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## **EXTRA KILOGRAMS AND OVERWEIGHT AS ECONOMIC THREATS**

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### **Abstract**

The level of development of the countries of people origin is another determinant of the degree of obesity. Thus, Gallus in a study in some European countries found that in high-income countries, adults with the highest level of education have the lowest prevalence of obesity. The treatment for obesity is difficult. Strategies in order to cure obesity are hard to monitor and not very effective, mostly are based on diet and exercise. The best solution at this stage is obesity prevention, particularly by promoting a healthy lifestyle. In order to achieve the goals regarding proper management of obesogenic environment, affected by untrue information about nutrition, surface the need for investment in professional human resources regarding nutrition, not only for health professionals, but also for other professionals that might influence food consumption, namely, teachers, social care professionals and food service personnel.

### **Keywords**

overweight, nutritional education, extra kilograms, economic threats.

### **JEL Classification**

D1

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### **Introduction**

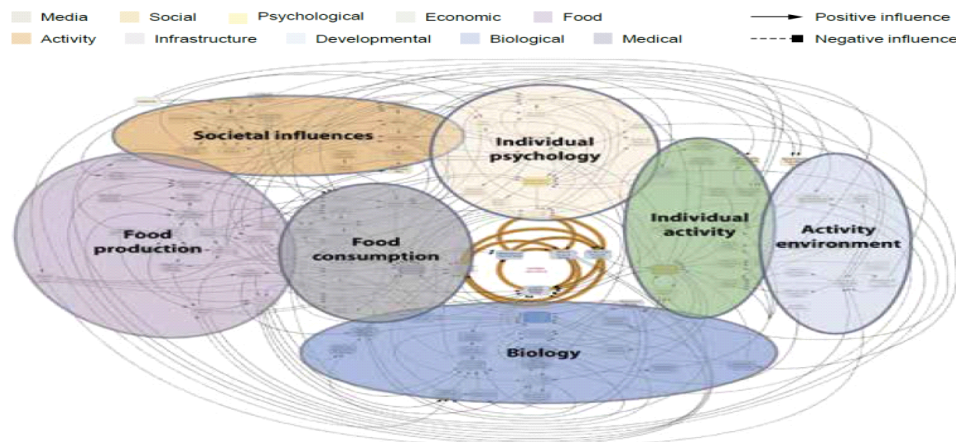
Healthcare expenditures have dramatically increased in the last 20 years due to three factors: (1) an increase in costs per obese individual; (2) a population increase, so even if the prevalence of obesity remained constant there would be more obese individuals; (3) an increase in the prevalence of obesity. (Biener, Cawley and Meyerhoefer, 2017). Only in the USA, the share of total health care spending of non-institutionalized adults that is devoted to treating obesity-related illness has risen from 20.6 % in 2005 to 27.5 % in 2010 to 28.2 % in 2013.

At the same time, not only the healthcare budgets were affected, but all economic costs were increased because, according to the components of the economic costs of overweight and

obesity include: direct costs resulting from the treatment of obese nutritional status and its comorbidities, and indirect costs caused by the lost productivity due to work days lost and premature mortality of obese people (Dee, et al 2014). Such costs will affect state functions, not only in financial terms, but also in the level and the way of development.

The whole process is described into the figure number 1.

Main environmental triggers of Obesity (OB) were identified Hill and Peters (1998); Jeffrey and French (1998) and Brownell (2002) as: the increased use of automobiles and public transportation systems which encourage inactivity/low physical activity, while increased time spent watching television, playing electronic games, and/or using computers which favoured the rise of sedentarism as obesogenic behaviour of both adults and children



**Fig. no. 1 Obesity causal map**

Source: Butland B. et al., *Foresight: Tackling obesities—future choices*, UK Government Office for Science, project report, 2nd ed., October 2007

The level of development of the countries of people origin is another determinant of the degree of obesity. Thus, Gallus (2014) in a study in 16 European countries found that in high-income countries, adults with the highest level of education have the lowest prevalence of obesity.

