## 50 - THE PREVALENCE OF OBESITY IN STUDENTS THAT ATTEND TO PHYSICAL EDUCATION CLASSES AT A SCHOOL IN THE CITY OF ITAUEIRA-PI

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## INTRODUCTION

Obesity is widespread agglomeration of body fat resulting from genetic, psychological and environmental influences related to lifestyle and eating habits, directly related to physical activity (TEIXEIRA et al., 2005).

Worldwide, in 2008, over 1.4 billion adults were affected in the overweight condition (Sousa et al., 2014).
In recent decades there has been a significant increase in the incidence of obesity in many countries. This has led the World Health Organization (WHO) to consider obesity a matter of public health, since, in addition to changing the personal image, exposes the individual to a number of cardiovascular, respiratory, musculoskeletal and metabolic (TEIXEIRA et al ., 2005).

Although many financial resources are being invested in research and public awareness campaigns for the prevention and control of obesity, the prospects are not at all promising, as the obesity epidemic has grown alarmingly in different populations (children, adolescents, adults and seniors). This phenomenon has raged beyond the developed countries, reaching a contingent increasing also in developing countries such as Brazil (PRATI, 2001).

In Brazil, it is alarming the number of children with overweight. 2009 year data from the Brazilian Institute of Geography and Statistics (IBGE), in research involving students from the ninth year in all Brazilian capitals, showed that obesity and overweight were the main nutritional problems identified (IBGE, 2009).

The interest in preventing obesity in adolescence is justified by the increase in its prevalence stay in adulthood and, especially, the potential as a risk factor for the development of chronic non communicable diseases (NAHAS, 2003).

Studies have indicated that many teens have changed the practice of physical activity of moderate intensity or vigorous for low-intensity activities and consequently low energy expenditure (Teixeira et al., 2005).

Some of the key factors associated with overweight / obesity in school, such as sedentary lifestyle, poor eating habits, overweight and obesity in parents, as well as the socioeconomic and environmental conditions, are widely discussed in the literature, in the quest for understanding the genesis of the problem, which It is of multifactorial origin (ENES, 2010).

Thus, there seems to be a strong relationship between the growth of overweight and obesity and changes in the lifestyle of young people, as a rule, the amount of estimated body fat is inversely proportional to the level of daily physical activity performed ( Teixeira et al., 2005).

Due to the increase of obesity in adolescents and its consequences, it is important to know the scale of this problem by means of studies investigating the prevalence of obesity in adolescents. Considering the importance of the topic, the objective of this study was to determine the prevalence of obesity in students that attend physical education classes of high school at the Municipal School Manoel Bastos Ribeiro in the city of Itaueira-PI.

## METHODOLOGY

This study was drawn from a direct descriptive field research with a quantitative approach in the city of Itaueira-Piauí, at the Municipal School Manoel Bastos Ribeiro between March 11 and 12 of 2015. The survey was based on two classes of third year of high school in the afternoon. The sample of convenience consisted of 64 students over 18 years, 35 boys and 29 boys, where 46 participate in physical education classes and 18 do not participate.

Data collection took step provided enlightenment for students. A lecture was held to clarify the procedures to be adopted in the research. Anthropometric measurement standards had to be followed. The students were measured in light and bare costumes, remained in the standing position with feet together, elbows (arms) extended and the body together. The measurements were recorded in kilograms with the use of an anthropometric scale (Welmy brand) to the nearest 0.1 kg to measure the body mass ( kg ) and stadiometer 0.1 cm precision to make the measurement of height ( m ) in order to calculate body mass index (BMI).

Overweight / obesity was assessed according to BMI and classified according to the criteria of the World Health Organization (WHO). The IMC has the following parameters: <18.5, underweight; between 18.5 and 24.9 normal weight; between 25.0 and 29.9 overweight; $\geq 30.0$ obesity (WHO, 2000).

Data were tabulated and analyzed in Microsoft Office Excel 2007 program, and the results were presented by presenting charts.

