# 24 - THE PHYSICAL EDUCATION TEACHERS AND PREVENTION OF SHARES AND FIGHTING OBESITY

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#### INTRODUCTION

The purpose of this research was to gather information of the performance of physical education teachers (EFI), with the students who are overweight and / or obesity and to survey the specific measures that they have adopted or may adopt in their classes as support strategy in prevention and combating this public health problem.

In European countries, like Belgium, this study has been developed starting from the hypothesis that the actions of EFI teachers are not yet sufficiently systematic and functional for the treatment of overweight and / or obesity in school EFI (JOSEPH, 2011; cloes, 2011). In Brazil we also consider that scientific indicative and data in support of this research, because the modern lifestyle, changing eating habits and other factors have favored an increase in overweight frame and obesity across the board (WHO, 2011).

Overweight and obesity are defined as abnormal or excessive accumulation of body fat that can be harmful to health (WHO, 2011). According to the World Health Organization (WHO) obesity has reached epidemic proportions worldwide. Today there are approximately 250 million overweight people and nearly 500 million overweight. The prevalence of obesity has tripled in the last twenty years, to the point that the WHO predicts that by 2015, 2.3 billion adults will be overweight and 700 million will be obese (WHO, 2003). We observed some differences in the official data and the magnitude of the problem, which does not make it any less disturbing. 2010 analysis of the International Obesity Task Force (IOTF) estimates that about 1.0 billion adults are overweight (BMI 25-29.9 kg / m<sup>2</sup>) and about 475 million are obese. If found by Asian standards for specific cut-off points for the definition of obesity (body mass index> 28 kg / m2), the number of obese adults would be considered in the order of over 600 million (IOTF, 2010).

This epidemiological picture begins to replace malnutrition and infectious diseases and relates to the chronic diseases and the possibility of developing serious psychological affections for individuals. It is now known that the obesity problem is not limited to industrialized countries including reaching the third world. In the latter case, the situation is even more complex because in addition to live with the problem of malnutrition and typical infectious diseases of poor countries need to organize to also manage the problem of obesity. Thus it is believed that being overweight is a major scourge of the XXI century (O'Reilly et al., 2002).

The epidemic also affects children. The report of IOFT (2010) estimates that currently overweight affects more than 22 million children under five years and about 155 million young people aged from 5 to 17 years old. In recent decades there has also been an increased prevalence of 1% per year in Canada, Australia and England and 0.5% per year in the United States and Brazil.

In Brazil overweight reaches 33.5% of children 5-9 years and 6.6% of boys are obese. 11.8% of girls are obese. Among men being overweight is 50.1% and the 12.4% considered obese. Among women being overweight is 48% with 16.9% in the obese state (IBGE, 2013).

Joseph (2011) quoting other authors commented on the three major consequences that excess weight and obesity can bring for both individuals and for society, as follows: the impact on health; psychological and social impact; and the economic impact. The impact on health (WHO, 2012) is related to the increase in body mass index (BMI) of the individual and a consequent increased risk factor for the development of chronic diseases. There is also forecasting a decrease in life expectancy of seven years for women and six for obese men age 40 (WHITE, 2007). The psychological and social impact is represented by the reduced self-esteem and ashamed of himself (RITZ and DARGENT, 2009) and the exclusion of certain professions (HULAUD et al., 2006). The economic costs of obesity are considerable. It is estimated that in developed countries they represent from 2 to 7% of the cost of health care in general (WHO, 2003). In the United States, the cost attributable to obesity is estimated at \$ 70 billion, 46 billion, which can be directly attributed to the direct costs, representing 6.8% of the country's health expenditure (Lecerf, 2001).

Several studies have been developed in the world on this symbolic issue. Cloes (2011) conducted a survey on the number of articles published in Medline via Pub Med by September 2011. 150,648 obesity on productions were registered since 1880; 6,656 publications on childhood obesity since 1935 and 1,095 articles on physical activity since 1975. Given this way of publishing scientific research and sharing with the idea that physical education has a close link with obesity frames (JOSEPH, 2011; cloes, Dewandre and LEBRETHON, 2012; cloes, 2012; cloes and ZIANT, 2009; cloes et.al., 2007), we still see a flashback to quantitatively scientific production lower and recent EFI regarding the first productions on obesity and demand this area of knowledge requires.