The EU-funded research consortium EATWELL (Interventions to Promote Healthy Eating Habits: Evaluation and Recommendations) (2009-2013) has classified policy interventions into two broad categories: (a) measures supporting informed choice; (b) measures changing the market environment. Informed choice is the basis for consumer personal choices. Measures included in this category are nutritional education programs, nutrition labelling, social marketing (information from the State) and restrictions on commercial advertising. Measures to change the market environment are public and governmental. Those are directed to create a legal format for: food standards to regulate nutrient content of foods, taxes and subsidies on unhealthy foods or nutrients, regulation of the foods available in school or workplace canteens and measures to make healthy foods more readily available to low income households. We can observe another category (a third). This category was created for measures not specifically targeted at healthy eating, but inadvertently influencing people dietary habits along with other general (generic) measures that are encompassed in the population choices of food.

Capacci et al. (2012) have made an analysis which considered 129 policy interventions (of which 121 were in Europe) with the aim of covering all potential types of policy action listed in Table 1 (affecting healthy eating) and revealed the degree of impact/ the effectiveness of each policy.

The study revealed that United Kingdom, Scandinavian countries and France as a newcomer, are the only countries in which the systematic healthy eating policies are implemented, beside the other information campaigns. The policy action of the Mediterranean countries, which is mostly limited to educational and informational measures, has a quite short history. More than this, the resistance to the development of obesity is developed by the individuals and groups through a powerful behaviourally component related to the cognitive restraint of food intake, but also through a cultural constituent. This is revealed by the way, in which a physical activity is constantly maintained, by various practices that lead to restriction of food, but also through higher ideals of moral and status valence. Other causes that lead to obesity/overweight are environmental, diet, alcohol drinking, lack of physical activity, but also the genetic one.

**Table no. 1 Number and Type of Diet and Health Measures in the EU**

Policy classification	Total no.	No. in Europe
<i>Interventions supporting more informed choice</i>	86	82
Advertising controls	6	5
Controls on advertising to children	5	4
Controls on general advertising	1	1
Public information campaigns	39	38
Nutrition education	35	35
For children at school	31	31
For adults/general public (e.g., at workplace)	4	4
Nutrition labeling	5	4
Nutrition information on menus	1	0
<i>Interventions changing the market environment</i>	43	39
Fiscal measures	4	3
Tax/subsidies on foods to the population at large	1	1
Subsidies to disadvantaged consumers	3	2
Regulation of meals	15	14
School meals (including vending-machine bans and provision of free fruit and vegetables)	13	13
Workplace cafeteria meals	2	1
Nutrition-related standards	1	1
Government action to encourage private-sector action	10	9
Measures to increase availability to disadvantaged consumers	2	2
Liability laws	1	0
<i>Interventions not explicitly targeted at healthy eating</i>	4	4
Generic interventions	6	6
<b>Total</b>	<b>129</b>	<b>121</b>

Source: *Eat Well, Effectiveness of policy interventions to promote healthy eating and recommendations for future action: evidence from the EATWELL project*, [pdf] - [http://eatwellproject.eu/en/upload/Reports/Deliverable%205\\_1.pdf](http://eatwellproject.eu/en/upload/Reports/Deliverable%205_1.pdf)

Despite the negative situation (almost half of adult population is OW or OB), overall Europe, obesity patterns in Europe remain substantially more favourable than those in the USA (Gallus, 2015).

### Data analysis

➤ Romanian children eating habits - Children eating habits are in strong relationship with their parents “normally, they eat what we eat”, “the child eats what we have in our fridge”, “sometimes we eat at home, at our parents when visiting or out - downtown”. The situation is somehow different when we, the children, are preadolescents or adolescents, because peers influence and strong desire to “eat out”, many times means eating at fast foods. In this situation, the parents have less control about the food and cannot restrict the children’s diet, because of the social importance of the “eating out” for adolescents.

➤ Family eating habits - The Romanian food consumption is strongly related to the tradition. In small and medium towns, like those included into the study, there is a reliable evidence of this fact. Facts we have discovered: 2 or 3 meals a day, a traditional menu (sour soups, cabbage rolls, polenta, beans, potatoes etc.), homemade cookies, seldom, or no salads, fruit as dessert. This pattern is reinforced also of the medium to poor income, who cannot afford expensive food (red meat, fresh vegetables outside season or fresh fish are some of them). The Romanians consume quite a few fresh vegetables and fruit. As many studies have

shown before, parents are highly influential factors for their children in different areas, including food habits.

