Alexandrina D. CRUCEANU
"Al.I.Cuza" University Iasi, Doctoral School
of Chemical and Life Science and Earth -
Faculty of Geographie-Geology
Izabella ŁĘCKA
University of Warsaw -Poland
Faculty of Geography and Regional Studies
Ionel MUNTELE
"Al.I.Cuza" University Iasi, Faculty og Geographie-Geology

THE HEALTH STATE OUR MOST PRECIOUS ASSET ? A SHORT REVIEW

Case study

Keywords
Health state
Physical determinants
Anthropogenic determinants
Medical geography
Health geography

Abstract

When we have health problems, we become "consumers" of resources (financial, material, affective and so on), and personal autonomy is losing ground to dependence on others (family, friends, doctors, health system, society in general), so that, our problem can become a problem of the society which, despite its good intentions may not be able to provide the necessary support"here and now".

In order to prevent, eliminate or at least improve the causes that gave rise to the various health problems, we first need to know them. Heredity, environment and education are factors often invoked in explaining the processes and phenomena underlying at our wellbeing, indisputable thing in fact, but which of them have a higher share in the evolution of our health state, and how do they do it ?

Thus, the paper aims to highlight the possible determinants of the population's health state in general, and of the individual's especially from the medical/health geaography point of view.

1. Introduction

In the famous novel *Quo vadis* by Sienkiewicz it is said (through the voice of Petronius character) that *"happiness is always where man finds it*". Can we really apply this truism for our health state too ?

Increasing life expectancy is now a desideratum for contemporary society and a long life without physical and psychical conditions and/or disability,is equally important, reason for which not only "quantity" but its "quality" are invoked more and more.

We all want to be happy, wealthy, and especially healthy and, however, only some of us can enjoy this privilege. Undoubtedly, the future resource will be given by the human being, and how else than a healthy one.

The health reflects socio-economic conditions, cultural-sanitary, so,like any socio-economic process, this can not be studied, separated from these health's determined conditions (Mureşan, 1989) where inequalities among individuals are frequently combined with very difficult climateric conditions, unequal exploitation of natural resources, latent geopolitical conflicts, etc., inequalities which are not only the poor countries' appanage. Some epidemics have reappeared in developed countries (tuberculosis, saturnism), others were born in such countries (eg. avian flu, "legionnaires" disease) (Barbat-Bussièr, 2009), so that the difficulty of studying the phenomenon is directly proportional to the high number of variables involved in this process.

The base of population's geography is the geosystem,a larger entity than society or human population (Muntele, 2009), so that, all geography would be worthless if it did not start from the problems of human presence and did not arrive to a dynamic and complete image of all categories relations between population and the environment in which it is called to live(Vert, 2002), and consequently, which would be the geography's role, if not to produce useful knowledge, and to explain human behaviours in space, and to analyse their consequences ? (Bailly et al., 2008).

Thus, the paper aims to illustrate the possible determinants of the population's health state in general, and of the individual's especially (frequently invoked in literature and speciality studies) from the medical/health geography's point of view, as well as the manners/mode in which physical-geographical factors (natural and anthropogenic) determine and influence our health state.

II. General notions regarding medical/health geography

Being a human, social, political and economic problem (Fleuret, 2006), health is not only the absence of disease, but a completely physical, moral and social well-being state (Fleuret, 2007a), psychological (Bruner et al., 1992), and the health concept, as well as the disease, is a plurisemantic concept, its meaning facing variations according to different groups, social classes or populations (Dumitrache, 2002).

The "medical geography" term is assigned to a French naturalist doctor, Finke, and it dates back to 1774 (Fleuret, 2007a), a term which later was known as "the health geography" or "the geography of disease", and through which it is intended the study of medical phenomena in relation to the space, and the identification of the differences existing from one area to another, and their determining factors too.

At the origins of the medical geography term,there are those medical topographies (which were actually some local topographies), especially made in France and which analysed the causal relationships between climate and the human being (Dumitrache, 2002) and the research and approach in medical geography were viewed conventionally around two major themes: 1) "geographical epidemiology", "geographical pathology" or "ecology of disease" and 2) health planning, help-seeking behavior and medical services resources (Mayer, 1982).

