



CHILDHOOD OBESITY ASSOCIATED WITH PHYSICAL INACTIVITY: CASE STUDY IN A SCHOOL IN BRAZIL

Valeska Gomes de Sousa

Leonardo da Vinci University Center (UNIASSELVI), street Djalma Batista, n0736, Manaus Brazil.

Aline Bayma do Nascimento*

Nilton Lins University, street Nilton Lins, n03259, Manaus, Brazil*Corresponding Author

Eduarda Galvão de Oliveira

Leonardo da Vinci University Center (UNIASSELVI), street Djalma Batista, n0736, Manaus Brazil.

ABSTRACT

The involvement of children and adolescents in physical activity and sport is a fundamental goal of preventing obesity. Obesity is a chronic non-degenerative disease characterized by excessive accumulation of adipose tissue in the body that can cause health problems. The objective of this research is to evaluate obesity in children at a school in the city of Manaus, Brazil. The methodology used was quantitative with 100 students from the school. The results prove an increase in students' obesity. It is concluded that physical activities with good nutrition are important for the formation of healthy adults.

KEYWORDS :obesity, health, physical activity, food.

INTRODUCTION

Obesity affects an increasing number of children. Physical activity plays an important role in preventing obesity in children and reduces the risk of obesity in adults. (BORAN et al, 2007) A large proportion of children and adolescents do not meet the minimum recommendations for physical activity guided by the World Health Organization.

Due to the high risk of overweight children, there is a tendency to become obese adults, thus, the involvement of children and adolescents in physical activity and sport is a fundamental goal of obesity prevention. (ONIS, 2015).

Obesity is already considered one of the main public health problems in the world, acquiring status as a global epidemic (WHO, 2006).

Rinaldi et al. (2008) describes that the current lifestyle can contribute to the onset of obesity, with repercussions on child health and adult life.

The general objective of this research is to determine the relevance of physical inactivity in childhood obesity at a school in Brazil.

METHODOLOGY

The sample will consist of 100 students aged between 11 and 14 years, 50 of whom are female and 50 are male, whether or not they practice physical activity.

The research was carried out at a school in the city of Manaus, Brazil. It is descriptive and of a quantitative nature, since opinions and data from data collection were quantified.

Data collection took place after the students' parents signed a consent form, in accordance with Resolution No. 196/96 of the National Health Council of Brazil, with clarification of the study proposal.

As inclusion criteria: students must be properly enrolled in the elementary school of the school, aged between 11 and 14 years old, and whether or not they are participating in Physical Education classes at school.

Exclusion criteria are: age less than 11 years and more than 14 years and not being enrolled in school.

The calculation of the Body Mass Index was performed using the formula $\text{Weight} / \text{Height}^2$, expressed in kilograms per square meter. Body mass was measured on a tempered glass digital scale, height was measured with an anthropometric gauge. The body mass index (BMI) was obtained by dividing total body mass by height squared. Obesity and overweight were defined using the BMI cutoff points for sex and age.

RESULTS

The results describe that the students presented 74% of the evaluated ones with Body Mass Index considered normal, 20% with overweight and 6% with obesity.

The female group presented 80% of those evaluated with Body Mass Index considered normal, 16% at overweight and 4% with obesity.

There is then a small difference between the two groups, where the female group has more than 6% of individuals with a normal Body Mass Index.

In Figure 1, the results of the Body Mass Index of both sexes are described, which shows that 77% of the individuals are in the normal pattern, 18% in the overweight pattern and 5% showing obesity.

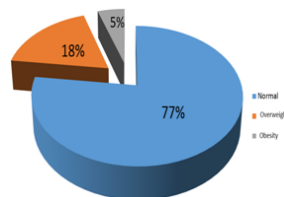


Figure 1: body mass index- male and female students

Sources: the authors

The next results show percentages of physical activity levels inside and outside the school for both sexes:

- 70% of students travel to school by car or other motorized transport, 25% walk and 5% by bicycle;
- 11% practice physical education classes 3 times a week, 56% practice 2 times a week, 28% practice 1 time a week and 5% do not;

- 82% of students eat at the school, while 18% take their own lunch from home;
- 45% claimed to eat pizza, chips, salty or sandwich, another 35% claimed to consume cake, cookies or biscuits, 2% none and 18% bring their snacks from home;
- 45% usually drink soda, 25% artificial juice, 12% natural juice, 0% yogurt /milk and 18% others.

CONCLUSIONS

According Monteiro (2020), obesity is a disease that can be caused by several factors, the main ones being physical inactivity and poor eating habits.

According Nogueira et al (2020), not participating in physical education classes can contribute to the installation of physical inactivity and consequent weight gain.

It can be concluded that there is a small prevalence of obesity among students aged 11 to 14 years in the educational institution in Manaus, being higher in male students.

There is a positive relationship between the practice of physical activity and the control of body weight, although most of the students consume high-calorie foods.

According Souza et al (2019), it is necessary for the family to encourage children in an active lifestyle, combined with adequate nutrition from the first years of life, as a measure of prevention of chronic diseases in adolescence and adulthood. It is necessary to carry out more in-depth studies on this subject, and with a larger sample size, to confirm childhood obesity associated with physical inactivity in private schools in Manaus.

REFERENCES:

- [1] Boran, P, Tokuc, G., Pisgin, B., Oktem, S., Yegin, Z., & Bostan, O. (2007). Impact of obesity on ventilatory function. *Jornal de pediatria*, 83(2), 171-176.
- [2] ONIS, Mercedes de. Preventing childhood overweight and obesity. *Jornal de pediatria*, v. 91, n. 2, p. 105-107, 2015.
- [3] WORLD HEALTH ORGANIZATION (WHO). Obesity: preventing and managing the global epidemic. Report of a WHO Consultation. Who technical report series 894. Geneva. World Health Organization, 2000. 253 p. http://whqlibdoc.who.int/trs/WHO_TRS_894.pdf
- [4] de Oliveira Pinheiro, A. R., de FREITAS, S. F. T., & Corso, A. C. T. (2004). An epidemiological approach to obesity. *REVISTA DE NUTRICAÇÃO-CAMPINAS*, 17(4), 523.
- [5] Monteiro, C. D. P., Almeida, M. L. D., & Bueno Júnior, C. R. (2020). A dança no tratamento da obesidade infantil: proposta de protocolo. *Revista Brasileira de Medicina do Esporte*, 26(1), 43-47.
- [6] Nogueira, E., do Nascimento, F. D. A., de Souza, R. L., & da Silva, W. M. (2020). A obesidade infantil no Brasil e fatores associados: desafios para os professores de educação física. *Revista Internacional de Apoyo a la Inclusión, Logopedia, Sociedad y Multiculturalidad*, 6(1), 13-24.
- [7] Souza, L. P. S., Assunção, A. Á., & Pimenta, A. M. (2019). Factors associated with obesity in urban collective transportation workers of the Metropolitan Region of Belo Horizonte, Minas Gerais, Brazil. *Revista Brasileira de Epidemiologia*, 22, e190029.