Study Joseph (2011) investigated the specific measures to support students with overweight EFI classes. It was observed that the EFI can play an important role in preventing and fighting overweight and / or obesity. Showed among other things that: there is a lack of knowledge on the part of EFI teachers about the problem of obesity; that most teachers underestimate the magnitude of this problem; the EFI teachers have adequate ideas on food education, but do not know how to program this content within the activities of their classes; and that there is a lack of dialogue between the different professionals have an important role in the fight against obesity, such as doctors, nutritionists, psychologists etc.

Cloes et al. (2007) compared the attitudes, percepeções and self-competence of students with different BMI. They were all high school students and data were collected on how they were related to the EFI goals. The main finding is the identification of a clear link between adiposity category and competence perceived by students on the EFI purposes. This study concluded that EFI teachers should be alert to the appearance of the weight of their students and must carefully analyze their physical, motor and psychosocial conditions. Also part of the role of EFI teachers immediately point out changes that may affect the behavior of students. Moreover, they should contribute to avoid changing image of overweight students proposing learning tasks that allow them feel good during physical activity. Finally, the survey noted that unlike obese students, students considered slim feel more competent and encouraged to participate in physical activities and to adopt a healthy lifestyle throughout life.

Another study Cloes (2012) on improving the actions of EFI teachers with students who are overweight in the context of Belgian schools found that it is time to prevent obesity; EFI teachers need specific support for actions to prevent and combat obesity; students who are overweight are eager to find the adapted physical activity and appropriate to their reality; and that there is a key role to be played by teachers graduates in EFI and sports in this matter.

#### OBJECTIVE

The main objective of this research was to collect data on the views and possible interventions that EFI teachers do or could do with their students in overweight status and / or obesity.

#### **METHODS**

Participated in this survey a sample of 234 EFI professionals all considered active in preventing and combating overweight and / or obese. The sampled graduates are professors and academics from two higher education institutions of the city of Goiania-GO-BR. To achieve this sample was sent via e-mail one SurveyMonkey questionnaire to 617 subjects. The questionnaire consisted of 64 questions mostly closed with minimum forecast of 12 minutes to be answered. The questionnaire was available online for six months, relaying being for those who have not responded three times. The questionnaire was contained in a Consent and Informed (IC) for previously authorized by the research participant.

The preparation of the questions was based on the Belgian questionnaire developed by researchers Isaline Feron & Marc Cloes the Department of Sport Sciences University of Liege and applied in the period 2012/2013 between EFI teachers of Belgium. This questionnaire was translated from French to Portuguese and validated by four bilingual professionals who fully mastered the French language.

The proposal was to develop an exploratory study as Collis and Hussey (2005, p. 24) occurs in situations where "there is little or no previous study where we can get information on the issue or problem." Gil (2002) also communes with the idea that the exploratory research seeks to provide greater familiarity with the problem in order to make it explicit or build hypotheses.

To analyze the data we used the frequency and percentage surveys and the interpretation of comments made in the open spaces of the questionnaire.

#### **RESULTS AND DISCUSSION**

We begin the analysis of data collected by the characterization of the sample used. We observed that there was a greater concentration of professionals interviewed operating predominantly on school grounds (57.9%) or acting in both spaces, school and non-school. Another considerable percentage (28.9%) professionals in higher education was where we understand to be a very important place in the training of teachers and consequently the dissemination and updating of the foreground.

In relation to academic education. Note that in the field of EFI is common for scholars to act effectively in planning and exercise prescription, assuming the regency of classes, even though not complete graduation.

But if we consider this sample the number of professionals with continuing education specialization, master's and doctoral we will have 34.3% of the total, which is very significant for the analysis of the issue of overweight and obesity.

The questionnaire sought to make a characterization of the divisions of the professionals interviewed to identify relevant data supporting the preventive and effective actions in control of overweight and obesity. As the predominant gender of students in classes it was observed that the majority are mixed classes (50%), mostly female classes (28.9%) and mostly male classes (18.4%). Only 2.6% of the classes were exclusively male. As the education of the students noted that the distribution includes 28.9% for classes with most higher education; 21.1% majority of high school; 13.2% majority of elementary school; 15.8% of higher education only; 5.3% of high school and only 15.8% of primary school only.

Considering only their current class was asked respondents what is the estimated number of students with overweight and obesity by 20 students classes. The average response was 6.2 students estimated overweight and 3.5 with obesity. If we consider the sum of students with overweight and obesity will have 9.7 students in a group of 40 at risk for health, ie 24.5%.

