54 - OVERWEIGHT AND OBESITY IN CHILDREN OF ELEMENTARY SCHOOL IN THE CITY OF GUARAMIRIM – SC, BRAZIL

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Nowadays, there is a significant increase of overweight and obesity in the world population. In Brazil it is not different. The inactivity os physical activity, associated with inadequate habits, such as high-calorie foods and soft drinks, among others, are some causes of this number. Trough these, there is an excessive and abnormal accomulation of fat in the adipose tissue, leading to serious consequences, such as dyslipidemia, hypertension, diabetes type II, cardiovascular disease, among others.

In this context, shows that the school is one of the most visible places to detect elementary school children with this problem, which proposes a study direted to this topic. The work carried out the team concern in finding ways of working, studying and preventing, as to what to do to reduce the overweight and obesety levels in children of municipal schools. It is known that the obesity prevention should be started as soon as the children is born, because the weight gain higher than expected results in an increase in the number of fat cells, favoring the appearance of obesity in the future.

It is believed that thorugh the development of activities related to anthropometric, BMI (Body Mass Index), the prevention and identification of overweight children, the children be reeducated in relation to nutrition and physical activity, beginning in school. And after, taking up to family environment, which would allow to develop healthier habits and leave a sedentary lifestyle. And when they reach adolescene and adulthood healthier, therefore acquire a better quality of life.

So, what are the educational processes that can be developed for the child stay healthy? What is the relationship between the incidence of overweight and obesity with lack physical activity? Which activities are most suitable and appropriate for a higher caloric expenditure? Andy et, it is possible to prevent the overweight and obesity with help of school? To seek answers to these questions it was necessary to: describe the educational processes that can be developed in the school environment that contribute to a child stay healthy; analyze possible causes of overweight and obesity in children of municipal schools of Guaramirim, SC; analyze anthropometric characteristics of children in municipal schools of Guaramirim, SC relating to sex, nutritional status, family income; define the characteristic of the food culture of the students in Guaramirim, SC; analyze the diet plan adopted in schools in the city of Guaramirim, SC; relating the children's food culture to the diet plan adopted in the schools in Guaramirim, SC and to the incidence of overweight and obesity; relating the physical activities most appropriate to children of 7-10 years. Evidenced as a hypothesis: If the school develop an educational approach that will improve the physical conditions and their eating habits, then there will be na improvement in bio-psycho-motor developing in children of 7-10 years; if children are reeducated about nutrition, then Will be possible to avoid overweight and obesity; if the child of Guaramirim's school, have a caloric expenditure adequate to the daily demands, so your body weight will bem appropriated for their age group; if children acquire habits related to physical activity, may reduce the overweigth and obesity level.

OBESITY

The lifestyle led by the modern world, often hás negative consequences on the people's behavior, and also in their nutrition status. One of the reasons that lead to such behavioral changes is the decreased in physical activity. Modern man cant get around unless, have at your disposal devices or appliances that develop actions that were previously only possible through human dislocation.

One in ten children in the worldwide is obese. This means a population of 155 million boys and girls overweight. In Brazil, the World Health Organization points the childhood obesity as a serious problem of public health. Over the past 20 years, for example, the obesity in Brazil has tripled. Today, almost 15% of children are overweight and 5% are obese. The obesity is a chronic disease, that can be defined as a excess of body mass (CAMPOS, 2001). The obesity is considered a disease in which excess of body fat has accumulated to such na extent that health may be affected (LEÃO, 2003).

Childhood obesity is a problem as old as the first steps of man on earth, and therefore, their study is so conplex and dense. Dealing with a disease that touches the area of human pleasure, that is eating, becomes very difficult and arduous (FISBERG, 2007).

Accordinf to the International Working Group on Obesity (IOTF), and the World Health Organization (WHO), obesity can be defined as the epidemicof the century, due to its dimensioss acquired over the past decades, through the impact on the mortality and high health spending.

IMPORTANT DIFFERENCES BETWEEN OVERWEIGHT AND OBESITY

One of the differences are de cutoff poinst that defines the BIM in overweight (25 a 29,9Kg/m2) and in obesity (30 Kg/m2 e acima).

The basic difference between obesity and overweight is the highest percentage of body mass (fat) in the obese. In other words, the free fat tissue expansion was not accompanied by increase of adipose tissue. The obesity is characterized by a significantly excess in your weight, particularly in adipose tissue mass. In overweight, however, the situation is even more complex.