Aside from the spatial analysis of the population's health quality in relation to their physical, biological, economical, behavioral and cultural environment (Bailly et al., 1984), attending the health services and often the decisive role of the couple time/distance concerning the accessibility of health services (Bailly et al., 2008), and also the identification and hierarchy for each spatial unit of health's risk factors (environmental, social, cultural and so on) (Léevy & Lussant, 2003),there are other issues that medical geography has been taking or takes into consideration.

More recent concerns have contributed to extending the borders of this discipline,considering the social and cultural geography, establishing new directions, without neglecting the already existing ones. (Kearn & Gesler, 1998), (the social geography is not necessarily seen as a branch of human geography, but a new approach to the whole field of cultural geography, as Frémont et al., 1984 stated), so that,the so-called "cultural turn" in medical geography has contributed to the transformation of this field into a new formulation as "health geography" (Gesler & Kearns, 2005).

A very detailed analysis of the development, topics addressed and terminology used in this discipline is performed by Rosenberg (1998), more exactly: mapping and modelling disease and health (mostly of Mayer's geographical epidemiology); the access, delivery and planning public health services and a debate on medical versus health geography.

The answer to the question addressed by Kearns and Moon, to scientific communities : What is new in the new health geography ? (Kearn & Moon, 2002), is that medical/health geography has focused in the last few years on medical approach, with a higher interest for a state of well-being and health maintenance (Moon & Kearns, 2007).

More recently, the concerns include the natural and social environmental health problems created by the human agent;the emergence of new disease and their diffusion through settlement systems of the population's mobility; the processes behind epidemics of non-communicable disease; locational optimization of health services and their accessibility and also, the social construction of the health and caregiving places, disease ecology, spatial and locational analyses (Meade, 2014).

Therefore, the medical geography is not a dictionary of disease, whether infectious or not, but a rather theoretical and applied research field of the environmental characteristics that determin the health state or illness of a human community (Teodoreanu, 2004) and that's the reason why there may be differences regarding the patient's status,the state's nature considered normal or pathological, depending on the type of society and the general level of education and development reached (Dumitrache, 2002).

Besides those things mentioned above, the medical geography aims also to: develop forecasts about spatial distribution risks of infectious processes; establish optimal locations for placing sanitary facilities and medical care, in order to maintain a constant ratio between pathogenic and sanogene forces (Ionac, 2000).

Regarding research in medical/health geography,it has used over time, both quantitative and qualitative methods (simultaneously or independently) were used according to the theoretical approach that the research was reported to.

With all scientific errors that may occur in scientific researches in general and epidemiological in particular (Gary, 2007), among the most used methods in medical/health geograpgy is the epidemiological one, consisting in the correlative study of the phenomena with factors known or suspected to be the main risk in the emergence of morbidity, accidents etc. (Mureşan, 1989), followed by the interview method, considered the qualitative approach of the facts, for a better connexion/correlation between social and spatial realtionships (Wiles et al., 2005); investigation/cross-examine; biographical method; phenomenological method, case study (Eyles, 2007).

At the same time,a very important aspect is the scale at which these processes and medical phenomena are studied, so that, the information resulted in a higher degree of homogenity and to reflect the realities existing, as accurately as possible. For example, the Global Mental Health's proposition to "scale up"/intensify the evidence concerning mental health care worldwide has created a heated debate between transcultural psychiatrists, anthropologists, and GMH proponents, a debate characterised by the polarisation of "global" and "local" approaches to the treatment of the mental health problems (Bemme & D'souza, 2014), and the effects of which may reverberate on the quality of the resulting information.

III. The natural determinants of the population's health state

Through natural determinants of the health state,we understand all those elements, processes and phenomena conferred by relief, climate, hydrography, the geological, edaphical, fauna and vegetation structure and composition, from a certain geographical area, likely to influence and determine the population's health state in general and of the individual's in particular.

The World Health Organisation estimates that one-fourth of the factors responsible for the occurrence of disease, including more than one third of childhood disease, is due to the changing of air, water, soil and food factors (McMichael et al., 2008), and environmental factors such as natural disasters, air, water and soils pollution, the noise, ionizing and non-ionizing radiations, nanomaterials, contribute in proportion of 10,5% - 23,1% to the "global burden of disease" defined as the difference between life expectancy and the numbers of healthy years (Viel et al., 2001 – after Besancennot, 2007).

