

## **Appearance of the health – conscious consumer behavior in the V4 countries**

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**Abstract:** In the past two-three decades the concept of sustainability has changed significantly – more and more attention is focused on social welfare, its preservation and increase. The health-conscious consumer behavior has become more important for both individuals and food industry - the realization of the strategy of the domestic food industry increasingly promoting healthy eating for example, consuming natural, domestic, fresh ingredients, prepared foods, in order to improve the overall health. The study is intended to present the change in consumer behavior – how the eating habits of consumers can influence the overall health status of the population in Visegrad countries. Furthermore, the aim was also to investigate the appearance of health awareness, as an increasingly significant factor of sustainability, in eating habits.

**Keywords:** health awareness, sustainability, food industry, consumer behavior, eating habits

### **Introduction**

Our research is based on the extensive literature review and Eurostat statistics. To understand the role that health-conscious consumer behavior can play in life quality development it is essential to know the most important definitions – what the health awareness and quality of life means, what kind of health issues (most common chronic diseases) are in the public nowadays, what kind of food categories are in the population's consumption, etc.

Furthermore, the paper also focuses on the different indicators as tools for sustainable development and the consumer-focused health communication as the key of the effective life quality development.

The main objective of the paper is to provide a better understanding of life quality development related to health awareness and its measurement. Moreover, the study also offers a brief introspection into the situation of Hungary in comparison with the European Union and regionally, with the other V4 countries (Slovakia, Czech Republic and Poland).

### **Materials and methods**

The study based on the extensive literature review and the data analysis related to the regional quality of life. Analyzed data derive from the Eurostat database – health related quality of life metrics between 2005/2010 and 2014 were acquired and analyzed.

The study aims to examine the relevant relationships and differences in quality of life between Hungary and the European Union or the Visegrad countries. Furthermore, the correlation between food consumption and health indicators was analyzed with correlation analysis – based on data from KSH database.

### ***Theoretical background***

#### *Health, health awareness and health literacy – relations and differences*

The most integrated, accepted and commonly used definition of health was defined by the World Health Organization (WHO) in 1948. According to the Preamble to the Constitution of the WHO: “Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.” (WHO, 1948). It is increasingly recognized fact that health can be maintained and improved not only through the health science and different healthcare services, but also through the smart lifestyle of the individuals or society. Thus, WHO also determined the main elements of health, which include the social and economic environment, the physical environment, and the person’s individual characteristics and behaviors. These determinants include the following key factors:

- a) Income and social status: the greater the gap in the social status and income level, the greater the differences in health – linear relationship.
- b) Education and literacy: low education level likely means more stressful lifestyle, poorer health and self-confidence level.
- e) Genetics
- f) Personal behavior and characteristics: balanced or unhealthy diet (fruit and vegetable consumption), physical activity, overweight and obesity, smoke, alcohol consumption, stressful work environment all affect health condition.
- g) Health services: the accessibility of healthcare services can help preventing certain diseases, treating easily others and or avoiding different threats.

Health awareness or health-conscious behavior is all of the individual attitudes, behaviors and activities in order to live longer and remain healthier. To reach these targets, people:

- keep important and enforce their health aspects during their decisions,
- control consciously their habits (e.g. proper nutrition, physical activity, sexual behavior, avoiding the harmful practices and habits) and thus, they are actively involved in the development of health,
- learn basic assistance and self-help skills (WHO, 2016)

The diverse resources (Busse et al., 2010; OECD, 2012; Cancer Research UK, 2009) mention the same diseases, as chronic diseases. Traditionally, chronic diseases include the following diseases: cardiovascular disease, diabetes, asthma, chronic obstructive pulmonary disease, cancer. Table 2 shows the deaths as a function of the chronic disease risk factors. It is clearly seen that smoking is one of the most important risk factor, because smoking is the responsible for 4.80 million deaths globally (8.5% of all deaths).

