THE RELATIONSHIP BETWEEN PUBLIC HEALTH INDICATORS AND THE COUNTRY'S ECONOMIC INDICATORS

ZÁVISLOSŤ INDIKÁTOROV ZDRAVIA OBYVATEĽSTVA OD EKONOMICKÝCH UKAZOVATEĽOV KRAJINY

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ABSTRACT
Objective. The article examines the relationship between public health indicators (healthiest country index, human development index, life expectancy as an independent indicator, mortality rate, and obesity rate among adults) and the country's economic indicators (gross national income per capita, health care costs).
Materials and Methods. The studied indicators were taken from annual reports of the following: Leading financial information providers for professional financial market participants Bloomberg L. P.; World Health Organization in conjunction with the United Nations Population Division, World Bank; Published for the United Nations Development Program (UNDP); United Nations (UN) report "Assessing World Population Trends"; calculations according to the method of the World Bank (The World Bank) in conjunction with the World Bank Development Data Group. Statistical data processing was performed using the correlation coefficient (r).
Results. As a result of research studies, it was found that Switzerland and Japan are leaders in almost all indicators of public health and economic indicators, the belatedly countries according these indicators are Macedonia and Serbia. The correlation analysis shows a very high correlation between the country's health indicators and the life expectancy of its population (r = 0.95) as an independent indicator according to the United Nations report.
Conclusions. Life expectancy, human development index, economic indicators of the country's development (Gross Domestic Product) are significant factors affecting the condition and level of human health. At the individual level, a higher income allows you to eat better, live in a healthier environment, play sports and get timely access to quality medical care. It is necessary to pay attention to the quality and the level of the population education; increase the role of heredity due to the role of lifestyle; pay more attention to the study of the effects of environmental factors on human health, quality and duration of life.

Key words: Economic indicators. Public health indicators.

ABSTRAKT
Ciele: Štúdia sa zaoberá vzťahom medzi ukazovateľmi verejného zdravia (index najzdravších krajín, index ľudského rozvoja, dĺžka života ako nezávislý ukazovateľ, miera úmrtnosti a miera obezity u dospelých) a ekonomickými ukazovateľmi krajiny (hrubý národný dôchodok na obyvateľa, náklady na zdravotnú starostlivosť).
Materiály a metódy: Študované ukazovatele boli prevzaté z výročných správ: popredných poskytovateľov finančných informácií pre profesionálnych účastníkov finančného trhu Bloomberg L.P.; Svetová zdravotnícka organizácia v spojení s Divíziou obyvateľstva OSN, Svetovou bankou; Publikované pre Rozvojový program OSN (UNDP); Správa Organizácie Spojených národov (OSN) o hodnotení svetových populačných trendov; výpočty podľa metódy Svetovej banky (Svetovej banky) v spojení so Svetovou bankou pre rozvoj údajov. Štatistické spracovanie údajov sa uskutočnilo pomocou korelačného koeficientu (r).
Výsledky: Zo sledoavaných štúdií sa zistilo, že Švajčiarsko a Japonsko sú lídrami takmer vo všetkých ukazovateľoch (zdravotných i hospodárskych), zaostávajúcimi krajinami podľa týchto ukazovateľov sú Macedónsko a Srbsko. Korelačná analýza ukazuje na veľmi vysokú koreláciu medzi zdravotnými ukazovateľmi krajiny a očakávanou dĺžkou života jej obyvateľov (r = 0,95) ako nezávislým ukazovateľom podľa správy OSN.
Záver: Stredná dĺžka života, index ľudského rozvoja, ekonomické ukazovatele vývoja krajiny (hrubý domáci produkt) sú významné faktory ovplyvňujúce stav a úroveň ľudského zdravia. Na individuálnej úrovni vám vyšší príjem umožňuje lepšie jesť, žiť v zdravšom prostredí, športovať a získať včasný prístup ku kvalitnej lekárskej starostlivosti. Je potrebné venovať pozornosť kvalite a úrovni vzdelania obyvateľstva, zvýšiť úlohu dedičnosti kvôli úlohe životného štýlu, venovať väčšiu pozornosť štúdiu účinkov environmentálnych faktorov na ľudské zdravie, kvalitu a trvanie života.

