

STUDY OF OBESITY AND OVERWEIGHT IN EUROPE

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Abstract

Obesity is a public health problem, the result of social and economic pressures that limit a person's control over his/her life and health. Assuming that the number of obese and overweight persons has increased over the past twenty years, this study aims to identify the subpopulation groups at risk. The results of the study reveal that the male population, the older age group and people with low intellectual level are more frequently associated with obesity and overweight. Therefore measures should be adopted, to address especially education on nutrition and health from an early age, and monitor such diseases.

Key words: obesity, overweight, adults, children, share, preventive measures

INTRODUCTION

Obesity is a complex, multifactorial disease, characterized by an increased body weight in the presence of adipose tissue (NICE clinical guideline, 2006; Hâncu, N. et al., 2001). During the last decades, it has become one of the most frequent nutrition diseases in the world, with a pandemic scale, as described by the WHO report in 2011, being considered the disease of the 21st century (Finucane MM, Stevens GA, Cowan MJ et al.2011, Howel D. 2011).

According to a study conducted in 79 countries by WHO, it seems that there are 250 million obese persons in the world (WHO Geneva, 2010.). Obesity represents a risk factor for cardiovascular diseases, hypertension, type 2 diabetes, sleep apnea, depression and some forms of cancer. Obesity involves multiple interactions of genetic, social, behavioral, metabolic, cellular and molecular factors, the results of which produce changes of the energy balance.

The worldwide increase of obesity and overweight prevalence is due, on the one hand, to increased energy intake, especially of food with high caloric density and rich in fat and sugar, and on the other hand to reduced physical activity, in association with sedentary life. Thus it is necessary to identify those population categories that are prone to such diseases, with the view of applying prophylactic measures to decrease the incidence and prevalence of obesity. The study of obesity in order to identify subpopulations (sex, age groups, educational level) of risk groups,

to whom prophylactic measures and education for health should be addressed.

MATERIAL AND METHOD

The retrospective and descriptive observational study that used statistical reports collected information regarding the population, namely the number of obese persons.

Primary data sources were periodical reports and statistical bulletins ([IASO](#), [EASO](#), [EFAD](#), [ESPGHAN](#), EuroHealthNet, accessed in jan 2012). The measurement, description and analysis of persons diagnosed with obesity were used as methods.

RESULTS AND DISSCUSIONS

Obesity in Europe and in Romania

The average number of obese adult persons registered in 2010 in the European region was of 15.5%, the lowest levels being registered in Romania 7.9%, Switzerland 8.1% and Italy 9.9% and the highest levels being reported by United Kingdom 24.5%, Ireland 23% and Malta 22.3% (fig.1).

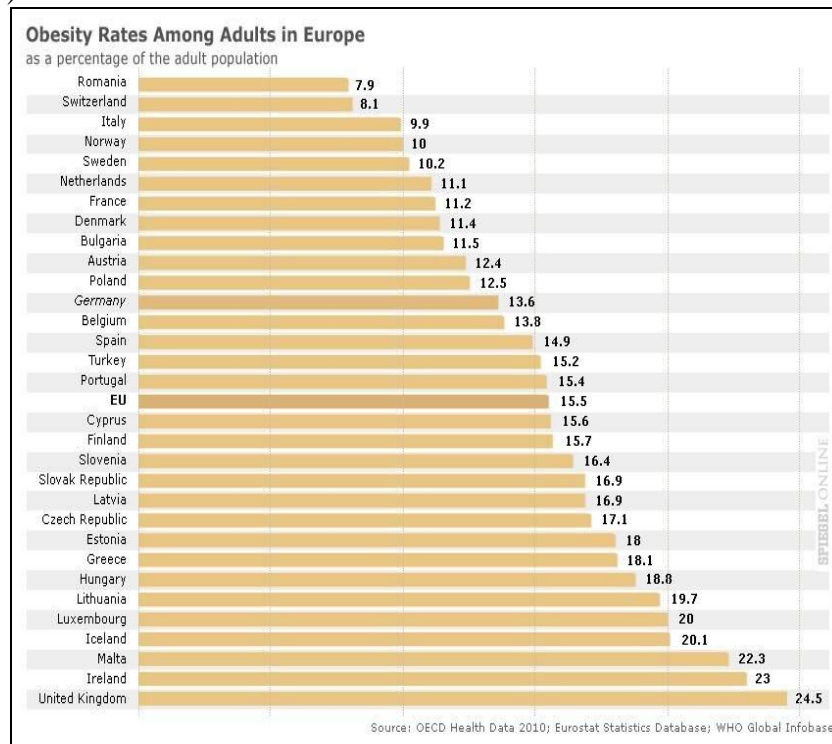


Fig.1. Obesity rate (%) in adults in Europe in 2010 (source OECD Health Data, 2010, Eurostat Statistics Database; WHO Global Infobase)

Of the 12 member states considered in the study and for which data are available, the proportion of overweight and obese adult population ranged in 2008-2009 between 36.9% and 56.7% in the case of women and between 51% and 69.3% in the case of men.

