LIFESTYLE AND SUSTAINABLE DEVELOPMENT - IMPLICATIONS FOR HUMAN HEALTH

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Abstract
Lifestyle is a concept closely related to society development and thus the emergence and widely spreading the concept of sustainable development. In the context in which environmental factors have been altered because of the hegemonic desire of developed nations to using natural resources at a rate beyond the regenerative capacity, the unprecedented indirect effect of impaired human health due to these actions appeared. This explains the lifestyle concept development and the link with sustainable development. This article aims to highlight just those indicators that correlate with variables such as pollution and to show that, regardless of the stage of economic development of a country, the influence of pollution on health has negative repercussions. In areas where lifestyle is reflected through positive actions, like environmental protection, the benefit most important to people is to improve their health.
Keywords
lifestyle, health, pollution, sustainable development

Introduction

Lifestyle, long gone unnoticed until now, is currently one of the most debated topics in the society. As people used wrong resources, because the direct and indirect environmental aggressions, lifestyle has become increasingly important. Seeking a current definition of this term is hardly to be found, but otherwise is very difficult because such a concept is widely accepted by specialists because of the multitude of features and important variables due to cultural factors, specific traditions of community and responsibility to receive and take on new practices in everyday life unverified sample time (Chirila, 2012). However, it is generally accepted that lifestyle is the particular way of living biological, psychological, spiritual, social, all told, in a very broad definition, that lifestyle is the way to live distinctive and recognizable (Sobel, p. 23).

The effects of environmental degradation on human health are of two kinds: direct and indirect. The direct one is due to the harmful effects of pollution on human health, and the best example is the air and water pollution. The indirect is manifested by interposing some activities between harmful human actions on the environment and determining the factor of human health. In both cases, the same cause has been identified: aggressive and destructive human action on the environment, and the same effect of degradation of human health. Currently almost all medical treatises specify pathogens of diseases due to pollution (the main cause of human aggression on the environment), and the emergence of ecological textbooks containing references to medical research on issues of health. The link between human health and the environment is the lifestyle that the man intends to adopt for himself,

referring to his own lifestyle and lifestyle related to environment. If the first has short-term impacts on human health and is easily modified with immediate consequences by improving lifestyle, the second has medium and long term impacts on human health, and it is hard to reach and change the attitude of people because the effects are visible for longer periods of time. In both cases, preventive actions, the environment and the factors that directly influence human health may result in a correct lifestyle, which in the context of environmental factor intervention can translate the term sustainable lifestyle. Complementing the above definition, and having regard to the subject so far, we can safely say that a sustainable lifestyle is reflected by the expression of individual behaviour privately which does not influence the quality of life of future generations by corrupting the biological and physical universe.

Based on this definition, we propose to investigate the effects of pollution on human health and the way that lifestyle can help to mitigate the consequences through medical way. This piece of research tries to answer the question: is health influence by human lifestyle? The objectives of the paper are to identify the correlations between human health, pollution as result of lifestyle and consumption pattern and countries development to reveal and argue the possible causes of illnesses.

1. Literature review

The effects of pollution on human health are discussed in literature in different ways for children and adults. The first category is more vulnerable in the first year of life, many studies describing the impact of air pollution upon illnesses of children under one year (U. Gehring et al., 2002). To show some pertinent conclusions, the data regarding air pollution (in emissions of CO_2) can be correlated to an indicator related to health, such as HDI (Human Development Index). The latter is used in World Health Organisation reports, because it justifies the impact of cancer disease among population (as main illness spread along with world economies development (World Cancer Report, 2014).

In literature, specialists use one more indicator: Functional State Index, FSI (Fashel and Bush, 1970) which is an aggregate indicator of HDI (Human Development Index), HPI (Happy Planet Index), GPI (Global Peace Index), DI (Democracy Index) and II (Income Inequality). It is considered one of the most sensitive indicators related to the correlation between human health and intensive development based on polluting industry and which leads to environment degradation and, finally, to human health degradation.

Still, because of its complex character which takes into consideration the hope of life, education and decent life standard, we consider that it can be correlated with the degree of pollution and cancer disease in a period of time. The main issue is that pollution has long term effects on health indicators, which leads to the idea of considering different time series. Thus, any reports on environment shows that the effects of air pollution on human health can appear after year, even decades. The most vulnerable populations are children and groups of people after 65 years.

The correlation between polluting emissions and health can be done considering longs periods of time of this indicator which reflects the degree of global pollution: pollution as a result of burning fossil fuels through emissions of CO_2 (the other harmful substances being associated to this indicator). After all considerations above, the average of CO_2 emissions per capita from 1995 to 2009 in developed countries will be compared to an indicator of health related to cancer, as average, in the period 2003-2009.