Kľúčové slova: Ekonomické ukazovatele. Ukazovatele verejného zdravia.

INTRODUCTION

Currently, the problem of improving the health level and life quality has become one of the most important for modern society. Within these categories, social and economic indicators are created that reflect the lifestyle of the population. According to the Charter of the World Health Organization, "health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" [1]. The experts of the World Health Organization in the 80's of the twentieth century identified the main factors ensuring the health of modern man, identifying four main groups of factors: Conditions and lifestyle of people, the state of the environment, genetic factors, medical care [2]. The relationship between the health of the country's

population, on the one hand, and economic growth, on the other, is recognized by both medical and economic sciences [3].

Studies of the relationship between the population's health level and their incomes have shown that incomes less than 72–86 % of the average have a negative impact on health [4]. The studies of socio-economic inequalities in health care and its impact on public health revealed a dependence on mortality from cardiovascular diseases, which is the main public health problem in most industrialized countries [5-7]. The decrease of the gap between low and high socio-economic groups, according to scientists, gives great potential to reduce mortality from cardiovascular diseases [7]. According to the results of research, the cause of mortality in the middle and older age groups were diseases not only of the cardiovascular system, but also of the respiratory system, as well as cancer. At the same time, in men, cardiovascular diseases accounted for 39 % of the difference between low and high educational groups in total mortality, cancer – 24 %, other diseases – 32 %, and external causes – 5 %. Among women, this difference was 60 %, 11 %, 30 %, and 0 %, respectively [8]. Moreover, as the results of the study show, the low level of medical literacy was associated with poor quality of life [9]. Comparisons of 22 European countries in terms of mortality and health self-assessment showed that mortality can be reduced by improving educational opportunities, income distribution, health-related behavior, and access to health care [10].

The living conditions and lifestyle, according to WHO, have the greatest importance as the component ensuring human health factors. Scientists believe that social determinants (including infectious and non-infectious diseases) within and between countries reduce life expectancy by 20 and 48 years, respectively. The growing volume of research defines social factors as the cause of most differences in the health of a country's population [11]. Research shows that the main requirements for reducing the decline in health in Europe are [12]: Measures to improve the cardiovascular system; enhanced smoking control; reducing alcohol consumption and injury control [13]. Earlier studies found large and growing differences in mortality by education and marital status in post-Soviet countries [14]. Modern authors have concluded that the absence of the disease can be considered as a global indicator of health [15].

Among the many economic indicators of the country, on which the welfare of the population depends, according to scientists, should be considered such as [16]: gross national income; GNP (gross national product); competitiveness index; GDP (gross domestic product); the level of economic growth; unemployment rate; housing construction, real estate sales; national wealth. At the same time, gross national income per capita is one of the indicators of the human development index (HDI), which is a cumulative indicator of the level of human development in the country and is used as a synonym for such concepts as "quality of life" or "standard of li ving" [17]. HDI is a composite indicator that focuses on three main dimensions of human development: The ability to lead a long and healthy life (as measured by the indicator of life expectancy at birth); ability to acquire knowledge (measured by the average duration of training and the expected duration of training); and the ability to achieve a decent standard of living (as measured by gross national income per capita) [18].

At the moment, the relationship between the main indicators of public health and economic indicators of the country has not been sufficiently studied.

The purpose of this contribution is to study the relationship between population health indicators (healthiest country index, HDI, life expectancy as an independent indicator, mortality rate, obesity rate among adults) and the country's economic indicators (gross national income per capita, health care costs).

METHODOLOGY AND METHODS

To determine the dependence of public health on economic indicators of the country, we have identified such indicators as: The index of the healthiest country; HDI, which consists of life expectancy, the literacy rate of the country's population, the standard of living estimated by gross national income (GNI) per capita at purchasing power parity in US dollars; life expectancy as an independent criterion; GDP per capita; health care costs, mortality rate, and adult obesity rate.

The 2019 Healthiest Country Index and its components were taken from one of the leading financial information providers for professional financial market participants Bloomberg L. P. [19].