For both men and women aged 18 or more than 18, the lowest index of obesity in 2008-2009 was observed in Romania (8.0% for women and 7.6% for men), Italy (9.3% and 11.3%), Bulgaria (11.3% and 11.6%) and France (12.7% and 11.7%). The highest percent of obese women was registered in United Kingdom (23.9%), Malta (21.1%), Latvia (20.9%) and Estonia (20.5% in 2006), and of men in Malta (24.7%), Great Britain (22.1%), Hungary (21.4%) and the Czech Republic (18.4%) (fig.2).

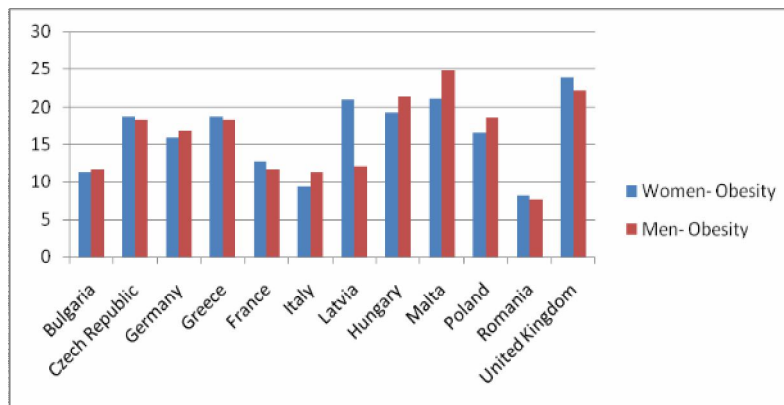


Fig. 2. Percent (%) of obese persons by gender, in 12 countries from Europe in 2009 (source OECD Health Data, 2010, Eurostat Statistics Database; WHO Global Infobase)

There are no significant statistical differences as regards obesity in men and women in the studied Member States. The percent of obese women was higher in six Member States and higher in men in six Member States (fig. 3).

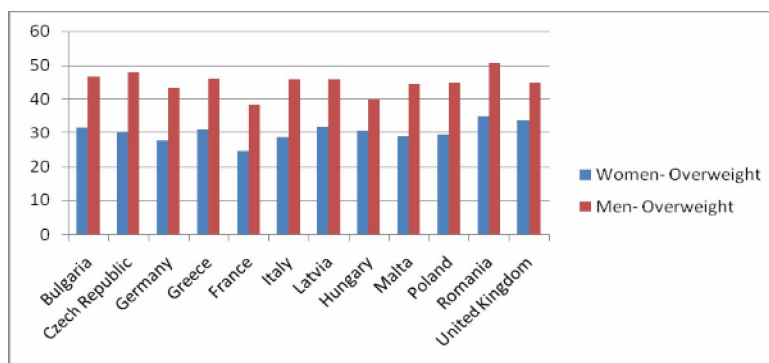


Fig. 3. Percent (%) of overweight persons by gender in 12 European countries in 2009, (source OECD Health Data, 2010, Eurostat Statistics Database; WHO Global Infobase)

However, as regards excessive weight, there is a clear difference between men and women in all the Member States evaluated, as the percent of overweight men is much higher than in the case of women (differences from 8.5% in Hungary to 18.1% in Czech Republic).

The analysis of overweight and obese persons from all the countries included in the study indicates a predominance of the male population suffering from such nutrition diseases (differences of 4.8% in Latvia and 19.1% in Malta) (fig.4).

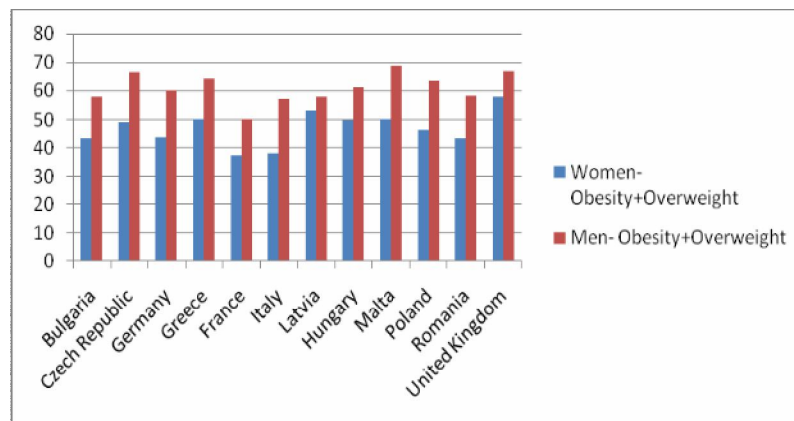


Fig. 4. Percent (%) of obese +overweight persons by gender, in 12 European countries in 2009