## RESULTS AND DISCUSSION

Figure 1: Prevalence of overweight / obesity in schoolchildren of the third year of the Municipal School Manoel Bastos Ribeiro in Itaueira-IP.


The chart above showed that $17 \%$ of students are overweight and only $11 \%$ of them is with obesity.
The prevalence of obesity ( $11 \%$ ) and overweight (17\%) of this study is similar to research Triches (2005) held in school 12-16 years in the cities of Morro Reuter and Brothers within the RS where they were found , $7.5 \%$ and $16.9 \%$ of obesity and overweight, respectively.

A study by Campos (2005) in school 16-18 years in the city of Fortaleza / CE obtained $19.5 \%$ of obesity, the higher prevalence found in our study ( $11 \%$ ). However, the prevalence of overweight is quite similar to this study.

In research conducted by Baruki (2006), with school 17-18 in the city of Corumbá / MS, percentage of $6.5 \%$ were obese were identified. This result differs from that obtained in our research, which was $11 \%$. As the prevalence of overweight obtained by Baruki, which was $6.2 \%$ had significantly lower percentage compared to our study, which obtained $17 \%$ of students in this state.

Figure 2: Prevalence of overweight / obesity in schoolchildren practitioners of physical education classes in the third year of the Municipal School Manoel Bastos Ribeiro in Itaueira-IP.


The chart above showed that the forty-six practitioners students from physical education classes, only $11 \%$ (5) were overweight and only $2 \%$ (1) had obesity.

The graph of the result 2 corroborates Lazzer, stating that physical activity has been identified as a protective factor against overweight and obesity, as more active teens tend to have lower BMI as obese adolescents compared with normalweight adolescents are less active and participate less intense and moderate activities, with a predominance of low intensity activities (Lazzer et al., 2003).

In fact, this is a global concern because the prevalence of obesity has increased alarmingly and acquiring epidemic proportions, one of the main public health problems in today's society (LOPES, 2007).

Figure 3: Prevalence of overweight / obesity in schoolchildren not practitioners of physical education classes in the third year of the Municipal School Manoel Bastos Ribeiro in Itaueira-IP.


The chart above shows that the eighteen students not practitioners of physical education classes, $34 \%$ were overweight and $33 \%$ were obese.

Our research is similar to the study of Baruk et al (2006), which presents considerations on passive activities and reports that they appear as a major cause of increased BMI, can show positive correlation with obesity (Baruk et al, 2006).

Baruk et al. (2006) studied school in the city of Corumbá, Mato Grosso do Sul, reported an average time spent in sedentary activities than 2 hours a day. These authors also observed a higher percentage of fat and higher BMI values less active adolescents. This result also found in our research.

The results found in our research are lower than the study conducted in Pelotas / RS with students between 10 and 12, who found a prevalence of obesity in sedentary school $58.2 \%$. Previous studies show that the prevalence of physical inactivity among the surveyed students strengthens these findings, as half of boys and $3 / 4$ of the girls reported not reach the minimum recommendation of 300 minutes of activity per week (HALLAL et al., 2006).

Figure 4: Prevalence of overweight / obesity according to gender in students of third year of the Municipal School Manoel Bastos Ribeiro in Itaueira-IP.


The graph shows that the 35 boys were evaluated, 4 were overweight, which corresponds to $11.0 \%$, and 3 were obese, which corresponds to $9.0 \%$. Of the twenty-nine girls were overweight 7 , which corresponds to $24.0 \%$ were obese and 4 , which corresponds to $14 \%$.

According to research conducted by Albano and Souza with students from 15 to 16, the prevalence of overweight and obesity reached $32.5 \%$ in boys and $26.5 \%$ for girls of a public school in São Paulo. This amount is higher than that found in our study in relation to boys was 19.0\%, and a lower value against girls was 38.0\% (ALBANO et al, 2001).

Regarding the difference between boys and girls was found in this study, a trend contrary to that found in studies conducted by Santos et al. (2008), which is the prevalence of overweight among male students (Santos et al, 2008)

Studies show a high prevalence of overweight and obesity in schoolchildren reaches values greater than $20 \%$ in both sexes (FARIAS, 2006).

