

THE CORRELATION BETWEEN ENVIRONMENT-HEALTH-NOURISHMENT AND BLOOD GROUP

Associate professor, Ph.D. Raluca Florentina CREȚU¹, Assistant professor Georgeta Narcisa CIOBOTAR²

Rezumat

Health represents the essential component of the quality of life and of welfare that people should strive for in order to fully accomplish themselves, to live under circumstances of normal and decent life. Nowadays, it was noticed the fast deterioration of the relation between and the environment. The result of this imbalance reflects upon the people's health which is impacted by factors such as over-alimentation, sedentary life, fatigue, life style. The hereby study is aiming to analyze the correlation between environment-health-nourishment and blood group. The case study has been carried out for the first blood group - O1 - the oldest and the most common of all.

Key words: *quality of life, environment, health, nourishment, correlation.*

JEL classification: I10, Q56.

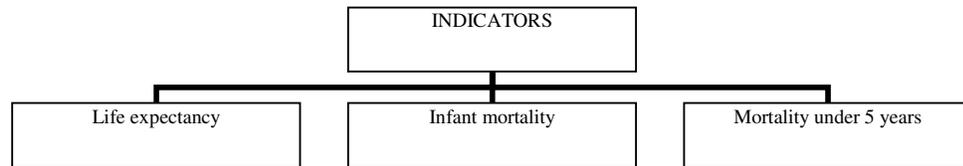
1. INTRODUCTION

In economy, there is the principle of minimax that says that the effort needs to be at the minimum level in comparison to the effect that must be maximum.

From the oldest times and especially nowadays, people have desired a perfect state of health and happiness but with as little efforts as possible. Such thing is no longer possible due to the relation between humans and environment. The result of this imbalance reflects upon the population's state of health, seriously affected also by a less healthy type of nourishment. Medical research has demonstrated that nourishment should be adapted to each individual's blood group. Certain types of food that are beneficial for certain people can act as poison for others or simply neutral for others. As per the old Greeks, the healthy, strong and happy populations exist in the less accessible parts of the universe. But where do these exist nowadays? Jean Jacques Rousseau said that humans were good, healthy and happy in the beginning but all these assets have been changed by civilization that changed them physically and corrupted them from a mental standpoint. "Hygiene, he was saying, is more of a virtue than science." It is well known that the evaluation of a country's state of health (Cretu, 2004, p.19) depends on three indicators, as shown in the picture below (picture no. 1).

¹ Faculty of Accounting and Management Information System/Department of Financial Analysis and Valuation, The Bucharest University of Economic Studies, City Bucharest, Romania, e-mail cretu_raluca@yahoo.com

² Faculty of Marketing/Department of Marketing, The Bucharest University of Economic Studies, City Bucharest, Romania, e-mail narcisa@ase.ro



Source: Cretu, 2004, page. 19

Picture no. 1: Indicators for evaluating the state of health

Health represents the essential component of the quality of life and welfare that people should strive for in order to fully accomplish themselves, to live under circumstances of normal and decent life. In 1948, the first documents of the International Health Organization were showing that having the best possible state of health is one of the fundamental rights of human kind regardless of religion, political opinions, social or economic condition (as per Gorean, 1992, page 88). OECD (the Organization for economic cooperation and development) has published a rating of the countries having the highest life expectancy chosen from among the 34 members and other nations in full process of development. In 6 of the 10 top countries, over three quarters of the adult residents have declared that they have a good state of health. Also, the residents of the countries with an increased life expectancy have less chances to contact severe diseases and a smaller rate of mortality in case of serious health problems.