The healthiest country index was calculated by the World Health together with the United Nations

Population Division, World Bank based on the following indicators: Sources: World Health Organization, United Nations Population Division, World Bank. Notes: Health grade = Health score (A) – Health risk penalties (B). A: Health score metrics: 1. Mortality by communicable, non-communicable diseases and injuries; 2. Life expectancy at the defining age of birth, childhood, youth and retirement; 3. Probability to survive neonatal, into young adulthood and retirement stages. B: Health risk penalties: 1. Behavioural/endogenous factors such as high incidences of population with elevated level of blood pressure, blood glucose and cholesterol, prevalence of overweight, tobacco use, alcohol consumption, physical inactivity and childhood malnutrition, as well as mental health and basic vaccination coverage; 2. Environmental/exogenous factors such as population with access to clean air, water and sanitation facilities. Of the more than 200 economies evaluated; 169 had enough data to be included in the final outcomes; and final index only included those with 0.3 million (rounded) population or more. Those scored 60 are displayed.

HDI as a component indicator was determined according to the annual Human Development Report 2019 published for the United Nations Development Program (UNDP). Data are presented as of 2018 (published in 2019) [18].

HDI is a composite indicator focusing on three main dimensions of human development: The ability to lead a long and healthy life (as measured by the indicator of life expectancy at birth); ability to acquire knowledge (measured by the average duration of training and expected duration of training); and the ability to achieve a decent standard of living (as measured by gross national income per capita) [17].

Life expectancy data (LED) are based on the United Nations (UN) report "Assessing Trends in the Development of the World Population" in the framework of the UN special series of reports on human development as of 2018 (published in 2019) [19].

GDP (nominal) per capita as the total value of all final goods and services produced during the year on the territory of the state by residents' country, expressed in the prices of the final buyer. Per capita determines the level of economic development of the state. All indicators for comparability are expressed in a single currency, the US dollar ($ million). It is calculated according to the methodology of the World Bank in conjunction with the organization World Bank Development Data Group. Data are presented as of 2018 (published in 2019) [20].

The ranking of the world's countries by the level of health spending is calculated as the total amount of public and private health care expenditures, expressed as a percentage of GDP. The World Health Organization database is the main source of information on national health spending in the economies of different countries [21].

The rating of countries in the world by average mortality is calculated annually. The mortality rate in the country determines the overall mortality rate. It is calculated as the number of deaths during a certain period, divided by man-years lived by the population during that period. This is expressed in the number of deaths per 1000 population [22].

The ranking of countries by the level of obesity among adults of different countries in the world is expressed as the percentage of the total population [23].

The correlation coefficient (r) was used to measure the degree of a linear relationship between the level of health of a country's population and its economic indicators. In our research, we proceeded from the fact that the correlation coefficient has a value of ± 1, due to which it reflects not only the density of the connection, but also its direction [24].

RESULTS

Currently, there is a concept of living standards developed by the UN, it includes the list of key components [25]: Health (quality of the health care system, ensuring a healthy human life); education (children's education; the possibility of personal education; the ability to maintain knowledge; human satisfaction with the level of personal development; preservation and transformation of the cultural level; quality of working conditions and employment); possibility of purchasing goods and services (the level of personal income and property ownership; the degree of differentiation or equality in the distribution of income and property; availability, diversity and quality of services for individual and public consumption); personal security and human rights; participation in public life; quality of the environment.

From the existing ranking of countries by standard of living, which includes the most important, in our opinion, indicators of living standards and quality of life, we will analyse the interdependence of the following indicators: Healthiest country

index, human development index, life expectancy, GDP, health care expenditures (% of GDP), average mortality, obesity among the adult population of the country (Tab. 1).