The geological composition may be both a permissiveness and a favorability element for health state and its maintenance (the classical example is the mineral water springs, the mofettes, peats deposits and peloids, successfully used in medical practice) or on the contrary, a restrictive element for this, for example, the habitation in the areas with extraction of certain underground resources (such as uranium) or building houses and space arrangement/management in areas with high seismicity.

The geomagnetic anomalies are numerous,of high or low intensity, often in the fault rift, generally in the regions with crystalline rocks or iron ore reserves, some of them considered to have benefic effects on the body, or which create the appearance of paranormal phenomena. So for example, it is said that on a distance of about 1 km² in the Bucegi plateau, the tourists don't feel exhausted (Teodoreanu, 2011).

The relief is likewise a favorable or restrictive factor for the health state evolution. Thus, in areas with rugged terrains, on hills and mountains, negative forms – depressions and

valleys -, maintain a shelter climate or thermic inversion conditions which change cold stress, owed to the low temperatures during the winter and, in addition, emphasizes the air polution for localities with active transport or polluting industrial enterprises (Teodoreanu, 2011).

Thus, through altitude, massiveness, degree of fragmentation, the relief energy etc., relief has created for the human communities, the possibility to settle and build houses, annexes, institutions and then society on the whole, so the degree of comfort and wellbeing in general and health in particular, has evolved in some cases depending on the constituent elements of the first one, and of course, depending on the individual's ability to adapt to these.

The relief's altitude is another important element taken into account where, at the mountain, for example, climbing causes clinical disorders through: thirst, vomiting, dyspnea, tegument's congestion, injuries, bleeding, tiredness, memory losing, mental depression, asphyxia and so on, excepting the mountain areas with warmer climates. (Peru, Bolivia, Tibet, Ethiopia) (Vert, 2002).

The edaphic component is also very important, knowing that generally, dry soil is more sanagenous than regions whith high moisture, such as swamps, where the air is more humid,there are more frequent mists (Teodoreanu, 2011), determining thus its composition and structure, where the presence or absence of the minerals and nutrients in the soil, affect the crop quality, food consumption and consequently, the health state.

Physical environment that supports life, is also the primary source of morbid risks of any kind,as its components (soil, water and air) hold a number of pathogenic properties which, through their separated and conjugated effect, determin the disorder of environmental integration mechanisms of the body, bringing serious damage to its physiological equilibrium (Ionac, 2000).

Therefore, the places are linked to/in space, distance or proximity (Kearns, 1993), and health raises many questions regarding its relationship with the territories and spaces (the first ones being of sanitary and epidemiologic order and the second ones involve the functional structure and organization of health systems) (Barbat-Bussièr, 2009), and the quality of a certain place is not absolutely conferred, but rather a value assigned by the communities living or intending to move there (Baudelle, 2004).

Osmond and his collegs discovered in 1990 that the people born in the north of England or Wales, showed a higher rate of heart disease, rate persisting, even if they moved from one side another of the country, suggesting that the place where you spent your childhood has a broad and profound effect. Similarly, Greenberg and Shneider have found in U.S.A that black people born in a certain region but who died in another one, had a mortality rate similar to the place where they were born.(Jones & Moon, 1993).

The attributed value to many landscapes, especially when they are based on the harmony impression that they can evolve (Rougerie, 2007) is related to what Yi-Fu-Tuau called in 1974 ”topophilia” – or emotional link between individuals and places (Curtis, 2007), so it is not possible to separate the health's experience and health care from the place where this is experienced, because the importance of therapeutic places (term introduced by Gesler in 1992) for the pacient’s wellbeing should be taken into account (Andrews, 2002).

Climateric conditions.

Of all physical-geographical factors analysed in the study of the population's health state, the climatic ones are most often invoked, considering that from all the physical factors of physiological stress, the atmospheric ones are the most aggressive because of their higher temporary variability and their wide spatial extention (Ionac, 2000), and the analysis of this influence, regardless of the favorable or limiting character, must start with the biologoical role (physiological) of climateric elements concerning human beings, moving then to the climate effects on the society in general, and finally, to the society’s role in climate change (Vert, 2002).

From early times, people have tried to understand the causal relationship between weather and health, thus, Herodotus from Halicarnassus (ca 484-425 BC) attributed to the sun the qualities in strengthening of the bones, and generally in improving health state, knowing that people around Mediterranian (Egyptians, Greeks, Romans) used to apply sun bathing for wound care and fractured bones and the famous physician of antiquity, Hippocrates from Kos (460-337 BC), ”the father of medicine”is a subtle observer of the relationship between patient, disease and weather (Teodoreanu, 2002).