Indicator s/ Country	1. Switzerland	2. Italy	3. Japan	4. Iceland	5. Spain	6. France	7. Australia	8. Sweden	9. Israel	10. Norway
Life expectancy -years	82.8	82.7	82.7	82.4	82.4	82.2	82	81,9	81,8	81,4
Gross domestic income (GDI) per person-in dollars	51,227	32,648	33,843	36,611	33,045	35,395	44,201	41,461	28.958	61.060
Health costs per person	5,643	3,012	3,213	3,305	3,072	4,118	3,800	3,925	2.239	5,669
Adult population percentage that have declared a good state of health-%	81.3	64.7	30	77.8	75.3	67.6	85.4	79.9	81.5	73,3

1. Switzerland has the highest life expectancy, of almost 83 years, 10 years more than back in 1970.

2. Italy is facing the changes in the residents' diet that use nowadays less and less the Mediterranean diet compared to the past, which transpires into less fruits, vegetables and olive oil.
3. In 2010, 23% of the population of Japan had over 65 years, while only 5% were over 80 years.
4. In 2011, the life expectancy of Icelandic men was of 80 years, the highest of all OECD countries.
5. Spain had only 3.2 hospital beds for each 1,000 residents in 2011, compared to the 4.8 average in the OECD countries and 13.4 in 1,000.
6. In 2011, the life expectancy among French women was of 86 years, the highest of all countries examined by the OECD. In 2010, 5% of the population in France was over 80 years.
7. Despite the fact that Australians are generally healthy, there's a higher chance for them to be over-weight than in other OECD member country, except Mexico and the USA.
8. In 1970, the life expectancy at birth in Sweden was the highest in the whole world, which is 74.8 years. Until 2011, the life expectancy has increased to almost 82 years.
9. Despite the population with a high life expectancy, the percentage of people over 65 years is 9.9%, which is a lot under the average 15.1% in the OECD.
10. Due to its considerable oil supplies in the Northern Sea, Norway is among the richest countries in the world. The only country that spends more than Norway on the health of each inhabitant is the USA.

Source: <http://www.zf.ro/din7> December, 2013

Table 1: Top 10 countries identified by the OECD

In Romania, in 1900, the life expectancy at birth was of only 36.4 years. The 20th century has witnessed an immense progress: in 1974-1975 the life expectancy has reached 69.3 years. In 2011, the average life expectancy was of 73.98 years (70.5 for men and 77.6 for women). Romania is on position 109 in the world classification of life expectancy.

In Romania, men's life expectancy has progressed from 67.4 years in 2001 to 69.2 years in 2006. For women, the life expectancy has progressed during the same time frame from 75.6 years to 76.1 years (Barilla S., 2007).

In 2010, the average life expectancy was of 70 years for men and 77.1 for women; this can rise by 2030 with 5.9 years for men and 4.4 years for women (Comper M, 2012).

The men's life expectancy is thought to rise to 81.8 in 2060 and for women to 86.7 years.

Years	By sex			By area					
	Total	Male	Female	Urban			Rural		
					Male	Female		Male	Female
1970	67,33	65,07	69,51	68,27	65,79	70,67	66,63	64,40	68,83
1971	68,00	65,70	70,26	68,84	66,29	71,32	67,41	65,17	69,61
1972	68,58	66,27	70,85	69,38	66,79	71,89	68,01	65,78	70,20
1973	68,55	66,28	70,77	69,50	66,98	71,96	67,87	65,67	70,02
1974	69,08	66,83	71,29	69,93	67,44	72,36	68,46	65,27	70,60
1975	69,58	67,29	71,82	70,29	67,84	72,69	68,99	66,74	71,18
1976	69,69	67,37	71,97	70,72	68,23	73,15	68,79	66,47	71,04
1977	69,76	67,45	72,06	70,56	68,06	73,00	69,03	66,71	71,28
1978	69,82	67,42	72,18	70,52	67,96	73,03	69,08	66,62	71,46