(source OECD Health Data, 2010, Eurostat Statistics Database; WHO Global Infobase)

Obesity increases with age

The share of overweight and obese persons increases with age. In all countries studied, the prevalence is highest in the older age group (65-74 years old), except Malta where data are not registered, Romania, where the predominant age group includes persons aged 45-64 and the United Kingdom, where the share is approximately the same at the two age groups.

The share of persons aged 18-24 is around 21.75%, at the age group 25-44 is of 45.12%, at the age group 45-64 is of 62.66%, and at the age group 65-74 it is of 63.79% (fig. 5.).

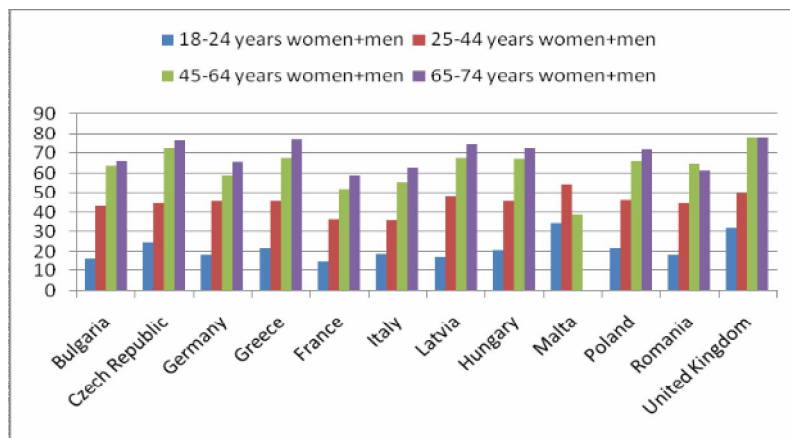


Fig. 5. Percent (%) of obese and overweight persons by age groups, in 12 European countries in 2009

(source OECD Health Data, 2010, Eurostat Statistics Database; WHO Global Infobase)

The average difference between the age groups 18-24 and 65-74 is around the value of 44% in the case of men and around the value of 53% in the case of women. For women there is a clear model in all available Member States: the more advanced in age the group is, the higher the percent of overweight and obese persons (fig. 6).

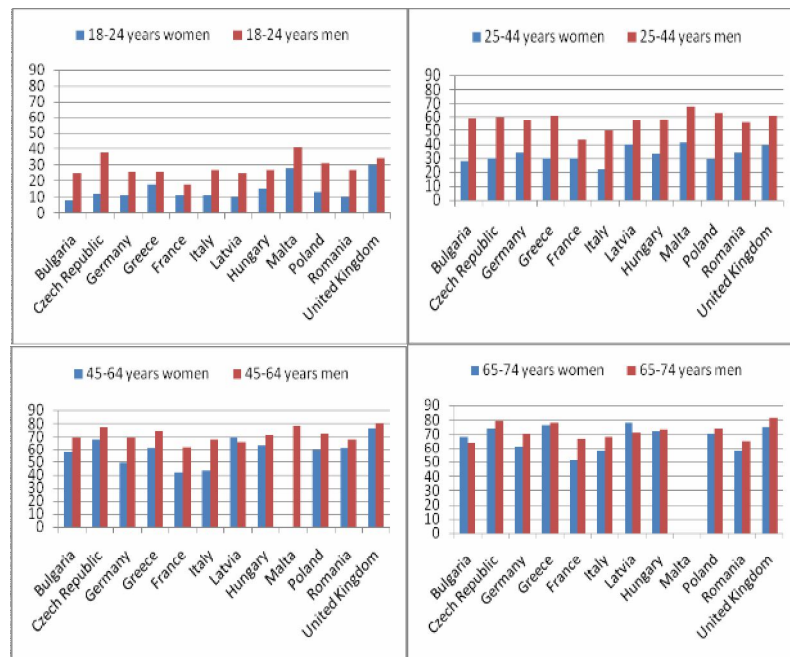


Fig. 6. Percent (%) of obese and overweight persons by age groups and sexes in 12 European countries in 2009

(source OECD Health Data, 2010, Eurostat Statistics Database; WHO Global Infobase)

In the case of men, the model is slightly different: the increase of weight excess and of obesity is systematic until the age of 65. At the age group 65-74 the situation is less uniform. For 9 of the Member States available for this study, the highest number of overweight and obese men is identified in the age-group 65-74.