2. Data analysis

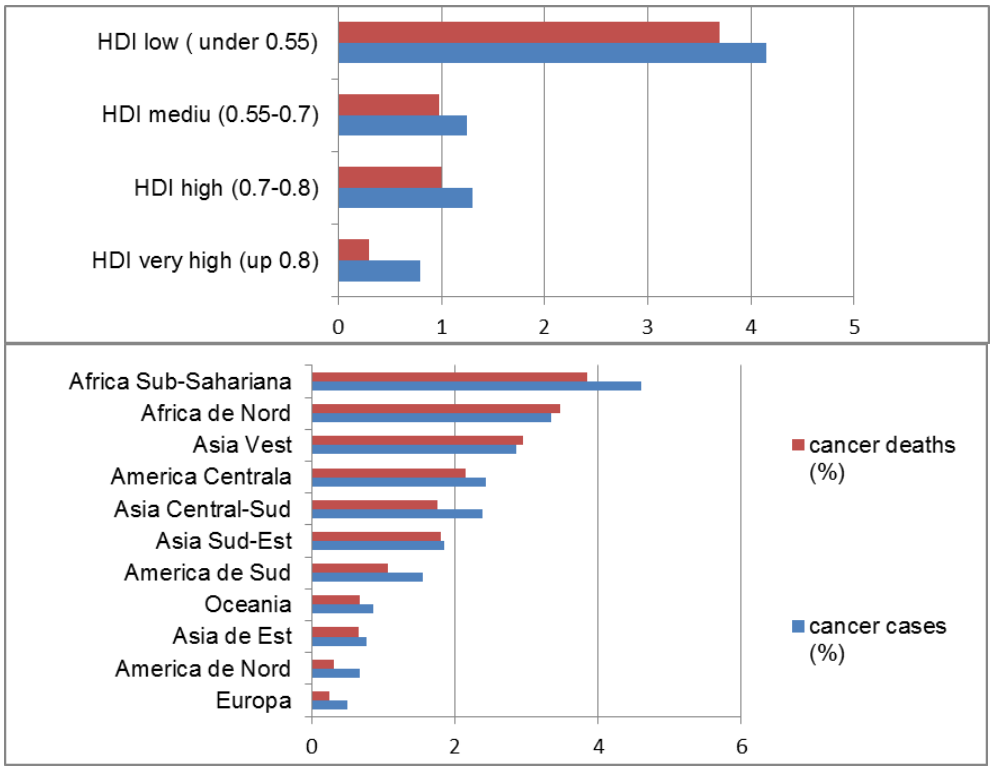
In analysing data of cancer illnesses, the rate to 100,000 thousand inhabitants is normalized to 10,000 inhabitants, for achieving a similar scale put on the graph together with the indicator of air pollution: emissions of CO_2 per capita. The indicators refer to average calculated in the period 2003-2007. Correlations between these data show a coefficient of 0.7. What draws the attention is that the correlation coefficient between HDI and pollution emissions is higher: 0.75. Considering the components of this index of human development, one can notice that pollution relates to the degree of education and living, which are important components in using natural resources and their use. Synthesising data, the top of countries with high cancer incidents per 10 thousand inhabitants, as average of period 2003-2007, compared to the level of HDI and CO_2 emissions are presented.

Table 1 Cancer incidence, HDI, CO_2 emissions, 2003-2007 average

	Cancer incidence (rate to 10,000 inhabitants) as average of 2003-2007	**HDI (Human Development Index very high)**	**CO_2 emissions/inhabitant (average 1995-2009)**
U.S.A.	34.7525	0.914	16.9
Australia	32.585	0.933	18
Denmark	30.855	0.9	7.9
Slovakia	27.645	0.83	8.1
Spain	26.125	0.869	6.3
Japan	21.805	0.89	9.2