1979	69,54	67,10	71,98	70,14	67,41	72,83	68,94	66,67	71,24
1980	69,21	66,68	71,75	69,82	67,02	72,59	68,59	66,21	71,03
1981	69,14	66,53	71,78	69,77	66,88	72,64	68,53	66,05	71,07
1982	69,42	66,70	72,17	69,94	66,90	72,95	68,89	66,31	71,53
1983	69,60	66,83	72,40	70,23	67,15	73,28	68,94	66,30	71,65
1984	69,77	66,98	72,61	70,46	67,40	73,49	69,04	66,34	71,82
1985	69,70	66,81	72,65	70,37	67,20	73,54	68,95	66,14	71,85
1986	69,74	66,78	72,78	70,36	67,10	73,61	68,99	66,14	71,98
1987	69,53	66,55	72,59	70,06	66,88	73,26	68,81	65,89	71,86
1988	69,27	66,30	72,32	69,84	66,69	73,03	68,52	65,60	71,58
1989	69,42	66,51	72,41	70,17	67,08	73,28	68,55	65,65	71,60
1990	69,56	66,56	72,65	70,25	67,06	73,46	68,70	65,70	71,80
1991	69,76	66,59	73,05	70,39	67,02	73,83	68,88	65,71	72,25
1992	69,78	66,56	73,17	70,54	67,16	74,02	68,75	65,45	72,29
1993	69,52	66,06	73,17	70,01	66,45	73,71	68,76	65,32	72,52
1994	69,48	65,88	73,32	70,02	66,36	73,83	68,67	65,04	72,68
1995	69,40	65,70	73,36	70,05	66,33	73,95	68,46	64,70	72,66
1996	69,05	65,30	73,09	69,84	66,12	73,77	67,99	64,13	72,33
1997	68,95	65,19	73,00	69,82	66,16	73,66	67,80	63,86	72,26
1998	69,24	65,46	73,32	70,09	66,39	73,97	68,11	64,16	72,58
1999	69,74	66,05	73,67	70,58	66,92	74,38	68,66	64,85	72,91
2000	70,53	67,03	74,20	71,31	67,84	74,86	69,53	65,93	73,49
2001	71,19	67,69	74,84	71,94	68,50	75,42	70,20	66,57	74,17
2002	71,18	67,61	74,90	72,02	68,55	75,51	70,08	66,35	74,20
2003	71,01	67,42	74,78	71,81	68,24	75,42	70,08	66,41	74,14
2004	71,32	67,74	75,06	72,15	68,62	75,70	70,34	66,67	74,41
2005	71,76	68,19	75,47	72,53	69,04	76,01	70,78	67,12	74,83
2006	72,22	68,74	75,80	72,98	69,56	76,34	71,23	67,69	75,13
2007	72,61	69,17	76,14	73,34	69,96	76,64	71,64	68,13	75,50
2008	73,03	69,49	76,68	73,76	70,29	77,16	72,05	68,42	76,05
2009	73,33	69,68	77,09	74,16	70,58	77,67	72,23	68,51	76,36
2010	73,47	69,76	77,30	74,38	70,78	77,91	72,26	68,45	76,54
2011	73,77	70,11	77,53	74,62	71,07	78,08	72,63	68,88	76,81

Source: The annual statistics of Romania, 2012

Table 2: The evolution of life expectancy in Romania between 1970-2011

One can notice the difference between the Romanians' life expectancy, which is 73.77 years, compared to 82 years, the age of people living in the first 10 countries of the world.

Nowadays, more than ever, a new way of thinking is required if people want to survive. This is probably always going to be the case.

2. ANALYSIS OF THE CAUSES THAT AFFECT POPULATION'S HEALTH

✓ The impact of climate changes on health. An average increase with 2-5 degrees in the following 50-100 years will result into a growth of the number of days with temperatures higher than 38 C degrees. The increase of mortality caused by heat stress is to be expected at a temperature increase over 32 C degrees. This will affect mainly the population with severe diseases and low immunity and probably also the infant population. The increase level of mortality has not been clearly evaluated yet. Air conditioning can reduce the number of victims. Breathing irritators will continue to pollute the environment which will result into an

increase of the morbidity and mortality by lungs diseases such as bronchitis, bronchitis asthma, severe infections of the higher breathing system etc. The deterioration of the ozone layer is expected to have a direct influence on the population's health. The incidence of all types of skin cancer, especially among the white population, will increase due to increased exposure to UV-B radiations. One must not forget also the possible increase of cataract incidence affecting all types of population categories. Another consequence of UV-V radiation increase relies in the deterioration of the immunity system which will cause a boost of infectious diseases. Most likely, the most important and devastating consequences of environmental changes will take place due to the impact on agriculture: the ground will become more salty and dry areas will keep expanding, etc.