Thus, according to the indicators of the healthiest country, the top five included Spain (96.56), Italy (95.83), Iceland (96,11), Japan (95.59) and Switzerland (94.71). At the end of the list on this indica-

Table 1 Public health indicators from the economic indicators of the country

Rank	Country	Health Grade *	Health Score *	HDI	LED	GDP	% of GDP healthcare	Mortality rate	Obesity %
1	Spain	92.75	96.56	0.893	83.4	29450	9	9.2	23.8
2	Italy	91.59	95.83	0.883	83.4	33690	8.9	10.5	19.9
3	Iceland	91.44	96.11	0.938	82.9	67950	8.3	6.5	21.9
4	Japan	91.38	95.59	0.915	84.5	41340	10.9	9.9	4.3
5	Switzerland	90.93	94.71	0.946	83.6	83580	12.2	8.4	19.5
6	Sweden	90.24	94.13	0.937	82.7	55040	10.9	9.4	20.6
7	Australia	89.75	93.96	0.938	83.3	53190	9.3	7.3	29.0
8	Singapore	89.29	93.19	0.935	83.5	58770	4.5	3.5	6.1
9	Norway	89.09	93.25	0.954	82.3	80790	10.5	8,0	23.1
10	Israel	88.15	92.01	0.906	82.8	40850	7.3	5.2	26.1
11	Luxembourg	87.39	92.03	0.909	82.1	69420	6.2	7.3	22.6
12	France	86.94	91.70	0.891	82.5	41080	11.5	9.4	21.6
13	Austria	86.30	90.81	0.914	81.4	49260	10.4	9.7	20.1
14	Finland	85.89	90.18	0.925	81.7	47750	9.5	10.1	22.2
15	Netherlands	85.86	90.07	0.933	82.1	51260	10.4	9,0	20.4
16	Canada	85.7	90.31	0.922	82.3	44860	10.5	8.8	29.4
17	South Korea	85.41	89.48	0.906	82.8	30600	7.3	6.3	4.7
18	New Zealand	85.06	89.68	0.921	82.1	40820	9.2	7.6	30.8
19	U.K.	84.28	88.74	0.920	81.2	41340	9.8	9.4	27.8
20	Ireland	84.06	89.57	0.942	82.1	59770	7.4	6.6	25.3
21	Cyprus	83.58	88.19	0.873	80.8	26300	6.9	6.8	21.8
22	Portugal	83.1	87.95	0.85	81.9	21680	9.1	10.6	20.8
23	Germany	83.06	88.10	0.939	81.2	47180	11.1	11.8	22.3
24	Slovenia	82.72	88.04	0.902	81.2	24840	8.5	9.9	20.2
25	Denmark	82.69	86.47	0.930	80.8	60190	10.3	9.3	19.7
26	Greece	82.29	86.92	0.872	82.1	19600	8.5	11.4	24.9
27	Malta	81.7	86.07	0.885	82.4	26220	9.3	7.9	28.9
28	Belgium	80.46	85.29	0.919	81.5	45340	10	9.7	22.1
29	Czech Republic	77.59	82.96	0.891	79.2	20260	7.2	10.5	26.0
30	Cuba	74.66	79.42	0.778	78.7	7230	12.2	8.9	24.6
31	Croatia	73.36	78.46	0.837	78.3	13830	7.2	12.4	24.4
32	Estonia	73.32	78.47	0.882	78.6	20940	6.7	12.7	21.2
33	Chile	73.21	77.70	0.847	80.0	14670	8.5	6.3	28.0
34	Costa Rica	73.21	76.88	0.794	80.1	11510	7.6	4.8	25.7
35	U.S.	73.02	78.13	0.920	78.9	62850	17.1	8.2	36.2
36	Bahrain	72.31	76.96	0.838	77.2	21890	4.9	2.8	29.8
37	Qatar	71.97	76.55	0.848	80.1	61190	3.1	1.6	35.1
38	Maldives	70.95	75.37	0.719	78.6	9310	10.6	4	8.6
39	Lebanon	70.53	76.10	0.73	78.9	7690	8	5.1	32.0
40	Poland	70.25	75.93	0.872	78.5	14150	6.5	10.5	23.1
41	Montenegro	69.69	75.62	0.816	76.8	8400	7.6	10.4	23.3
42	Bosnia and Herzegovina	69.66	74.96	0.769	77.3	5690	9.2	10.1	17.9
43	Albania	68.04	73.35	0.791	78.5	4860	6.7	6.9	21.7
44	Brunei	67.96	71.74	0.845	75.7	31020	2.3	3.7	14.1
45	Slovakia	67.28	72.58	0.857	77.4	18330	7.1	9.9	20.5
46	United Arab Emirates	67.14	71.47	0.866	77.8	41010	3.5	1.7	31.7
47	Uruguay	65.66	70.38	0.808	77.8	15650	9.1	9.4	27.9
48	Hungary	64.43	69.75	0.845	76.7	14590	7.4	12.8	26.4
49	Oman	64.07	68.99	0.834	77.6	15110	4.3	3.3	27.0
50	Panama	64.01	68.87	0.795	78.3	14370	7.3	5.0	22.7
51	Turkey	62.81	67.40	0.806	77.4	10230	4.3	6.0	32.1
52	China	62.52	66.73	0.758	76.7	9470	5.0	8.0	6.2
53	Mexico	62.09	66.92	0.767	75.0	9180	5.5	5.4	28.9
54	Argentina	61.19	66.41	0.830	76.5	12370	7.5	7.5	28.3
55	Serbia	60.99	67.08	0.799	75.8	6390	9.1	13.6	21.5