➤ The Romanian OB/OW children meal patterns compared to healthy foods patterns - The children nutrition is restrained at the information provided by MD when the diversification of the child (when this one was less than 1 year of age) and sometimes, when there occurred a medical problem (including OB/OW) within the family, and advice is asked of MD, or somebody in the family (a mother) has voluntarily searched for nutrition information, usually on the Internet. Sometimes the interviewed women mentioned TV entertainment, or educational cultural programs as the source of information: "I have seen and listened to personal experiences and information from invited stars, medical professionals, fitness trainers, etc.". after the TV shows, more educated these and particularly, in this case, not necessarily, wealthier mothers deal better with "difficult" nutrient's consumption like fats and carbohydrates

Overall, the main nutritional claims of questioned mothers were: "not too much salt," "less sugar, if possible", "eat what we eat because we are 1 year old".

- people perceived as nutritional experts - As previously mentioned those are: MD especially for early ages, TV stars, fitness coaches, nutritionists with or without medical studies. The information from them is rather tangential rather than deliberately sought. There have been situations where mothers admitted that they themselves are overweight and that they are looking for solutions to reduce their weight

- marketing elements considered to be appropriate in relation to educational nutrition in Romania -Spontaneously, few mothers (3) have recognized that they have overweight children and this fact could be a problem. Because the discussion focused on diet and nutrition, some mothers have recognized that they have "plump/chubby" children, but they have put this aspect on the age problems considering that the situation will be corrected as they grow up. Basically, mothers do not realize or avoid discussing about their children's nutritional issues. This aspect, coupled with the lack of interest / documentation on nutrition and the lack of professionalism of the sources of information to which they pay attention, leads to the conclusion that the only practical solution at present in Romania is the education of both mothers and children. First of all, it is necessary to educate people in order to recognize the trustworthy sources of information. Once the sources of information are set correctly, a step-by-step nutritional education, starting from the elementary notions, must be achieved.

- investigating obesogenic environment - Many children spend most of the time without doing exercise /they event do not go to physical education classes in school; eat fast food, or unhealthy food (e.g., fried potatoes), spend a lot of time on TV, have almost always unhealthy snacks (sweet or salty), spend a lot of time on the computer, or with other devices (phones, tablet). "the today children are lazy, they don't run, just watching TV or playing games on various devices or surfing Net", "they don't want to eat healthy food, just junk food". Mothers seem not to understand their responsibility for their children is action, blaming only the children for the lack of physical activity and unhealthy food habits.

- the types of arguments/media channels able to influence the children to form opinions on healthy eating. According to mothers' opinions, trust worthy sources of information for their children in order to accept nutrition advice and health food proposals could be TV programs and school teachers. "if they say it on TV they trust in it", "what I say is less important, important is what say and do their colleagues", "the school teachers are very important, she spends a lot of time in school".

Furthermore, the children's usage of new technologies and communication channels (digital/social media) could be turned into a positive way, by transmitting useful nutrition information. "they have a phone, or a device all day long in their hands", "children use devices at every free moment"

- the types of arguments/media channels able to influence the mothers to form opinions on healthy eating - Due to the rest of the data provided, authors have abandoned this research objective. Until mothers would be able to correctly identify the valid sources of information, marketing approaches to healthy nutrition are designed for failure. Maybe some national/social campaigns in order to raise awareness to the health issues linked to the nutrition and in order to show/explain what are the trust worthy sources of nutrition information, could make a notable difference. Then digital/social, media must be widely used, trying to transform its communication networks into a reference for the general population to search for information on food and nutrition.

- distinctions between the children's level of influence over the food consumption at different age intervals. The mothers of teen and pre-teens have signalled the influence of teen's social groups. "they eat same things, they wear similar things, they talk in the same way".

- the level of trust in the Ministry of Health and Ministry of Education, particularly related to the nutritional tutorials/programs for children. The level of trust in the state institutions responsible for such a program, the Ministry of Health and Education, is extremely low, mainly owing to the lack of coherent and responsible macro-social policies. This lack of responsibility of the government is clearly seen through the precarious (poor equipment, lack of trained personnel, lack of consumables, sometimes etc.) situation of sanitary and educational institutions, frequented by the population.