✓ Over-alimentation, inactive life and fatigue. Digestion, metabolism, immunity system, stress resistance and individual type of personality (Ciocan V., 2012) have imprinted themselves in the genetic memory of each type of blood and they coordinate our life, regardless of our will. We cannot choose these blood groups in the same way we cannot choose the sex, colour of the eyes and hair. The blood type determines all vital processes in the human body. Knowing and putting into practice this information, we can all find beneficial solutions to provide ourselves with a healthy life style!

✓ We will show here below a few specific characteristics of each blood group (table 3).

Blood group	Genetic characteristics	Recommendations
OI	✓ The Ketonic type of metabolism-nourishment rich in proteins and animal grease, poor in sugars	✓ Physical work is the antidote against fatigue, depression and stress.
AII	<ul style="list-style-type: none"> ✓ Sensitive people that cannot take prolonged physical effort. ✓ They respond with anxiety and irritability to prolonged effort. ✓ Stress and prolonged physical effort lead to weakening the immunity system and affect the cardio-vascular system. 	<ul style="list-style-type: none"> ✓ Open air walks, swimming and cycling. ✓ Mental involvement in the physical activity.
BIII	<ul style="list-style-type: none"> ✓ Well balanced people, harmoniously responding to intellectual and physical activity; ✓ Stress resistant and easily adapting to challenging situations; ✓ People with a harmonious life, working and eating in a balanced way. 	✓ Practicing sports that involve a moderated effort: tennis, basketball, football, volleyball, cycling, aerobics, etc.
ABIV	<ul style="list-style-type: none"> ✓ Complex, enigmatical and inactive persons; ✓ Mentally responding to stress and physical fatigue in the first stage; ✓ Need relaxing measures, otherwise the immunity system is affected; ✓ Anxiety and irritability affect the immunity system. 	<ul style="list-style-type: none"> ✓ Practicing sports: swimming, cycling, relaxation exercises, walking; ✓ Mental involvement in the physical activity.

Source: Ciocan V, 2012, pages 35-37

Table 3: Specific elements of each blood group

3. CASE STUDY - THE HEALTHY ALIMENTATION OF THE 01 BLOOD GROUP

We will hereby present in the first part of the case study, the genetic characteristics of the people with 0 type of blood and the general table of the diet that ensures them a healthy life style.

The genetic characteristics of people with 0 type of blood are:

- ✓ Eating meat;
- ✓ Strong digestive system;
- ✓ Efficient metabolism;
- ✓ Slender and full of energy;
- ✓ Hyper-active immunity system;
- ✓ Intolerant to nourishment changes, as well as to environmental changes;
- ✓ Efficient response to stress by intense physical activity;
- ✓ Ketonic type of diet based on proteins and animal grease without sugars;
- ✓ Healthy diet based on low fat meat, unpolluted, without chemicals;
- ✓ Cereals and food products are not attractive;
- ✓ Have a hyper-thyroids tendency (due to lack of iodine, they have low levels of thyroid hormones). For this type of deficit, it is not recommended to consume iodized salt, but rather products that contain iodine).
 - ✓ As a guideline in the diet of this blood group the following are recommended: fish, sea food, low fat red meat, including liver;
 - ✓ To be avoided food containing gluten due to the fact that they inhibit the metabolism of insulin;
 - ✓ Lactose intolerance;

The general table of the diet for the 0 type of blood is shown under table number 4:

Type of food	Healthy	Neutral	To be avoided
Meat and products based on meat	fish from cold salty and sweet water such as: cod, herring, mackerel, salmon, sardine, sturgeon, ray, scomber, pike, trout, zander and other species with white, low fat meat); low fat beef, calf, sheep, lamb, goat, billy goat, bull, deer, turkey, chicken, baby chicken meat and products based on this kind of meat	Carp, gold fish, eel, flat fish, perch, cockle, crabs, frogs, mussels, oysters, shrimps, crabs, snails, turtle; Goose, pork and products based on this kind of meat;	Catfish, octopus, caviar
Dairy products	NONE!	Butter, feta cheese, goat cheese, soy cheese and milk	Whole cow cheese, yogurt of all kinds, sour milk, fat cheese, ice-cream
Eggs	2 to max. 4 a week		
Vegetal and animal fat	Mono-saturated oils (olive and soy oil)	Sunflower oil, butter and margarine	Corn oil, pork grease, beef and sheep fat
Cereals, bread and pasta	NONE!	Only in small quantities!	Wheat, wheat flour, wheat pasta, oat and derived products
Vegetables	Vegetables with green leaves (lettuce, spinach, dock, orach, nettle; garlic	Cucumbers, tomatoes, endives, peas, dry and green beans, dill,	White cabbage, red cabbage, sprout, cauliflower, egg-plants, mushrooms, mustard,

	and onion; parsley, parsnip, carrot, celery, red beetroot, kohlrabi, radish, bell pepper, sweet pepper, pumpkin, radishes.	fennel, leek, squash, green olives.	marinated olives, potatoes and corn.
Fruits	Fresh and dry plums, apricots, figs, blue berries, cherries, grapes, water melons, pears, nectarines		Lemons, oranges, grapefruits, strawberries, cherries, sour apples, blackberries, coconuts
Juice and drinks	Recommended between meals; Cherry, apricot and grape juices; Plain and carbonated water, green tea, white wine	Beer, red wine, coffee, black tea	Lemon, orange, sour apple, grapefruit juice Coke, distilled alcoholic drinks

Source: Ciocan V, 2012, p. 59-65

Table 4: The general table of the diet for 0 blood group

4. CONCLUSIONS

There is still time to do something about it. "We will not salvage everything that we would like to salvage, but we will salvage more than if we didn't make any attempt to do so", said Sir Peter Scott.

We, the population of this planet, we are the ones responsible for the quality of the environment, regardless of the geographical coordinates where we run our activities. The health and quality of the food we eat depend on the environment, but even these types of food should not be consumed randomly but in relation to the blood group of each individual. As shown in the present study, some types of food can be healthy, some neutral or even poisonous based on this criterion, the blood group that we can't choose.

In the end, we will show a set of rules for a healthy diet of 01 type of blood (Ciocan, 2012, pages 69-71):

- ✓ Avoiding the consumption of food additives (Es), artificial colouring agents, synthetic flavourers, preservatives;
- ✓ Consumption of meat coming only from adult animals: chickens, sheep, beef;
- ✓ Consumption of food that has not been heat processed;
- ✓ Avoiding to drink water or other liquids before, during or immediately after meals as they dilute the gastric juices;
- ✓ Avoiding refined or overly-refined food: sugar, tinned food, jams, salamis, smoked meat;
- ✓ Cutting down the consumption of alcohol, coffee and processed drinks;
- ✓ The consumption of vegetables and fruit juices is healthy;
- ✓ A lot of physical exercise.

BIBLIOGRAPHY

- Gorean, Th. (1992) *An analytical framework for environmentally sound technology assessment*, New York;
- Ciocan, V (2012) *The 0 blood group and the individual life*, University Publishing House, Bucharest.

- Cretu, R F (2004) Sustainable development aspects. Case study - Buzau County, Cartea Universitara Publishing House;
- <http://www.worldbank.org/depweb/english/modules/social/life/index.html>
- www.capital.ro/2007, Ștefan Bârliba, *Capital*, accessed on March 10th, 2014
- <http://www.zf.ro/business-international/topul-tarilor-cu-cea-mai-mare-speranta-de-viata-11741230>
- www.ins.ro.