependence on child malnutrition, with the lowest prevalence in the most developed regions of the country, in the South and Southeast. As the authors cited found a negative association between child malnutrition and per capita income and human development index (HDI).

According to a study on the panorama of the anthropometric status of Brazilian students carried out by Reis, Vasconcelos (16) , despite the increase in access to food, public policies against hunger, and governmental and non-governmental actions, there is still the coexistence of the double burden of diseases, malnutrition, and overweight that afflicts the Brazilian school population. This statement was partially corroborated by the present study, as a percentage of 72.2% of girls and 60.3% of boys with normal weight was found, according to the variable BMI. However, the percentages found in this study should not be disregarded, as 22.2% of girls and 17.8% of boys were classified as at risk of overweight, in addition to 2.8% of girls and 9.6% of boys being framed in the overweight state.

Analyzing Table 2, which compared the age groups without considering sex, it is observed that when comparing two study groups there was a significant difference in the overweight classification, where the group of younger children had a higher percentage. It could be observed that, even if not significantly, there is a tendency for the group of older children to have lower percentages as the range of risk of overweight increases. Suggesting that children tend to lose weight with increasing age.

The results of the present study show that, in the group of girls, there was a significant difference in the classification of nutritional status through BMI, with 92% of girls aged 7 to 12 years classified as a normal weight against 60.9% of girls from 13 to 17 years old. In the classification of overweight risk, the difference was not statistically significant, with 34.8% of girls in the older group being classified against less than 1% of girls in the younger ones. On the other hand, in males, there seems to be a tendency to decrease in weight with increasing age, since significantly in the “normal” weight range, older boys surpassed younger ones with 73% against 47.2% and in the two risk ranges of overweight and overweight, the younger boys’ group significantly outperformed the older ones. The study of Matsudo, Ferrari (17) suggests a percentage of 45.4% prevalence of overweight/obesity in children in the southeast region of the country. When comparing these data on overweight and obesity with those of the group of students evaluated in this study, it can be assumed that this difference is due, in part, to the fact that students in the surf project participate in three days of physical activities per week.

Other studies with samples compatible in age range with the sample in this study found nutritional status data in line with those observed in this study, Vieira-Ribeiro, Andreoli (18) observed that 15.5% of the students studied were overweight; and Camargos, Azevedo (19) reported 4.8% of the schoolchildren studied with obesity.

Authors (20) investigated the nutritional status of schoolchildren aged 7 to 11 years in the

city of Guarapuava-PR and identified low weight in 0.84% of the children. 68.17% were eutrophic, 19.20% overweight and 11.79% obese. These values are close to those found for boys in this study, aged 7 to 12 years, but they did not mention whether the sample performed extracurricular physical activity, such as the project focused on surfing classes where the sample of this study is inserted.

Although the WHO has stipulated curves for the analysis of child BMI by age using the z-score and percentile (14), new studies are suggested with samples from different social realities and locations so that the confidence in these indexes can be ratified because many works in the literature presented results with different trends from those found in this study.

Regarding the assessment of WHtR, the results showed that groups of both sexes presented an association between waist circumference and height tending towards risk and above the cutoff point considered to be high risk, where to Sant'Anna, Tinôco (21) values between 0.41 and 0.44 are considered ideal, regardless of sex and age among Japanese schoolchildren. In a study carried out with schoolchildren in the city of Ponta Grossa-PR, by de Camargo Smolarek, Smolarek (22) found an average of 0.47 for boys, while in the present study an average of 0.44 was found for male students. Also in this same study, carried out with girls aged 6 to 10 years, showed an average of 0.46, a value like that found in the present study (average of 0.42 for female participants aged 7 to 12 years), which is justified by the similarity of the sample even though they are from different regions of the country.

In another research carried out in the city of Curitiba-PR, by de Camargo Smolarek, Guimarães (23), found WHtR values of 12.2% of male participants with a high-risk situation. This higher percentage, both for male and female children from Ponta Grossa and Curitiba, compared to the present study, suggests that a very different region in terms of climate and geography influences the lifestyle of its inhabitants.