Obesity increases with lower educational levels

The share of overweight and obese persons tends to decrease with higher educational levels (Sobal J, AJ. Stunkard, 1989). The proportion of obese or overweight women decreases with higher educational levels. For women, the differences between upper and lower level of education varies between 12.8 and 36.7% (fig. 7).

In the case of men, the pattern is again slightly different. Differences are more reduced and the distribution is different: in 5 of the available Member States, the highest percent of overweight and obese men was identified at the persons with lower educational levels, in 4 Member states at men with average educational level and in 2 countries in the case of men with higher educational levels.

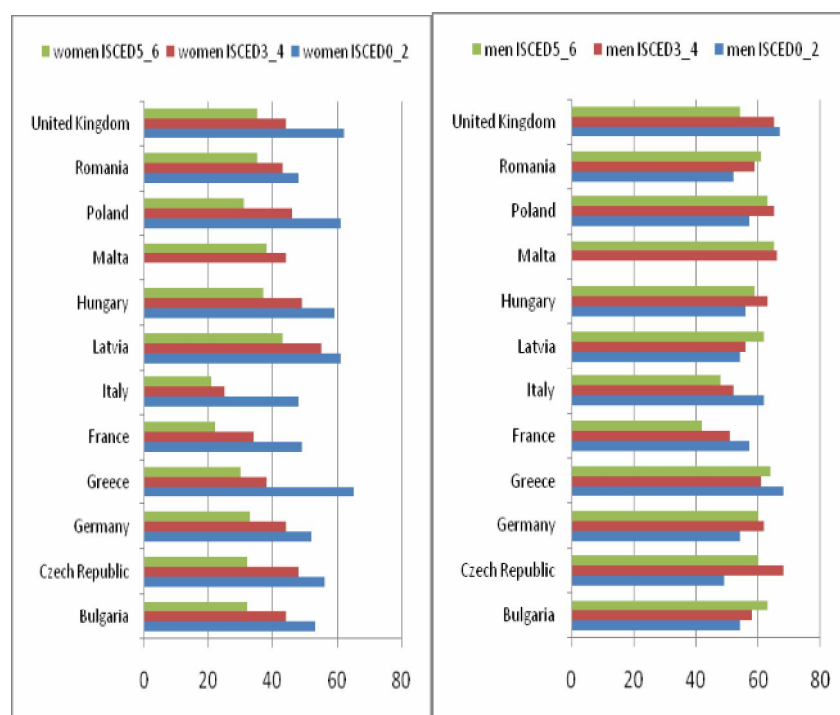


Fig. 7. The percent (%) of obese and overweight persons in terms of education level and gender, in 12 European countries in 2009.

Source: Eurostat International standard classification of education (ISCED)

Obesity in children

During the last 20 years, obesity in children has tripled in Europe (European Commission 2007, EASO 2004).

In pre-teens (7-11 ani) the highest values of obesity and overweight were registered in Malta and Greece (40-45%) and the lowest ones in France and Romania (20%). By gender, there are higher values in boys in ten of the twelve Member States considered in the study, except France and United Kingdom (fig. 8.).

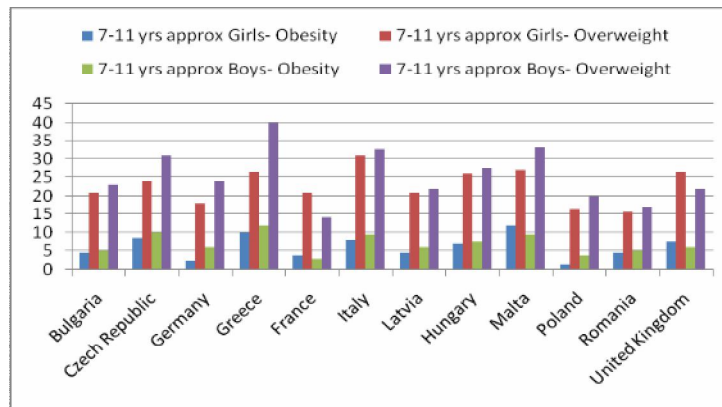


Fig. 8. Percent (%) of obese and overweight children (7-11 ani) by age groups and gender, in 12 European countries in 2009

In adolescence (14-17 years old) the share of children diagnosed with obesity and overweight decreases in the studied countries, in 5 states values of about 30% being registered, which are higher in Greece and United Kingdom. In Latvia, the share of children with weight problems is of 8%. Lower weight in boys as compared to girls has been observed in Hungary, Italy and United Kingdom (fig. 9).