HUMAN GROWTH

Studies suggest that by monitoring the growth, physical activity information is presented as a inhibiting or stimulating factor to growth of children and teenagers. They emphasized the importance of physical activity intervention for healthy changes in development and growth of students. It is noticed then, the importance of implementation of intervention measures in combating and prevention of nutritional disorders in young people, through vehicles working in the education field. Emphasizing this Physical Education's trend, Guedes (1997), asserts that another approach that has been used in na attempt to analyze the influence of physical activities in variables aimed at the morphological and functional aspects of children and teenagers, is the monitoring of physical education programs offered by schools on the number of weekly sessions, and the development of specific routines of physical exercices for a certain period.

NUTRITION IN THE SCHOOL PROCESS

The concern about children's nutrition in school age dates of 1849, in France, when some public elementary schools were officially aided in their feeding programs. In the United States, appeared in 1853 a child protection society, in New York. In 1904, England invested in material for preparing school lunches. In Brazil, with the understending of the principals and teachers about the necessity of eating well, started the “soup school”. Only in 1954m the Education Ministry created the National School Lunch Campaign. Today, the school nutrition is one of the most effective social weapons to fight the child innutrition, preserve their health, improve their development and promote their education.

In Brazil, the PNAE (National School Feeding Program) qas estbablisched in 1955 to ensure the school feeding of students from kindergarten (daycare and pre-school)and from basic education, including indigenous schools, enrolled in public schools and charities. Aism to attend the nutritional necessities of students during their stay in classroom, contributing to student's growth, development, learning and school performance as well the formation of healthy eating habits (FNDE, 2007).

Food consumption has been related to obesity not only because of the volume of food ingested, as well as the composition and quality of the diet. Besides, the eating patterns have also changed, explaining in part, the continuous increase of adiposity in children, as well as the low consumption of fruits, vegetables and milk, the increase in consumption of sweets (stuffed cookies, candies and snacks) and soft drinks, as well as omission of breakfast.

The obesity treatment on children should include considerations of nutrient requirements for growth. The success is more probable to result from a program that considers family involvement, dietary modifications, nutritional information, physical activities and behavioral components. Besides the nutritional factors, studies such as Oliveira et al (2003), found that childhood obesity was inversely related to the practice of systematic physical activity, with the presence of Tv, computers and vídeo game in home, confirming the influence of the environment on the development of overweight in our country. According to Bouchard (2003), the body weight is a function of nutrient and energy balance for a long period of time. Studies started in the late 40's, more specifically on the work of Adams (1938) apud Mattos (2000) about the increase in stature as a result of physical exercises program.

The creation of habit and taste for physical activity are directly influenced by the habits of parents, which often persist into adulthood, which reinforces the hypothesis that the environmental factors are critical in mantaining a healthy weight or not. Therefore, the genetic information constitutes a sufficient cause to determine overweight and obesity, but not always necessary, it is possible to reduce the influence through changes in the micro and macro environment (OLIVEIRA, et al, 2003).

METHODOLOGY

This research was conducted with students of municipal schools in Guaramirim, the period from February to May, 2012, which is located north of Santa Catarina and south of the country. These students are 7-10 years old, who are properly enrolled in elementary school. For the presentation of the research proposal, a meeting with parents or guardians was realized, which were explained the research proposal and the importance of the consent. Anthropometric assessment was performed by physical education professionals from the municipal, which corresponds to data colletion from weight, height, arm circumference and ticeps and subscapular skinfolds.

It is a quantitative research, which seeks to respond through the survey data, the number of children who are overweight and obese and lack of physical activity. It was also part of the project, the development of a multidisciplinary framework, that will corroborate to the proposal, to minimize this overweight and obesity rate. The doctors examined through tests the causes of weight increase in these children, and nutritionist developed a menu suitable for these children who have a high level of their weight.

Portuguese teachres held essays about the context as healthy eating, as well as obesity in elementary school. In Science, was developed in the school gardens and its compositions as macro and micro nutients, developed recipes healthy foods like cake, juices and others. A psychologist examined the possible problems that contribute to obesity disorders. A universe of 2000 children, the study uses a sample of 252 students chosen randomly.