It is clear that the numbers of deaths are higher in periods of atmospheric instability, which explains the morbidity peak in the late winter and early spring, when the weather has a maximum instability (Teodoreanu, 2004), the seasons being thus associated to an increased frequency of some disease (eg, in spring prevailing maniac and melancholic conditions, epilepsy, bleeding, angins, hoarseness, cough, leprosy, eczema) (Teodoreanu, 2011).

Excepting temperature, the human being is more sensitive to discontinuous phenomena, such as radiation, nebulosity, wind and rain (Lamarre & Pagney, 1999), and more than that, the physiological threshold of thermal comfort depends on both objective factors (the temperature and air

moisture together with wind speed) and sujective factors (gender, age, health state and past climatic experience of individuals exposed to a certain climatic environment - Ionac, 2000, individual features and so on, the most adaptable being apparently the young and healthy people (Teodoreanu, 2002, 2011).

The geographical position is also involved in the overall variation of comfort limits, and if for England the limit of comfort is considered from 14,4 to 20,6°C, for USA20,2-26,7°C, and for tropical regions, from 23,3 to 29,4°C, in conditions of relative humidity of 30-70%, for European temperate zone, the limit of thermic comfort is considered between 16,8 and 20,8°TEE, and for American temperate zone, 18 to 22°TEE (Teodoreanu, 2011).

The thermal comfort from inside buildings must be taken into account too (Ionac et al., 2012a, 2012b), the way in which the values of microclimate parameters can influence working conditions in office buildings, because some studies have observed a close correspondence between optimal values of bioclimatic indices and the subjective perception of weelbeing and comfort from collective groups.

And not in the least, we should mention the impact of weather for providing home care(Skinner et al., 2009) where the climatic conditions in winter may create different ”scales of care” translated into geographical, administrative, economic, operational, physical, social and psychosocial.

The climate change

It is expected that climate change to increase the average temperature and at the same time,the number and intensity of heat waves that are associated with increasing morbidity and mortality in short time (Nerlander, 2009).

Among the causes of these climatic changes,we can mention the dynamics of tectonics plaque, solar production, orbital variation, volcanic eruptions, human influence, represented mainly by deforestations, urbanization, industrialisation, burning of fossil fuels and releasing in atmosphere greenhouse gases (see McMichael et al., 2008, and Mohanty, 2013)

The effects felt are of the most various, such as: high temperatures, fast multiplication of vectors, water contamination, water scarcity and drought, liberation of substances (which may lead to increasing respiratory and cardiovascular conditions), increasing the ozone concentration (thus increasing the incidence of conditions such as asthma or allergies), increasing ocean levels (resulting in coastal erosion, their flooding and contamination of fresh water with salty one), increased natural disasters (such as storms, cyclones, hurricanes, floods in some areas, droughts in others, forest fires, earthquakes and volcanic eruptions) (Swain, 2013), skin cancer, cataracts and blindness, slendering of immunity system (Misha, 2013).

Hydrographic factors

Absence of water in certain regions represents a real obstacle, often insurmountable, as excess of water has similar consequences, and its quality matters too (Vert, 2002), so that the risks due to the chemical contamination with various substances (such as arsenic) causes in addition to the immediate effects (intestinal disorders/diarrhea), other medical conditions too, such as skin pigmentation, hyperkeratosis, cardiovascular disease, neuropathy and cancer (McMichael et al., 2008). Freshwater resources of the world, their availability and quality are in addition to those mentioned above, extremely important elements in the study of the population's health state.

Fauna and **vegetation** is representative especially when we consider the transmission of certain medical conditions (especially infectious)through vectors (eg. insects, mosquitoes, ticks and so on) that can trigger the appearance and maintenace of epidemics and even pandemics on extended areas.

IV. The anthropogenic determinants of the population's health state

Health care

According to the Center for Health Policies and Services, Bucharest (2006), a health system is represented by a set of elements that interact to contribute to the insurance of the individuals’health from a community. The components of a health system, considered subsystems, are: production and development of resources, establishment of resources regarding producing services, service delivery, management and funding.