The main factors that influence and lead to overweight, can be considered the following:

- **Mother's income and level of education** -Previously studies have shown the importance of mother's education in influencing the child's nutrition, but mainly by means of the opportunity given by education to achieve a higher socio-economic status. The studies have also shown that simply by giving advice, or even obliging a child to accept healthy food, without "demonstrating" /eating it parents themselves, means a dead end in nutrition education. The worst results were given by coercive methods. Women's income does seem to be associated with household expenditure patterns and that income and education erase the eventual risk introduced, for example, by the fact that the child is living in a single parent family (Miller and Rodgers 2008, Pierre-Louis et al., 2007). This statement is especially true in a traditional society like Romania, an East European country where the child care and food preparation are still women's tasks in the household (Popescu, 2009). As a result, more educational programs, regarding first of all, basic principle of nutrition, than general information about nutrition have to be put in place and have to target women with children.

- **The socio-economic condition of the parents** - At this time, a good nutrition is ultimately a problem of due material resources. The medium to low income of parents is reflected into OB/OW status of Romanian children. There are significant differences between the amount spent on food in United States and Europe, for example between 2002-2003 the American urban citizens spent around 10% of their income on food (Blisart and Stewart, 2007) while European citizens combined spent an average of 22% of their income on food in the late 1990s (Robertson, 2001). For the Eastern European countries, the situation is even worse, the citizens of Romania, Bulgaria and Lithuania spent around 50% while those of Czech Republic, Slovakia, Poland and Latvia something in between 30% and 40% (Robertson, 2001). Given the context, the purchase of high-energy food, but at the same time, poorer in micronutrients is more affordable for the people belonging to lower economic classes, the higher quality food being limited by the income. However, the national food balance for the Eastern European countries in terms of dietary energy availability, between 1992 and 2005, has remained unchanged despite the increased wealth (Ulijaszek and Koziel, 2007).

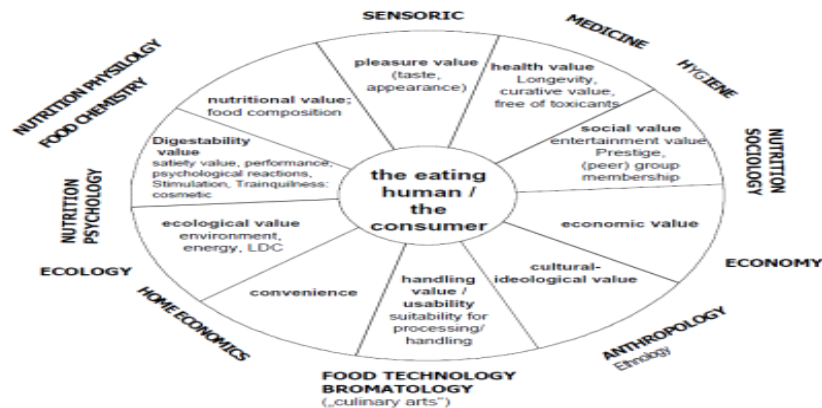
- **Those responsible for the nutritional education/ communication process.** – In what concerns the nutritional education for children, the main responsibility rests, as it is

normal, with the parents, but they should not be the solely responsible, there is also a public involvement, like any other type of education and both of them must converge in the same direction. Bringing together the structural and behavioural changes that allow the individuals to discern the right choices requires an in-depth and multiple levels analysis. The private sector uses complex manipulative techniques to influence the consumer's choices, inspiring various informative channels that, in the end, will conduct to changes into the individual's behaviour. The recommendations and communication in terms of nutrition should have a dual existence: they should be firm and flexible at the same time. The term 'firm' means simple and understandable, while 'flexible' is used to give enough room for customized solutions. The trust is extremely important and it is involved in a successful communication, having to answer to major questions like "who? and whom?" people trust in the end. The accelerated rhythm of research will produce continuous results about the correct nutrition, which could contradict previous recommendations. In terms of communication, one of the most used channel is the television, but this one is only suitable to target different groups like adolescents, young mothers or elderly people who are very well defined in the structure and the content of the programs (Lücke and Rössler, 2005). Other communication channels, like brochures, seminars, internet courses for nutritional education are more narrowed and they address a limited number of people. On the other hand, television has a broader audience and succeeds in raising the awareness about nutritional education which is a precondition for the motivation to ask and get further information. However, the television is still under-exploited even today, it has a serious potential to educate the children and help parents and schools to improve eating behaviours (Grabovschi and Campos, 2014). As we found, in Romania, the main source of information influencing the SRs of the children is the mass-media. Grabovschi and Campos (2014) explains why the SRs of unhealthy food in Romania is more widely spread than their SR of healthy food, compared to Canada, where the school is the primary source of influence and SRs of healthy and unhealthy foods are more balanced.