For anthropometric variables measurements, were used a Plena brand balance with a precision of 100 grams, a type tape stadiometer with 200 cm, with accuracy of 0.1cm from Seca model 206, a 150cm anthropometric tape brand WISO and a scientific caliper of Cescorf with precision of 0.1mm. Were used the cutoff points established by the World Health Organization (WHO), which define overweight measured between 85-95 percentile, and obesity above the 95th percentile. Nutritional status was classified according to the percentile. Nutritional status was classified according to the percentile curves of WHO (2007) for children from 5 years to teenagers aged 19, was given the percentile according to BMI, gender and age. Nutritional status was stratified according to percentiles (P): underweight = $p<3$, eutrophic = $3<p<85$, overweight = $85<p<97$, obesity = $p>97$ (OMS 2007).

SEARCH RESULTS

A total of 252 children were studied, and that 116 (46,05%) were male and 136 (53,95%) were female. In the first survey revealed a prevalence of 14,3% (36 students) were overweight and 13,9% (35 students) presenting with obesity. In the second survey with applications of the activities described, were obtained improve results, where were 13,8% overweight and 12,7% obese. Although the values obtained are small, the work made a difference for these children. The prevalence of overweight was comparable to those found in some regions of Brazil.

FINAL

The development of this study gave us relevant information about the nutritional status of children from public schools in Guaramirim, SC, informations that will be presented for responsible sectors, and also for small and large groups to be concerned with the data found.

The intention is to use the results of this study so they can serve as a reference to implementation of public health programs and government policies in order to attenuate the overweight and health risks. The media and school are important sources for physical activity and nutrition to the children public information.

There are many strategies options that can be done to change this condition. Action strategies such as changes in eating habits – a reduction in quantities, quality of food – changes in physical activity habits – stimulation of the school and beyond – and support within the family, can facilitate the process a bit. For weight reduction and maintenance of healthy body, it needs to be developed a combination of daily movements, changing the habits to a more active lifestyle for these students.

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ABSTRACT

Take care of children from an early age is important to ensure the health of the population. Combating overweight and obesity is a way of preventing diseases. The research was to examine the prevalence of overweight and obesity of children duly registered in the municipal Network of Bananal-SC, during the period February to May 2012 with the child's age from 7 to 10 years who attend the public education in Guaramirim. The focus of the field research was verify that these children would be overweight and obesity calculated through BMI and subscapular skinfold triciptal and.

The calculation of BMI was conducted by the Division of body weight in kilograms by the square of height in meters. Cutting limits for the definition of overweight and obesity were = 85 $\leqslant$ p $\leqslant$ 97, obesity = p $\geqslant$ 97 (2007 WHO). We studied a total of 252 children, 116 (46.05%) male and 136 (53.95%) females. The first sample showed a prevalence of 14.3% (36 students) were overweight and 13.9% (35 students) presenting with obesity. In the second sampling applications with the activities described were obtained improved results, where we obtained 13.8% overweight and 12.7% obese. While the values are small, the work made a difference for these children. The prevalence of overweight were comparable to those found in some regions of Brazil.Whereas the percentages were worrying realized awareness work with families, suggesting changing menu with accompanying nutritionist and targeted physical work. The school developed research in various disciplines and lectures on the topic.

KEYWORDS: assessment of school, BMI, Obesity

SURPOIDS ET D'OBESITE ENFANTS DE L'ENSEIGNEMENT PRIMAIRE DANS LA MUNICIPALITÉ DE GUARAMIRIM - SC, BRESIL.

RÉSUMÈ

Soigner les enfants dès la petite enfance est important pour assurer la santé de la population. La lutte contre le surpoids et l´obésité est une forme de prévention des maladies. Le but de la recherche était d´analyser la prévalence du surpoids et de l´obésla période de Février à Mai 2012ité, chez les enfants de 7 à 10 ans régulièrement inscrits au résau écolier de la municipalité de Guaramirm – SC dans la période de février à mai de l´année 2012. Le calcul de l´IMC a été effectué en divisant le poids en kilogrammes par le carré de la taille en mètres. Les limites de coupure pour définir le surpoids et l´obésité sont 85 p 97, 97p= obèses (OMS2007). Nous avons étudié un total de 252 enfants dont 116 (46,05%) hommes et 136 (53,95%) femmes. Le premier échantillon a révélé une prévalence de 14,3% (36 étudiants) en surpoids et 13,9% (35 étudiants) en obesité. Après la réalisation des activités décrites, le deuxième échantillon a présenté des meilleurs résultats : 13,8% étaient en surpoids et 12,7% ont été classés obèses. Bien que les valeurs sont faibles, le travail a fait une différence pour ces enfants et les taux de prévalance de l´embonpoint et de l´obésité sont devenus comparables à ceux qu´on trouve dans quelques régions du Brésil. Comme les pourcentages étaient inquietants nous avons réalisé une sensibilisation au sein des familles pour un changement du menu, suivant les conseils d´un nutritionniste, et la réalisation d´un travail physique dirigé. L´école a mis à point des recherches dans différentes disciplines et des conférences sur le sujet ont été réalisées.