Legend: HDI – The Human Development Index, LED – Life expectancy Data, GDP – Gross Domestic Product

tor are Macedonia (65.74), Serbia (67.08), Argentina (66.41), Mexico (66.92) and China (66.73).

Note the most interesting data on the studied indicators. The report "Updated statistics for 2018" presents the HDI values for 189 countries and territories; the most recent statistics are dated 2017. Of these countries, 59 are in the group with a very high level of human development, 53 countries are in the group with a high, 39 – with medium and only 38 countries – in the group with low human development. In 2010, the group with a low level of human development included 49 countries.

The top five countries according to the global HDI rating include: Norway (0.954), Switzerland (0.946), Ireland (0.942), Germany (0.939), Australia (0.938), Iceland (0.938). The last five of this rating are the Maldives (0.719), Lebanon (0.730), China (0.758), Macedonia (0.759) and Mexico (0.767).

The largest increase in the HDI rating for the period from 2012 to 2017 happened in Ireland, which rose by 13 positions, and Turkey – by eight positions. Over the past almost three decades, all human development regions and groups have made significant progress. The value of the global HDI already in 2017 reached 0.728 – 21.7 % higher than in 1990, when it was 0.598.

All over the world, people live longer, are better educated and have greater life opportunities. Life expectancy has increased by seven years since 1990, and universal primary education coverage exists in more than 130 countries.

The gap in human development is the reflection of inequalities in access to education, health care, employment, credit and natural resources, due to gender and group affiliation, disparities in income and place of residence.

In the ranking of life expectancy for many years the leading positions are occupied by the same countries: Japan (84.5), Switzerland (83.6), Singapore (83.5), Spain (83.4), Italy (83.4). Mexico (75.0), Macedonia (75.7), Brunei (75.7), Serbia (75.8), and Argentina (76.5) have the lowest life expectancy.

In general, the increase in life expectancy is a consequence of the following: Economic development; scientific progress (especially in the field of medicine); the growth of the hygienic culture of the population and the educational level in general; the elimination of class and other a priori, non-economic inequality. Increasing life expectancy is a necessary condition for: increasing productivity, labor efficiency, and, in general, economic progress; increasing the level of education, the scientific progress of the word (ability to learn, stable relationships between generations, accumulation and processing of knowledge); social and gender equality; real right to choose. According to the economic indicator of the country, gross domestic product, the countries are placed in the following order – Switzerland (83580), Norway (80790), Luxembourg (69420), Iceland (67950), the United States (62850). The last positions on this indicator are occupied by: Albania (4860), Macedonia (5450), Bosnia and Herzegovina (5690), Serbia (6390), Cuba (7230).

In our opinion, achievements in the field of human development should be expressed not only quantitatively – such as life expectancy or duration of study – but also by qualitative indicators. From the point of view of human development, true progress can be achieved only by ensuring quality in the field of education, health and in other spheres of human life.

Although life expectancy in most countries has significantly increased over the past decades, this indicator does not show whether the years lived were healthy and pleasant. In our opinion, there are several indirect indicators of health quality, such as access to doctors, the number of hospital beds. As well as direct indicators – health care costs, expressed as a percentage of GDP.