Pereira et al evaluated 491 children 6-11 years old in the city of Rio de Janeiro, encountering $26.4 \%$ of obesity in males and $30.3 \%$ among females. These results differ from the results found in our research because it gave better results.

## CONCLUSION

The results showed a high level of overweight (34\%) and obesity (33\%) among students who do not participate in physical education classes compared to the students that attend to physical education classes, where overweight and obesity prevalence were respectively $11 \%$ and $2 \%$.

I believe that this study will raise awareness educators, families and students on the importance of physical education classes in the life of each one, for the realization of physical activity in physical education classes helps in the promotion of health and prevention of evils arising overweight such as chronic non communicable diseases associated with it.

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## THE PREVALENCE OF OBESITY IN STUDENTS THAT ATTEND TO PHYSICAL EDUCATION CLASSES AT A SCHOOL IN THE CITY OF ITAUEIRA-PI. <br> ABSTRACT

Obesity and overweight come significantly increasing worldwide in recent years. With technological advances in recent decades, the school became less physically active, which contributed to the increase in overweight and obesity in these groups. It was held a direct descriptive field research with a quantitative approach in order to collect data to determine the prevalence of obesity in schoolchildren that attend to physical education classes of high school at the Municipal School Manoel Bastos Ribeiro in the city of Itaueira-Piaui. The sample by convenience comprised 64 students above 18 years old from the 3 rd year of high school. Obesity and overweight were evaluated by body mass index (BMI) and classification was performed according to WHO table having BMI the following parameters: <18.5 Underweight; between 18.5 and 24.9 normal weight; between 25.0 and 29.9 overweight; between 30.0 and 34.9 obesity. During collection, a lecture was held to clarify the procedures to be adopted in the research. Anthropometric measurement standards had to be followed. It was found that about $17 \%$ of schoolchildren are overweight and $11 \%$ of them are obese. It is also noted that the prevalence of obesity is higher among students who do not attend the Physical Education classes (33\%) compared to the students that attend to physical education classes (2\%).

KEYWORDS: Prevalence; Obesity; School.

## LA PRÉVALENCE DE L'OBÉSITÉ CHEZ LES ÉLÈVES QUI PARTICIPENT À DES CLASSES D'ÉDUCATION PHYSIQUE ET SPORTIVE DANS UNE ÉCOLE DE LA VILLE DE ITAUEIRA-PI. <br> RÉSUMÉ

Au cours des dernières années, l'obésité et le surpoids ont augmenté mondialement de manière significative. Avec
les progrès technologiques de ces dernières décennies, l'école a diminué ses cours d'activité physique, ce qui a contribué à l'augmentation du surpoids et de l'obésité des groupes scolaires. Une recherche de champ descriptif direct avec une approche quantitative a été organisée, dans le but de recueillir des données pour déterminer la prévalence de l'obésité chez les élèves qui participent aux cours d'éducation physique de l'école secondaire municipale de Manoel Bastos Ribeiro dans la ville de ItaueiraPiaui. L'échantillon, par commodité, regroupe 64 élèves âgés de plus de 18 ans et scolarisé à partir de la troisième année du secondaire. L'obésité et le surpoids ont été évalués par l'Indice de Masse Corporelle (IMC) et la classification a été effectuée selon le tableau de l'OMS détaillant I'IMC selon les paramètres suivants : < 18,5 insuffisance pondérale ; entre 18,5 et 24,9 poids normal ; entre 25,0 et 29,9 en surpoids ; entre 30,0 et 34,9 obésité. Lors de la collecte des résultats, une conférence a été organisée pour clarifier les procédures qui doivent être adoptées dans la recherche. Des mesures anthropométriques standards ont dû être suivi. Les résultats montrent que près de $17 \%$ des écoliers sont en surpoids et que $11 \%$ d'entre eux sont obèses. De plus, la prévalence de l'obésité est plus élevée chez les étudiants qui ne fréquentent pas les classes d'éducation physique (33\%) par rapport aux étudiants qui assistent à ces cours ( $2 \%$ ).