Source: own calculation based on statistical data

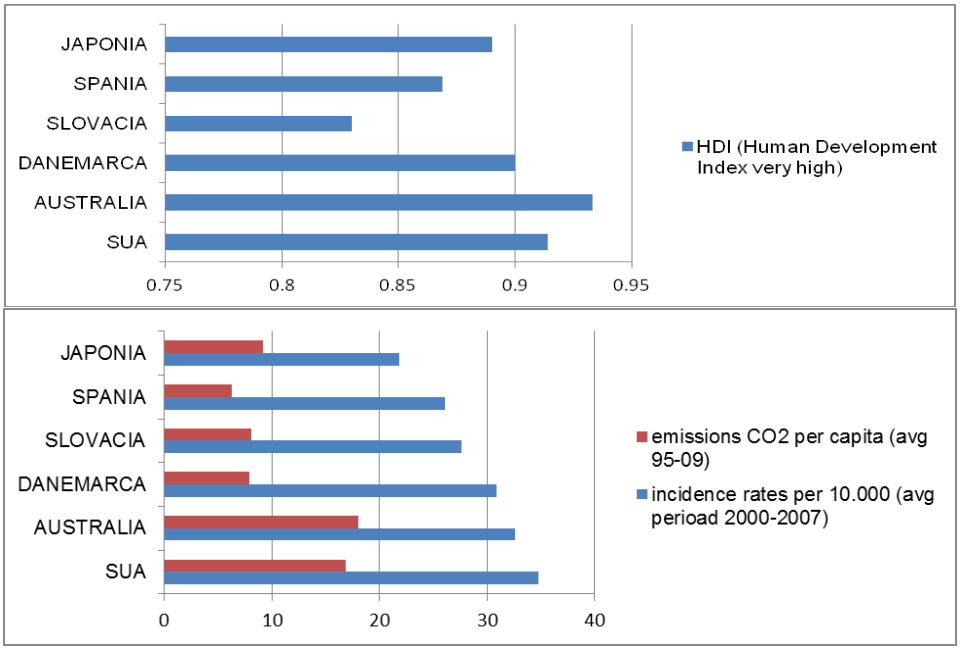
At the opposite side, data regarding children (under 15 years) cancer and mortality as rate in total population are centralized, as average of the period 2005 and 2012. Data show an inverse correlation between HDI and children cancer. This leads to the idea that developing countries have high rates of children cancer and developed countries have a low rate of children cancer.



Source: own calculations based on statistical data

Fig. 1 Correlation between HDI and cancer (deaths and incidence)

The situation is different in the case of adults, when the effects of pollution affect human health after a longer period of time, as data already shown. Thus, in developed countries, where HDI have high levels, where CO_2 emissions have high levels as well, an upward trend of cancer incidence registered, in the same periods comparable in those regarding the negative effects of pollution on human health. As the graph shows below, a strong correlation can be noticed between all indicators presented before.



Source: own calculations based on statistical data

Fig. 2 CO_2 emissions correlated with cancer incidence rates and HDI

All these data show that human health is closely linked to pollutants, a specific example being the present research. This finding is particularly important as the precise effects of different substances on the development of cancerous diseases (causes of) are not yet known, but the statistical and econometric research has shown that impairment is caused because of lack of health lifestyle component of environmental conservation. Thus, there are different categories of people because of their lifestyle are more prone misfit cancerous diseases. We could say that there are one or more drivers, according to the literature, related to lifestyle adaptation to human health and can result in a greater proportion of illness that affected organ pollutant (see table risk factors in the emergence of different types of cancer). The studies show that the best example is given the close link between developments of cancer in the last time. Cancer climbed in the rakings as a cause of mortality from place 5 to place 2 in just 10 years, and projections show that next 10 years will rise as first index on mortality in the world (estimated by WCR - 2014). We reported on this disease because it is the most significant affected by pollution on humans, in all aspects: the pollution of water, air, soil, food and electromagnetic pollution (the main source influencing the life and health) -According International Agency for Research on Cancer.

Table 2 Factors causing cancer

Food deficiencies	30%
Smoking	30%
Heredity factors	15%
Obesity, sedentary	5%
Professional risks	5%
Infections	5%
Alcohol	3%
Drugs	2%
Pollution	2%
Exposure to UV	2%

Source: Beliveau and Gingras, 2006

As shown in the table above, lifestyle puts emphasis on the possible development of diseases, with a cumulative risk of 70% of getting sick of a cancer disease if humans do not behave like a component of the environment where they born, grow and dye, being influenced by external factors considered aggressive pollutants to our health.

Conclusions

Considering of the arguments revealed, some conclusions can be drawn. The human lifestyle influences its health. Pollution, as a way of living, affects the quality of human life in all aspects, with regard to environmental pollution that has indirect effects on human health, and the failure of a lifestyle filled with direct consequences on human health. Pollution is considered one of the most direct important components of the environment – man.

Countries with high HDI (developed countries) have a high incidence of cancer in adults and low incidence to children, and high CO_2 emissions. Countries with low HDI (developing countries) have a high incidence of cancer in children and low incidence in adults, and low CO_2 emissions.

Future research may go deep to investigate the pollution impact over health and how we could chance our life style to keep "green" the connection between environment and human health.

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