At the same time, the largest percentage of gross domestic product will be in health care in such states as the United States (17.1 %), Switzerland (12.2 %), Cuba (12.2 %), France (11.5 %), Germany (11.1 %), Sweden (10.9 %) and Japan (10.9 %); the lowest percentage is in Brunei (2.3 %), Qatar (3.1 %), the United Arab Emirates (3.5 %), Turkey (4.3 %), and Oman (4.3 %).

As our research has shown, the countries that lead in all indicators of human health, as well as in economic indicators (GDP, health care costs) are Switzerland, Sweden, Norway, Iceland. At the end of the list of countries for all studied indicators are Macedonia, Mexico and China.

The ranking of countries in the world by average mortality is calculated annually. The worldwide mortality rate is estimated at 8.6 deaths per thousand population. Qatar (1.6), the United Arab Emirates (1.7), Bahrain (2.8), Oman (3.3), Singapore (3.5) have the lowest death rate per 1000 population from

Table 2 The results of the correlation analysis of indicators of population health and economic indicators of the country

Indicators	Health Grade	Health Score	HDI	LED	GDP	% of GDP, health-care	Mortality rate, 2018	Obesity, %
Health grade	-	1	0.8	0.96	0.72	0.44	0.13	-0.22
Health Score	1	-	0.8	0.95	0.71	0.45	0.16	-0.21
HDI	0.8	0.8	-	0.75	0.82	0.33	0.18	-0.02
LED	0.96	0.95	0.75	-	0.69	0.42	0.07	-0.19
GDP	0.72	0.71	0.82	0.69	-	0.32	0.11	-0.01
% of GDP, health-care	0.44	0.45	0.33	0.42	0.32	-	0.48	0.01
Mortality rate, 2018	0.13	0.16	0.18	0.07	-0.11	0.48	-	-0.12
Obesity, %	-0.22	-0.21	-0.02	-0.19	-0.01	0.01	-0.12	-

Legend: HDI – The Human Development Index, LED – Life expectancy Data, GDP – Gross Domestic Product

the countries presented in the table. The highest death rate per 1000 population is in Serbia (13.6), Hungary (12.8), Estonia (12.7), Croatia (12.4), and Germany (11.8).

According to the World Health Organization, 41 million people die each year from non-communicable diseases in the world, accounting for 71 % of all deaths. The largest share of deaths comes from cardiovascular disease – 17.9 million people. The leading causes of death are heart attacks and strokes, which result from a combination of risk factors such as tobacco use, unhealthy diet and obesity, lack of physical activity and harmful use of alcohol, high blood pressure, diabetes and hyperlipidemia.

Thus, the percentage of obesity among adults around the world varies from 2.10 % to 61.00 % (Central Intelligence Agency. Country ranking by obesity, 2020). In our studies, the countries with the lowest percentage of obesity include Japan (4.3%), South Korea (4.7%), Singapore (6.1%), and China (6.2%), Maldives (8.6%); with the highest percentage of obesity: USA (36.2%), Qatar (35.1%), Turkey (32.1%), Lebanon (32.0%), United Arab Emirates (31.7%).

It is impossible to draw a parallel between living standards and obesity.

The correlation analysis (Tab. 2) shows a very high correlation between the country's health indicators and life expectancy of its population (r = 0.96) as an independent indicator according to the United Nations report.

According to our research, high correlation is also observed between the country's health indicators and the human development index (r = 0.79). In turn, the human development index has a high correlation with life expectancy (r = 0.75) and the country's economic indicator of gross domestic product (r = 0.816). The country's health indicators are also interrelated and have a high correlation coefficient with the gross domestic product (r = 0.72). The country's economic indicators (GDP) have a significant correlation coefficient with life expectancy of the population (r = 0.68).

At the same time, a moderate relationship is observed between the indicators of health care spending and the following indicators: index of the healthiest country (r = 0.44), human development index (r = 0.33), life expectancy (r = 0.42), mortality rate (r = 0.48) and, quite logically, in our opinion, the country's economic indicators in the form of gross domestic product (r = 0.32). In this case, very little feedback is observed in the rate of obesity among adults and all health indicators, as well as gross domestic product.