The geography of health care systems studies the distribution of equipment and healthcare stuff, which helps to define the level of medicalization (development of medical structures) of the population affected by certain disease, analysing the unequal distribution of supply and health resources and medical consumption (Barbat-Bussièr, 2009), where in the public health system, for example, health services management is often removed from its consumers (Jones & Moon, 1993).

Accessibility is an important arrangement issue, that extends beyond the urban built space , necessarily including the resources, means of transport, routes, and urban facilities (Bodin, 2007),the waiting time of a patient for a specialist (Harrington et al., 2014), and turning environment accessibility into an indispensable condition for a good public health care, including people with disabilities, is not a fad or a desire to create an

additional concept desired by researchers (Fournier & Haddad, 1995), but a sine qua non requirement for health's maintenance and support.

In the health care/system (public or private) analysis the health **technologies are taken into consideration too, that focus on** (after Vlădescu & Enăchescu, 2002) : **material character** (pills, devices, equipment and supplies, medical and surgery procedures, support systems, organizational and managerial systems), **objectives** (prevention, screening, diagnosis, treatment, recuperation/rehabilitation) and **stage of technologies' broadcast** (earlier stage of distribution, experimentation, investigation, admission, overfulfilled, outdated or abandoned technology).

Nevertheless, the route and the success of treatment depends on other factors too, such as **social medicine workers** (Tihan, 2004), **emergency medical services** (for example, EMS – Emergency Medical Service – which represents an interface between primary nursing and hospital, a great sourse of epidemiological information and health care - Krafft et al., 2003), air **quality management** (Luca & Ioan 2012), water, soil and space in general, and also, the number and surfaces of green spaces existing in certain geographical areas, and to which the population can have access.

Regarding services provided for older people, two types of elderly communities have been identified: communities that have high services, the seniors have a good health state, superior facilities and the communities that have poor services, in which seniors have a poor health state and limited facilities (Davenport et al., 2009), but in recent years, home care has become an alternative for elderly care, an eloquent exemple being given by "residential care facilities" from Beijing, China (Cheng et al., 2010), so that the situations of "bringing" health home or in other nontraditional healing, fragments and substitutes the voice of scientific authority (Gesler & Kearn, 2005)

Three recent developments have a direct impact on the organization of the health care (Fleuret, 2007b), more exactly: lifestyle changes that generate new pathologies and medical conditions; life expectancy (due to the medical progress too) and not in the least,the ageing of the western population which caused an epidemiological transition with an increasing proportion of chronical disease related to ageing.

Besides those mentioned above it is advisable to consider also hygienical conditions from public and private hospitals, how the patient is treated (and not only strictly from the medical point of view, but with respect, consideration and dignity), emigration of doctors and medical professionals from less developed countries to those already developed (thus emphasizing the discrepancy already existing), the criteria according to which the subsidizing of treatments and hospital practices is realised, and not in the least, health education among the population.

It is a fact that to prevent is easier and involves fewer material, financial and time resources than treating problems already arising, so that the initiation, development and support of health education among the population is required not only in schools and academic areas, but also in the family, at work and in general in all public and private spaces where the information can " run" for all.

Social environment

The base of brain development is the early attachment and dependence on others and our social nature binds us fundamentally to the others, lifelong, but when these relationships/connections are strained or broken, health consequences are profound (Ornstein& Sobel, 1999), but the connection is clear: individuals need the community and the community needs the individuals' involvement in order to develop (Foot, 2012) or in other words "people need people" (Gesler & Kearn 2005).

Between nature and society, the social space stands out as a collective construction in particular, but made up from a variety of private interventions that do not respect all the same rules and immuable principles of actions (Di Méo& Buteon, 2005) and the meaning of"social environment" can vary considerably from one study to another (McNeill, 2006).

Broadly, the dimensions of social environment include (after McNeill, 2006): interpersonal relationships (e.g. social support and social networks), social inequalities (e.g. socioeconomic position and income inequality, racial discrimination), and neighbourhood and community characteristics (e.g. social cohesion and social capital, neighbourhood factors). Neighbourhood factors include: physical environment (e.g water quality), the availability and support of social, community and health services, the community's reputation or other cultural or historical characteristics.