MOTS-CLÉS : Prévalence. obésité. école.

## LA PREVALENCIA DE OBESIDAD EN ESCOLARES PRACTICANTES DE LAS CLASES DE EDUCACIÓN FISICA EN UNA ESCUELA EN EL MUNICIPIO DE ITAUEIRA-PI <br> RESUMEN

La obesidad y el sobrepeso ven aumentando significativamente en todo el mundo en los ultimos años. Con el avance tecnológico en las últimas décadas, los escolares se tornaron menos activos fisicamente, lo que ha contribuido para el aumento del sobrepeso y de la obesidad en estos grupos. Para el levantamiento de los dados fue desarrollada una pesquisa directa de campo de caracter descritivo y una abordaje cuantitativa con el objetivo de verificar la prevalencia de obesidad en escolares practicantes de las clases de Educación Física de la ensenañza mediana en la Escuela Municipal Manoel Bastos Ribeiro en el município de Itaueira- Piaui. La amuestra fue por conveniencia y compuesta por 64 escolares maiores de 18 años del terceiro año de la enseñanza mediana. La obesidad y el sobrepeso fueron avaliados por el índice de Masa Corporal (IMC) y la clasificación fue hecha de acuerdo con la tabela de la OMS teniendo el IMC los seguientes parámetros: <18,5 abaixo del peso; dentre 18,5 y 24,9 peso normal; dentre 25,0 y 29,9 sobrepeso; dentre 30,0 y 34,9 obesidad. Durante la coleta, fue realizada una palestra para esclarecimientos sobre los procedimientos a seren adoptados en la pesquisa. La aferición antropométrica tuve padrones a seren seguidos. Se encontró que cerca de $17 \%$ de los escolares pesquisados están con sobrepeso y $11 \%$ de ellos se encuentran con obesidad. Se observó también que la prevalencia de obesos es mayor entre los alumnos non practicantes de las aulas de Educación Física ( $33 \%$ ) en comparación con los alumnos practicantes de las clases de educación física ( $2 \%$ ).

PALABRAS CLAVE: Prevalencia. Obesidad. Escolares.

## A PREVALÊNCIA DE OBESIDADE EM ESCOLARES PRATICANTES DAS AULAS DE EDUCAÇÃO FÍSICA EM UMA ESCOLA NO MUNICÍPIO DE ITAUEIRA-PI. <br> RESUMO

A obesidade e o sobrepeso vêm aumentando significantemente em todo o mundo nos últimos anos. Com o avanço tecnológico nas últimas décadas, os escolares tornaram-se menos ativo fisicamente, o que contribuiu para o aumento do sobrepeso e da obesidade nesses grupos. Para o levantamento dos dados foi desenvolvida uma pesquisa direta de campo de caráter descritivo e uma abordagem quantitativa com objetivo de verificar a prevalência de obesidade em escolares praticantes das aulas de Educação Física do ensino médio na Escola Municipal Manoel Bastos Ribeiro no município de Itaueira-Piaui. A amostra foi por conveniência e composta por 64 escolares maiores de 18 anos do $3^{\circ}$ ano do ensino médio. A obesidade e o sobrepeso foram avaliados pelo índice de Massa Corporal (IMC) e a classificação foi feita de acordo com a tabela da OMS tendo o IMC os seguintes parâmetros: <18,5 abaixo do peso; entre 18,5 e 24,9 peso normal; entre 25,0 e 29,9 sobrepeso; entre 30,0 e 34,9 obesidade. Durante a coleta, foi realizada uma palestra para esclarecimentos sobre os procedimentos a serem adotados na pesquisa. A aferição antropométrica teve padrões a serem seguidos. Constatou-se que cerca de $17 \%$ dos escolares pesquisados estão com sobrepeso e 11\% deles encontra-se com obesidade. Observou-se também que a prevalência de obesos é maior entre os alunos não praticantes das aulas de Educação Física (33\%) em comparação com os alunos praticantes das aulas de educação física (2\%).

PALAVRAS-CHAVE: Prevalência; Obesidade; Escolares.