Teachers were asked about their level of agreement on various issues. Consider the answers, totally agree (CT), agree (C), disagree (D) and strongly disagree. It has been found that the vast majority of respondents strongly agree or agree that physical education should play a role in preventing overweight and / or obese (100%) in addition to follow up of the students (97.4%). This demonstrates that the professionals assume this public health problem as a proper object of interventions in EFI playing field.

When asked if during her classes professionals find difficulties with students with overweight and / or obese responses were divided between those who fully agree or agree (56.5%) and those who disagree or strongly disagree (43.5%). However the vast majority (79.5%) assume that during their planning adjustments due to the presence of students with overweight and / or obese.

We note that a large majority of respondents strongly agree or agree that: a) lack the physical education teachers the general knowledge of Overweight theme (71.7%) and obesity (74.3%); b) students are not aware of the risks associated with overweight (79.4%) and obesity (81.9%); c) students overweight (84.6%) and obesity (94.7%) have difficulty accepting their body image; d) students overweight (69.1%) and obesity (89.7%) refuse to participate in certain activities and sometimes they are excluded; e) motor disability and / or physical to some students because of their overweight condition (71.7%) and obesity (84.5%) is a problem in some activities (performance, suitable materials, sweating, ...); f) students overweight (71.7%) and obesity (74.4%) have difficulty accepting what others think about their health condition. A relative majority of respondents strongly agree or agree that: a) the contact between the physical education teacher and the parents or guardians of students overweight (61.4%) and obesity (61.4%) is difficult to establish; b) the parents or guardians of students overweight (66.5%) and obesity (69.1%) are not aware of the role of physical activity and physical education in health; c) it is difficult for physical education teachers to determine the health status of overweight students (72.7%) and obesity (66.6%); d) for physical education, it is difficult to propose specific actions without stigmatizing the situation of students with overweight (50.3%) and obesity (58.9%); e) it is difficult synergy between the physical education teacher and other health care professionals who deal with students in overweight status (56.3%) and obesity (56.3%) (doctor, nutritionist, etc.); f) students overweight (61.5%) and obesity (56.3%) are not aware of the role of physical activity and physical education in health. In other flagship issues a majority of respondents professionals disagree or strongly disagree that is: a) difficult for the physical education teacher to determine whether the child is overweight (69.4%) and obesity (77.0%); B). difficult to establish a dialogue between the physical education teacher and students who are overweight (84.7%) and obesity (82.1%); c) difficult dialogue in the class of overweight (61.7%) and obesity (56.5%) when other students of normal weight are present. d) there are few specific documents that help the physical education teacher to deal with students with overweight (69.3%) and obesity (66.8%); e) students overweight (77.1%) and obesity (71.9%) had medical certificates that prevent them from participating in activities that are affordable and beneficial; f) in physical education

assessment (physical performance, motor skills, etc.) of overweight students (66.8%) and obesity (61.7%) is a problem. As the questions students with overweight and / or obese are afraid of getting hurt during physical education (injury, asthma, malaise, shortness of breath, body aches ...) and for the physical education teacher, It is difficult to manage the taunts or comments made by other students those who are overweight and / or obesity the opinions of respondents were not featuring different if the majority disagrees or agrees wholeheartedly.

An open space so that respondents could make their comments and / or clarification of proposals and / or its submitted answers was made available. Only about 18% of respondents have woven a review of which selected a few that we consider most significant to the problem in question: a) "Often inhibition of obese students or overweight begins at school or group activities that take these students often to be looking for private lessons in gyms, hence agent can work physical student, but ends up falling short interaction of that student with society, since it is also something indispensable in the formation of a person's character, teamwork and socialization. " b) "I think one should be greater unity among teachers to better cope and deal with a public health issue." c) "The comment is not specific to an item, but a general observation. The physical education teacher is one of the few professionals that is desired in school classes it is easy to talk and charge about publicly overweight and obesity, because all students like school. " d) I believe that no teacher EF DISCUSSES "obesity" with their students, if only because it is more appropriate for nutritionists. e) "The student with obesity and / or overweight is aware that exercise is beneficial, but already brings home discouragement." f) "Students consider themselves overweight normal mainly male."

In the face of the foregoing we can consider that the EFI is assumed as an area of knowledge that is committed to the issue of students with overweight / obesity. However, there is still lack of the situation and situations that need to be resolved. These issues involving both students and families and society as a whole.