Thus, as a result of research, it was found that Switzerland and Japan lead in almost all indicators of public health and economic indicators, the lagging countries in these indicators - Macedonia and Serbia.

Discussion

Recently, a healthy lifestyle has become especially relevant, as one of the key factors in ensuring human health. During the period of progress and development of various technologies, the human body is subjected to various kinds of loads associated with complicating the structure of society, increasing man-made, environmental, psychological, political and military influences that provoke adverse changes in people's health.

According to the modern research, the main components of a healthy lifestyle are: rational nutrition, regular physical activity, hardening of the body, abandonment of bad habits, maintaining a stable emotional state [26, 15, 27].

As the results of our studies have shown, Switzerland and Japan top the list of countries studied for all indicators of population health and economic indicators of the country. Our studies supplemented WHO data that the living conditions and lifestyle

are the most important component of human health factors [2].

The Swiss are Europe's leaders in the consumption of products based on environmental criteria. Consumers of "bio-products" can be found today in Switzerland among the people with the wide range of income levels. Healthy eating has ceased to have, like before, a lot of supporters of alternative lifestyles [28].

In the field of retail trade, bio-product sales increased in recent years in Switzerland by 4.3%. The total turnover in this area is now 1,74 billion francs a year. Thus, the share of organic products in the Swiss food market reaches 6 %. "Organic farming" may not be a panacea for diseases and does not protect and strengthen the client's health, but, in any case, "organic farming" is a huge help to the environment, which suffers from a huge amount of fertilizers and chemicals used by conventional agricultural production.

Japan, in turn, is one of the three world leaders in the consumption of fish and seafood per capita. The average per capita consumption of fish and seafood in South Korea ranked first in the world and reached 58.5 kg, according to the Norwegian Committee on Fish. In Japan, which ranks second in the ranking, 53.3 kg are consumed per year. Norway closes the top three – 50.2 kg. The average world fish consumption is 20.2 kg. Japan is a country with high discipline and hard work of citizens, which allowed to achieve great success in technology and production. A high standard of living has been recorded in the country and lifelong employment of citizens is practiced. It is believed that the longer a person has worked in one place, the more prestigious it is [25].

Most people today live longer, have a higher level of education and wider access to goods and services than ever before [10]. However, in the sphere of the quality of human development, in our opinion, there are drawbacks. The number of years lived and the increase in the duration of education do not automatically translate into the quality of human development. In the future, progress should be monitored and the main focus should be put on the quality of human development, the level of public health, life expectancy in an ecologically clean environment with minimal morbidity and disability.

According to modern concepts, health depends on 50 % of the lifestyle, 20 % on heredity, 20 % on the action of environmental factors (including the professional environment); and only 10 % of the level of health care development [1, 2]. These figures are very approximate and insufficiently substantiated, and they are based on expert assessments.

In our view, there is no need to increase health care spending in low-income countries. It is necessary to pay attention to the quality and level of education of the population. Also, we believe that the role of heredity should be increased due to the role of lifestyle, because it is known that with a favorable genetic base, sometimes even a very unhealthy lifestyle does not lead to serious diseases for a long time. At the household level, it is common for a person to attach exaggerated importance to medicine and pills, placing responsibility for their health on medicine, and underestimate the importance of their bad habits and lifestyle. At the same time, it should be borne in mind that a person is responsible for his own health, medicine is only sometimes able to correct human errors in relation to his health.

Conclusions

Our findings indicate the number of factors and relationships between public health indicators and the country's economic indicators.

Summing up, we can say that life expectancy, human development index, economic indicators of the country's development (GDP) are significant factors affecting the state and level of human health. Other things being equal, higher incomes make it possible to lead a healthier lifestyle. At an individual level, a higher income allows you to eat better, live in a healthier environment, play sports and have timely access to quality medical care. Rich countries have the means to create healthy and safe living conditions and provide their citizens with timely, high-quality medical care.

As a result of research, in our opinion, it is also necessary to pay attention to the quality and level of education of the population; increase the role of heredity due to the role of lifestyle; more attention should be paid to studying the effect of environmental factors (including professional environment) on human health, on the quality and life expectancy, because, in our opinion, over time, the contribution of this factor to the health of modern man will increase.

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