Research carried out by Pinto, Arruda (24) in the city of Recife-PE, with adolescents between 10 and 14 years old, found values for WHtR above the level considered as low risk in 12.85% of the population between 10 and 11 years old, which requires attention in that population when compared the findings of the present study. The numbers mentioned by those authors are like the research carried out in Curitiba, but different from the study with children from Guarapuava, which reported that among those evaluated, males aged between 10 and 11 years old, 29.88% of the students are above the considered level. of low risk, and among girls 16.45% are at high risk. When comparing the data mentioned above with the present study carried out in Rio de Janeiro, which revealed a lower value for the age group from 7 to 12 years old, 11.11% and between 13 to 17 years old 5.40% with high risk for boys. And for girls, we found 7.69% and 4.34% for ages between 7 to 12 years and 13 to 17 years, respectively. These numbers demonstrate that even compared to other regions of Brazil, male individuals are in the high-risk classification range and more likely to have cardiovascular risk problems compared to females. A fact that presents greater complications when it is associated with a sedentary lifestyle and a diet low in nutrients and high in calories.

However, the data from this research show a lower percentage, which can serve as a reference regarding positive strategies linked to cardiovascular risk reduction. Emphasizing that WHtR is one of the best risk indicators associated with body fat, both in men and women, being of great value and easy to measure, especially in the school context (25).

As for CI, despite few studies with schoolchildren, Barbosa, Chaves (26) carried out a study with 209 students, aged between 7 and 9 years old, in the city of Diamantina-MG, and reported an average CI of 1.10 for girls and 1.20 for boys. In the present study, the mean was 1.08 for girls and 1.15 for boys in the total sample. However, specifically in the age group from 7 to 12 years, the results were 1.13 for girls and 1.12 for boys. Similar to what happened with WHtR, geocultural difference and climate may be possible causes of

the differences observed between the results of the present study and the study by Barbosa, Chaves (26).

Barbosa, Chaves (26) observed that 32.4% of the students were above the limit recommended by Lohman for the body fat percentage (ideal: girls up to 35% and girls up to 25.3%). This percentage of the sample tend to problems with body fat were similar to those found in the cross-sectional study carried out by Pedroni, Rech (27) which 1230 students from southern Brazil were evaluated and concluded that the prevalence of abdominal obesity and excess body fat was 28.7% and 40.1%, respectively. above the limit recommended by Lohman. This is perhaps justified by being a sample that performs extracurricular physical activity regularly, suggesting that regular surfing is positive for controlling the body fat percentage in infants, and justifying the implementation of health actions with this practice.

Regarding the analysis of body fat percentage distribution between genders, there was a prevalence of 11.11% and 8.21% of moderately high for girls and boys, respectively. When observing the high classification, boys have a higher prevalence of 15.06% and girls 5.55%. Despite these results about excess body fat, one fact drew attention. For the female sample, 55.55% were underweight. Thus, given the data presented, it is shown that for this age group, the nutritional transition that occurs in Brazil is verified, corroborating the statement by Reis, Vasconcelos (16) , that, while showing changes related to nutritional deficiencies, there are also those resulting from excess weight.

As limitations of the present study, the fact that the children in this study are residents of a neighborhood with a vast coastal area with more accessibility to outdoor sports can also be a determining factor for these differences, even considering other influencing factors of weight gain such as hours of sleep, eating style and energy expenditure of daily activities, not controlled in this research.

Conclusion

The results showed a low prevalence of obesity according to the anthropometric variables used, and according to the analysis of the BMI of the sample in this study, a trend towards weight reduction with increasing age. This fact is important because the sample is regular physical activity. Therefore, incentives to promote health through social sports projects in the context of eating habits and physical activity practices are important to promote a healthy lifestyle for all age groups of the population.

Especially at school age, where knowledge of risk factors and the distribution of malnutrition and childhood obesity is necessary to define priorities and action strategies in Public Health, especially in the prevention and control of these morbidities, reducing the risk of diseases preventing children from becoming obese adults. It is important to carry out new studies seeking to monitor the anthropometric profile, especially of students enrolled in social sports projects in other regions. The fact that it can positively influence weight control.

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