In TABLE 1 was proposed previously observed the same list of issues in order to know the answer of the respondents about how they find interesting the situation in question to manage your own practice. The responses ranged from Very interesting (MI), Interesting (I) Not interesting (NI) and little interest (PI). We obtained the following answers:

TABLE 1: Degree of interest of respondents on issues problems
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Question / interest in percentage (%)	МІ	I	NI	ΡI
Students overweight and / or obese have medical certificates that prevent them from participating in activities that are affordable and beneficial.	8.9	0.5	4.3	6.2
Students overweight and / or obese are not aware of the role of physical activity and physical education in health.	5.1	8.6	.4	0.8
For physical education teacher is difficult to manage the taunts or comments made by other students those who are overweight and / or obese.	6.2	4.1	8.9	0.8
Students overweight and / or o bese have difficulty accepting what others think about their health condition.	0.6	4.4	3.9	1.1
Students overweight and / or obese are afraid of getting hurt during physical education (injury, asthma, malaise, shortness of breath, body aches).	6.7	6.1	7.8	9.4
Lack the physical education teachers the general knowledge on the theme of excess weight and / or obesity.	8.9	8.9	3.9	.3
Contact between the physical education teacher and the parents or guardians of students with overweight and / or obesity is difficult to establish.	9.4	0.0	4.7	.9
A dialogue in class about overweight and obese normal weight when other students are present is difficult.	3.3	4.4	6.7	.6
Students and overweight / obesity refuse to participate in certain activities. Sometimes they are excluded.	6.1	0.0	.8	1.1
A synergy between the physical education teacher and other health care professionals who deal with students in overweight status and / or obesity is difficult (doctor, nutritionist, etc.).	7.1	1.2	.8	.9
For physical education, it is difficult to propose specific actions without stigmatizing the situation of students with overweight and / or obese.	4.2	2.4	7.3	.1
Students overweight and / or obese find it difficult to accept their body image.	5.7	5.7	.7	.9
Parents or guardians of students are not aware of the role of physical activity and physical education in health.	5.5	9.4	.1	.1
It is difficult for physical education teachers to determine the health status of students with overweight and / or obese.	0.0	7.1	.6	4.3

In the analysis of the issues TABLE 1 observe that the views which they considered very interesting and interesting account for more than 70%. This reaffirms that there is an awareness of EFI interviewed teachers of the class about the main factors that require interventions with students and overweight or obese.

Some information for suggestions and possible actions were cited by respondents: a) special training in the middle of the physical education teacher career with other professionals in overweight and / or obese (doctors, psychologists ...) (83.8%); b) an internet site which offers theoretical and practical information (70.3%); c) an article published in a professional journal (67.6%). In a matter for comment and other response options only about 5% of respondents, with the highest highlight the responses included increased production of books, magazines and articles; more conferences related to interdisciplinary themes and preferably closer to professionals from other related fields; organization of research groups - interdisciplinary - in the workplace promoting to have the most fruitful interaction of those involved with the academic world; and a greater definition of public policies, coordinated social, to control the situation.

### CONCLUSION

This research showed that in fact there is an imbroglio involving practical actions related to control and combat overweight and obesity by EFI interviewed professionals among its students. This is confirmed due to public health surveys that show an increase of this health worsening global and local level. Dare is, even if good portion of society involved in the issue to be conscious and aware of the basic mechanisms to control the situation in practice can not yet effective control of this disease. We believe that the most important benefit of this research has been the composition of a database that can support the reflections, analysis and systematization of knowledge to be placed in the practical field, even having to consider the specifics of the sample

studied.

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# THE PHYSICAL EDUCATION TEACHERS AND PREVENTION OF SHARES AND FIGHTING OBESITY ABSTRACT

The purpose of this research was to gather information of the performance of physical education teachers (EFI) in the practical field with the students who are overweight and / or obesity and to survey the specific measures that they have adopted or may adopt in their classes as a strategy to support the actions of preventing and combating this public health problem. The main purpose was to collect data on the views and possible interventions that EFI teachers do or could do with their students in overweight status and / or obesity. Participated in this study a sample of 234 EFI professionals all considered active in preventing and combating overweight and / or obese. It was sent via e-mail one SurveyMonkey questionnaire to 617 EFI professionals. The questionnaire of 64 questions was based on the Belgian questionnaire developed by the Department of Sport Sciences University of Liege. This research showed that in fact there is an imbroglio involving practical actions related to the control and overweight combat and obesity by professionals of EFI interviewed together to their students.