*Table 2. Major chronic disease risk factors*

<i>Chronic disease risk factors</i>	Low-and middle-income	High-income	Worldwide
	Death (millions)		
High blood pressure	(12.9%)	(17.6%)	(13.5%)
Smoking	(6.9%)	(18.5%)	(8.5%)
High cholesterol	(6.3%)	(10.7%)	(6.9%)
Low fruit and vegetable intake	(4.8%)	(4.2%)	(4.7%)
Overweight and obesity	(3.6%)	(7.8%)	(4.2%)
Physical inactivity	(3.2%)	(4.8%)	(3.4%)

Source: Adapted from Busse et al., 2010

Overweight and obesity is also a main problem, and not only in case of adults, but also an increasing number of children is affected. Overweight and obesity are usually derived from the unhealthy diets and the lack of physical activity: both adults and children consume less fruits and vegetables, and do less exercises than they should in order to live healthier.

## Results and discussion

### *The correlation between food consumption and health indicators*

We can observe the amount of food consumption of households per capita in different regions and settlements on Table 3. The direction of changes of consumption levels between 2010 and 2014 was indicated by different colours. The consumption levels changed minimally on country- and Hungarian regional levels. The fact that in certain regions the consumption of fruits and vegetables increased, while cereal and fat consumption dropped, indicates that the health-awareness of the population is positively changing.

Table 3. The amount of food consumption of households per capita in different regions and settlements (2010, 2014), (kg/capita)

Name of region	Total cereals		Total meat		Total milk, cheese, egg		Total oils and fats		Total fruits		Total vegetables and potatoes	
	2010	2014	2010	2014	2010	2014	2010	2014	2010	2014	2010	2014
	<i>kg/capita</i>											
Hungary	85	78	53	54	17	16	38	39	77	75	14	14
Central Hungary	74	64	48	46	16	13	42	36	79	65	12	10
Central Transdanubia	82	75	52	52	17	15	33	39	69	71	15	14
Western Transdanubia	87	74	50	49	17	15	32	38	60	67	15	13
Southern Transdanubia	92	94	51	64	17	16	39	45	80	99	14	16
Northern Hungary	91	87	53	56	19	18	34	36	81	78	15	15
Northern Great Plain	86	90	54	60	19	19	35	39	72	82	16	17
Southern Great Plain	99	84	67	61	18	16	42	41	95	83	14	14
Budapest	60	60	41	44	13	12	42	42	69	64	8	8
	<i>The consumption:</i>											
	<i>decreased</i>			<i>increased</i>					<i>stagnated</i>			

Source: Authors' compilation based on data from the KSH

### *Analysis of quality of life in V4 countries*

There are different metrics for measurement of quality of life (for example net income can influence the quality of life). However, this study exclusively examines the following health related metrics based on the Eurostat database:

- life expectancy by age and sex
- healthy life years in absolute value at birth and in percentage of total life expectancy
- body mass index (BMI) by sex
- daily smokers of cigarettes by sex and age

Life expectancy increased in all countries in case of both females (Figure 2) and males (Figure 3) from 2005 to 2014. If total values are compared by V4 countries and EU (28), total life expectancy increased exactly by 1 year between 2010 and 2014.

Among the V4 countries Hungary is in the worst, and Czech Republic in the best situation in all categories. In 2014, total life expectancy was 76 years in Hungary, and 78.9 years in Czech Republic (similarly, males: 72.3 and 75.8; females: 79.4 and 82), the difference is around 3 years. Life expectancy is higher in female population than in males in all countries.