MOTS CLÉS : évaluation des étudiants, IMC, surpoids, obésité

SOBREPESO Y LA OBESIDAD EN LOS NIÑOS DE EDUCACIÓN PRIMARIA EN EL MUNICIPIO DE GUARAMIRIM - SC, BRASIL.

RESUMEN

Niño cuidado temprano es importante para garantizar la salud de la población. La lucha contra el sobrepeso prevención de obesidad es una manera y la de la enfermedad. La investigación pretende analizar los estudiantes con sobrepeso y obesidad en la red municipal correctamente inscritos de Guaramirim-SC-Brasil, cuando de febrero en el mayo de 2012 con el niño de la edad de 7 a 10 años asisten a las escuelas públicas de Guaramirim. El cálculo del IMC logró el peso en kilogramos dividiendo por el cuadrado de la altura en metros. Definición de límites de la obesidad y fueron de los de sobrepeso = 85 $\leqslant$ p $\leqslant$ 97, obesidad = p $\geqslant$ 97 (OMS, 2007). Fueron analizados un total de estudiantes 252, siendo 116 (46.05%) niños y 136 (53.95%) niñas. En el primer mostraron una muestreo del 14,3% de los estudiantes (36) con sobrepeso y 13,9% (35 estudiantes) sofriendo con la obesidad. En el segundo muestreo con aplicaciones de las actividades descritas se obtuvieron mejoras en los resultados, donde teníamos 13,8% con sobrepeso y 12,7% con la obesidad. Aunque los valores obtenidos son pequeños, pero el trabajo hecho fue precioso para los estudiantes. La prevalencia de sobrepeso fueron comparables a los encontrados en algunas regiones del Brasil. Considerando que los porcentajes fueron preocupantes, realizó trabajos para sensibilizar a las familias, lo

que fue sugerido un cambio en el menú con nutricionista y trabajos físicos dirigidos. La escuela ha desarrollado investigaciones en diferentes disciplinas y conferencias sobre el tema.

PALABRAS CLAVES: Evaluación de la escuela, masa, sobrepeso, obesidad

SOBREPESO E OBESIDADE EM CRIANÇAS DO ENSINO FUNDAMENTAL NO MUNICIPIO DE GUARAMIRIM – SC, BRASIL.

RESUMO

Cuidar das crianças desde cedo é importante para garantir a saúde da população. O combate ao sobrepeso e obesidade é uma forma de prevenção às doenças. A pesquisa teve como objetivo analisar a prevalência de sobrepeso e obesidade das crianças devidamente matriculadas na Rede municipal de Guaramirim - SC, no período de fevereiro a maio de 2012 com criança da faixa etária de 7 a 10 anos que freqüentam o ensino público em Guaramirim. O calculo do IMC foi realizado pela divisão da massa corporal em quilogramas pelo quadrado da estatura em metros. Os limites de corte para a definição do sobrepeso e obesidade foram = 85 $\leqslant$ p $\leqslant$ 97, obesidade = p $\geqslant$ 97 (2007 OMS). Foi estudado um total de 252 crianças, sendo 116 (46,05%) do sexo masculino e 136 (53,95%) do sexo feminino. Na primeira amostragem observou- se uma prevalência de 14,3% (36 alunos) com sobrepeso e de 13,9% (35 alunos) apresentando com obesidade. Na segunda amostragem com aplicações das atividades descritas foram obtidos melhora nos resultados, onde obtivemos 13,8% com sobrepeso e 12,7% com obesidade. Embora os valores obtidos sejam pequenos, o trabalho fez diferença para estas crianças. As prevalências de excesso de peso foram comparáveis àquelas encontradas em algumas regiões do Brasil. Considerando que os percentuais foram preocupantes realizamos trabalhos de conscientização junto às famílias, sugerindo mudança no cardápio com acompanhamento de nutricionista e trabalhos físicos direcionados. A escola desenvolveu pesquisas nas diferentes disciplinas e palestras sobre o tema.

PALAVRAS-CHAVES: Avaliação dos escolares, IMC, Obesidade.