➤ **Obesogenic environment** – The Romanian OB/OW children live into an obesogenic environment. The OB/OW problem cannot be solved outside understanding and controlling the so-called the obesogenic environment, that means whole constraints/ web of multiple environmental pressures on individual choices (Battle and Brownell, 2002). Obesogenic environments not only discourage physical activity, but also encourage inactivity both occupationally and during leisure time (Brownell, 2002; Hill and Peters, 1998; Hill and Wyatt, 2005). Educating the public unless the obesogenic environmental factors are modified generates almost no impact. Educating the obesogenic environment is a very complex work that requires fine strategy, a considerable amount of time and money. Ferro-Luzzi (2005) argues that this strategy is only operational by the involvement of a large number of stakeholders from diverse segments of society as a crucial prerequisite due to the complexity of the environment. At macro and mezzo-social level state, local governments can take action in order to redesign the obesogenic environment through street and neighbourhood design, plans for parks and community recreational facilities, locations of retail food facilities. At micro-level, each unit of the food, beverage, restaurant, entertainment, leisure and recreation industries share in the responsibilities for obesity prevention and may be induced in supporting this goal (Koplan, Liverman and Kraak 2005). From social/sociological point of view, it is not fair to put the entire responsibility for the individual counterbalance of obesogenic environment through purposive exercise in school, at home, in gymnasiums and in open air sports, because those kinds of actions are specific to privileged and especially motivated subgroups, the wealthy and educated. For medium and low-profile people's opportunities to exercise - in terms of accessibility, affordability and awareness of its health value are low and competing needs – in terms of money and time pressure and preferences – e.g., TV viewing, other passive leisure which are many and powerful. The Romanian society as a whole must be aware of the complexity of correct nutrition and associated elements. Any

adequate marketing plan of policy makers or other organizations interested should take into consideration any of following aspects (Figure no. 2).

During the last period, OB/OW has increased (WHO, 2018) and brought to the surface the problem of misinformation on nutrition issues parallel with growing interest in healthy eating.



**Fig. no. 2 Different views on food choices by consumers and scientists**

Source: Oltersdorf, U., 2005, *Consumers research in the field of nutrition – “hard” and/or “soft” science, Consumer & Nutrition Challenges and Chances for Research and Society 9. Karlsruher Ernährungstage – 9th Karlsruhe Nutrition Congress 10. – 12. Oktober 2004 in Karlsruhe*

In order to achieve the goals regarding proper management of obesogenic environment, affected by untrue information about nutrition, surface the need for investment in professional human resources regarding nutrition, not only for health professionals, but also for other professionals that might influence food consumption, namely, teachers, social care professionals and food service personnel. Rankin et al. (2016) ask for reliable policy, economic regulation interventions and strategies to prevent OB from affecting future generations.

### Conclusions

There are limits on the use of a sample of obese or overweight children aged between 6 and 14 (out of a total of 0-17 years) coming from the middle-income families living in small urban areas. Behaviour in similar large urban ages and with similar, or above average, or similar income may be dramatically different, mainly due to the options / facilities offered or their quasi-total lack in rural areas. The main goal of such macro, mezo and micro-social and economic actions would be an improvement in the children’s eating habits, to such an extent that the coming generations would be stronger and healthier both physically and mentally. As a final conclusion, our research paper subscribes to Grabovschi et Campos (2014) point of view, who consider that “Romanian children would benefit from the implementation of culturally adapted nutritional education programs in schools’ curriculum”.

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