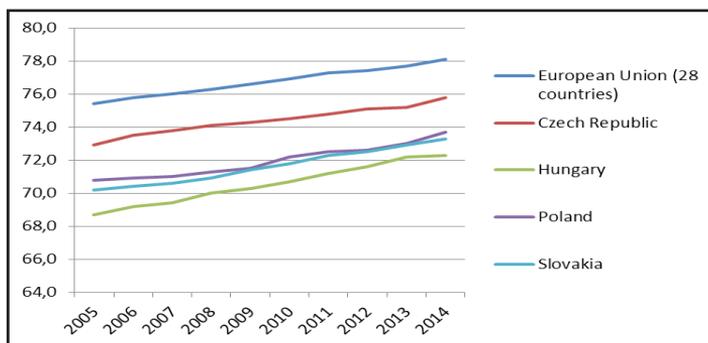


Figure 2. Life expectancy by age in females between 2005 and 2014. Source: Author's compilation based on Eurostat database

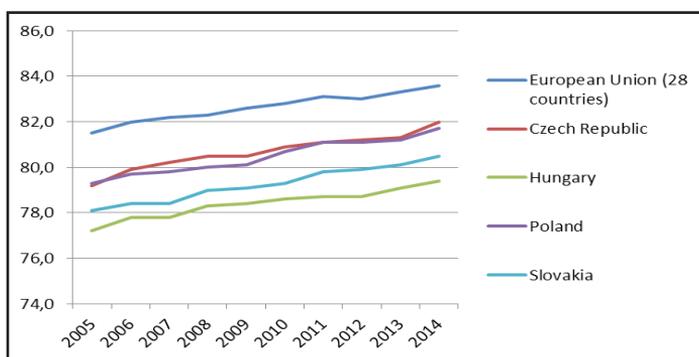


Figure 3. Life expectancy by age in males between 2005 and 2014. Source: Author's compilation based on Eurostat database

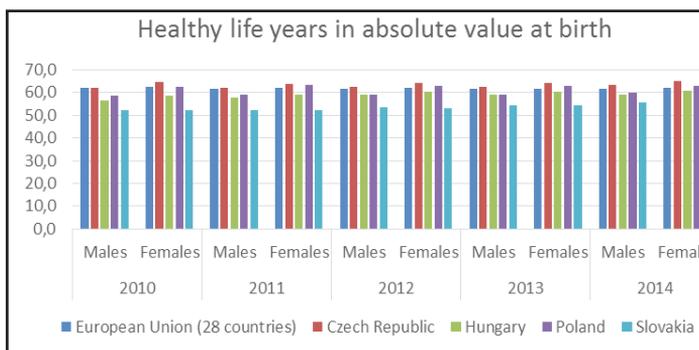


Figure 4. Healthy life years in absolute value at birth between 2010 and 2014. Source: Author's compilation based on Eurostat database

Figure 4 presents the healthy life years in absolute value at birth by sex and countries. Healthy life years can be analyzed and evaluated in percentage of the total life expectancy or in absolute value. When it comes to the analysis based on absolute value at birth it is clearly seen that both the male and female population can count the highest figure in Czech Republic among the Visegrad countries. In other words the development of life quality through health awareness would be the most important task in case of Slovakia. The difference was relatively high between the lowest (Slovakia – males: 55.5, females: 54.6) and highest (Czech Republic – males: 63.4, females: 65) value in 2014.

## Conclusions

Theoretical background summarizes the most relevant scientific literature in relation to the health awareness, life quality development and food consumption. Based on the regional comparative analysis, it is clearly seen the health status of the population in Visegrad countries is not so bad, however, there are several opportunities to improve it with a well-designed and structured life quality development process. In order to improve the quality of life it would be necessary to analyze, evaluate and change the population's consumer behavior related to health awareness – not only the food consumption factors, but also the healthy life factors. The key of change is the appropriate life quality development process by influencing the population's eating habits and reducing the main risk factors – the most important tasks are collected and summarized in the following list:

Food consumption factors for example:

- to decrease the consumption of fat and sugar -> it can reduce the cholesterol level
- to change our eating habits -> the population should reduce the quantity of unhealthy food and consume more quality food instead.

Chronic disease risk factors:

- to reduce the mentioned risk factors (such as smoking, high blood pressure, obesity etc.) in order to avoid the different chronic diseases by
- increasing the physical activity of the population
- decreasing the number of daily smokers or amount of smoking

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