KEYWORDS: physical education, prevention, obesity.

### LES PROFESSEURS D'ÉDUCATION PHYSIQUE ET DE PRÉVENTION DE LUTTE CONTRE L'OBÉSITÉ ACTIONS ET

### RÉSUMÉ

L'objectif de cette recherche était de recueillir des informations de la performance des professeurs d'éducation physique (EFI) dans le domaine pratique avec les élèves qui sont en surpoids et / ou de l'obésité et de l'Enquête sur les mesures spécifiques qu'ils ont adoptées ou peuvent adopter dans leurs classes comme une stratégie pour soutenir les actions de prévention et de lutte contre ce problème de santé publique. Le but principal était de recueillir des données sur les points de vue et les interventions possibles que les enseignants EFI font ou pourraient faire avec leurs élèves dans le surpoids et / ou de l'obésité. Participé à cette étude d'un échantillon de 234 professionnels EFI tous considéré comme actif pour prévenir et combattre le surpoids et / ou obèses. Il a été envoyé par e-mail un questionnaire SurveyMonkey à 617 professionnels EFI. Le questionnaire de 64 questions a été basée sur le questionnaire belge élaboré par le ministère des Sciences du Sport de l'Université de Liège. Cette recherche a montré que, en fait, il ya un imbroglio impliquant des actions concrètes liées à la commande et à combattre le surpoids et l'obésité par des professionnels de EFI interviewés ensemble à leurs élèves.

MOTS-CLÉS: éducation physique, la prévention, l'obésité.

# LA EDUCACIÓN FÍSICA MAESTROS Y ACCIONES PREVENCIÓN Y OBESIDAD LUCHA RESUMEN

El objetivo de esta investigación fue recopilar información del desempeño de los profesores de educación física (EFI) en el campo de práctica con los estudiantes que tienen sobrepeso y / o obesidad y la encuesta de las medidas concretas que se han adoptado o puedan adoptar en sus clases como una estrategia de apoyo a las acciones de prevención y lucha contra este problema de salud pública. El objetivo principal era recoger datos sobre los puntos de vista y las posibles intervenciones que los maestros EFI hacen o podrían hacer con sus estudiantes en el estado y / o la obesidad sobrepeso. Participaron en este estudio una muestra de 234 EFI profesionales todos considerados activa en la prevención y la lucha contra el sobrepeso y / u obesidad. Fue enviado por correo electrónico un cuestionario SurveyMonkey a 617 profesionales de EFI. El cuestionario de 64 preguntas se basó en el cuestionario belga desarrollado por el Departamento de Ciencias del Deporte de la Universidad de Lieja. Esta investigación mostró que, de hecho, hay un embrollo que implica acciones prácticas relacionadas con el control y la lucha contra el sobrepeso y la obesidad por profesionales de EFI entrevistó juntos a sus estudiantes.

PALABRAS CLAVE: la educación física, la prevención, la obesidad.

# OS PROFESSORES DE EDUCAÇÃO FÍSICA E AS AÇÕES DE PREVENÇÃO E COMBATE A OBESIDADE RESUMO

O propósito desta pesquisa foi reunir informações da atuação dos professores de educação física (EFI) no campo prático junto aos alunos que estão com sobrepeso e/ou obesidade e fazer um levantamento das medidas específicas que os mesmos adotam ou podem adotar em suas aulas como estratégia de apoio nas ações de prevenção e no combate deste problema de saúde pública. O objetivo principal foi coletar dados sobre os pontos de vista e possíveis intervenções que os professores de EFI fazem ou podem vir a fazer junto aos seus alunos em situação de sobrepeso e/ou obesidade. Participaram desta pesquisa uma amostra de 234 profissionais de EFI todos considerados atuantes na prevenção e no combate do sobrepeso e/ou obesidade. Foi enviado via correio eletrônico um questionário surveymonkey para 617 profissionais de EFI. O questionário de 64 questões foi com base no questionário belga desenvolvido pelo Department of Sport Sciences University of Liège. Esta pesquisa mostrou que de fato há um imbróglio que envolve as ações práticas relativas ao controle e combate do sobrepeso e obesidade pelos profissionais de EFI entrevistados junto aos seus alunos.

PALAVRAS-CHAVE: educação física, prevenção, obesidade.