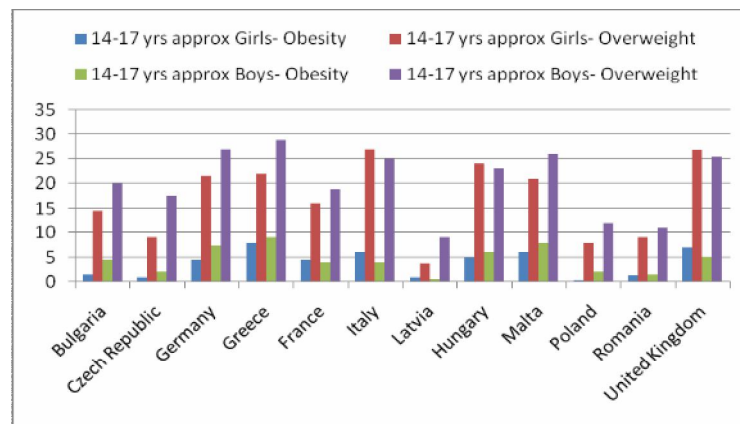


Fig. 9. Percent (%) of obese and overweight children (14-17 ani) by age groups and gender in 12 European countries in 2009

Obesity – a risk factor

Maintaining a “healthy weight” may be a difficult exercise, given the abundance of food rich in calories and the pressure of lifestyles that reduce the possibility of physical activity, both at work and in leisure.

In Europe today, six of seven leading risk factors for premature death – blood pressure, cholesterol, excessive weight, diet low in fruit and vegetables, physical inactivity and alcohol abuse – are connected with the way people eat, drink and move. Overweight and obesity are on the rise in Europe, a trend that is particularly worrying.

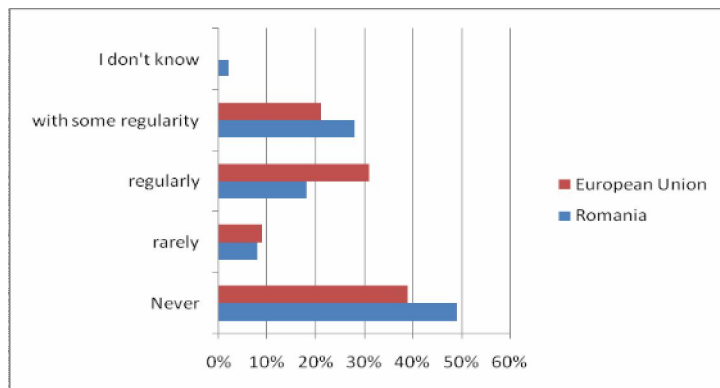


Fig.10. Results of the questionnaire concerning exercise in Romania and the European Union, 2011

A study conducted in 2001 (Eurobarometer – Sport and Physical Activity) indicates the fact that European citizens move more than people in Romania, as 28% of the Romanians declared they do exercise three times a month, while 9% of the people in Europe do sport 5 days a week (fig. 10).

Measures to combat obesity

In order to combat obesity, European deputies suggested the Member States and European Commission a series of measures (Haskel L, William L. et al 2007):

- official recognition of obesity as a chronic disease,
- identify profitable opportunities for the association of health services with industry;
- prevention and monitoring of obesity before birth and up to advanced age; recognizing the fact that education on nutrition and health from an early age is essential for the prevention of overweight and obesity, school is the place where children spend most of their time, so the school environment should encourage children to develop their tastes;
- sufficient funding for schools to ensure the fact that children are given fresh cooked food;
- sufficient facilities available to children to do sports and physical activity;
- eliminate advertising, including new forms of advertising directed at children, such as text messaging, for food high in fat, sugar and salt.

CONCLUSIONS

During the last decades obesity has become one of the most frequent nutrition problems, the average number of adult obese persons in the European Region in 2010 being of 15.5%.

For both men and women aged 18 or over, the lowest obesity index in 2008-2009 has been observed in Romania (8.0% for women and 7.6% for men), while the highest one has been registered in women in United Kingdom (23.9%) and in men in Malta (24.7%).

Men are most frequently overweight (differences from 8.5% in Hungary to 18.1% in the Czech Republic) as compared to the female population and people at more advanced age 65-74 years old (63.79%).

In pre-teens (7-11 years old) the share of obese and overweight children is of 31% and at adolescence there is a percentage of 17% from the total number of children in this age category.

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