The social capital is generally regarded as an important factor in determining health state (Abbott & Freeth, 2008), but the index of which can vary from one community to another or from one ethnic group to another. The study of Zimmerman & Bell, 2006 are examples regarding white and hyspanic populations or the one undertaken by Pickett & Wilkinson 2008 on ethnic density from some neighbourhoods and the relationship with the health state of its members.

The studies have shown that poor regions are associated with worse health status before and beyond the characteristics of the individuals living there (e.g. Robert, 1999) (after Jeffry et al., 2004)

with some differences that can arise in the case of ethnic minorities members who live in places where there are few people of the same ethnicity, and who seem to have a better physical condition than those living in areas where the density of the same ethnicity is higher. However, through the eyes of the majority community, they may be more aware of belonging to a minority group with lower status and the psychological effects of stigma can compensate any advantage (Pickett & Wilkinson, 2008).

Another extremely interesting aspect is the so-called **effect of the"healthy immigrant"**

One example is that of immigrants from Canada, who generally have, when they arrive here, a better health state than their Canadian counterparts, born here, and with even so, the health state of immigrants is damaged after a few years (Subedi & Rosenberg, 2014) or the case of the inhabitants from the Japanese island Okinawa whose population holds the world record for longevity (81,2 years life expectancy) and where some famous gerontologists (brothers Willcox and Dr. Susuki, after Ladoucette, 2008) found that the life expectancy of those expatriated from this island, decreased gradually until it touched the performance of the host country.

The scholar environment

In a study realised by Bauer et al., (2004) in some scholar mediums, several aspects of the school environment have been identified, which can affect the pupil's health state, among which: the competition, teasing and bullying, time and quality of food served, easier access to snacks and low consumption of nutritious food in schools or limited time for lunch, where both health state and physical and psychical growth are equally affected.

The family environment also represents one of the most important factors in the evolution of the health state of its members, through the habits and family lifestyle, predominant diet, affective climate existing, parental model (present or not), stimulation or inhibition of behaviors designed to maintain a good health state.

Generating health or illness, or simply neutral, the familial environmemt is the one that will "engram" in our conscious or subconscious (often at long terms) a particular perception on the world, that we will - fortunately or not - often report to and according to which we will adopt (or not) a certain behavior that will strenghten our character, personality and temperament.

Regarding education, some studies show that the regions with a higher level of education have better levels of self-evaluation health state (Vafaei et al., 2010) and the number of schooling years and physical and psychical health are closely correlated but depend on the nature of the learnt experience and the socio-economic structures in which the student is situated.

Besides these issues we must consider the composite and contextual effect of learning (Jeffry et al., 2004) because the level of education is a complex product of the individual's previous influences (e.g. inborn characteristics), family (e.g. learning expectations), and of social context (e.g. schooling quality) and at a certain moment in life, the individual can "possess" a particular level of education that can be considered a predictor of his health state.

Thus, the association between educational level and health state can reflect in part both social context and composite effects. However, the border between composite and contextual is conceptually very unclear and in addition,there is the lack of a suitable database, an appropriate methodology and perhaps the most importantly, a proper social and epidemiological theory (Jeffry et al., 2004).

Individual factors

Biological, physiological, genetic and phylogenetic factors

Regarding the importance of genetics in determining the predisposition to certain medical conditions there have been written numberless articles, books and there have been made numerous and important studies that complete this complex "image" in which one of these show its indestructibile role or on the contrary, that this "destiny reactor" can be interrupted by the changing of the environment (Marmot & Wilkinson, 2005), favourably or not for the individual's health state in particular and of society's in general.

As we inherit some physiological traits (e.g hair, eyes, skin color, constitution, temperament) is it possible to inherit also the disposal/predisposal to certain medical problems that our parents, grandparents or great-grandparents had ? Some researches come to reinforce this statement (especially those from medicine and biology area) and others (mainly those from socio-human area) to remove it, highlighting the importance of physical, social and cultural environment as main determinant for maintaining a certain health state.

Studies on animals show close links between certain hormones (e.g.Testosterone, Cortisone) and health, but for human beings we must been consider the complexity of our society too (e.g. culture, socialization), not present in the world of animals (Rivers & Joseph, 2010) so that the extrapolation of results should be performed with caution.

The gender

The paradox health-gender is quite well researched. Generally, women live longer than men but they have more disabilities and chronic or acute disease comparatively to the latter (Bird & Rieker, 2008).

The causes of general mortality present a few fundamental differences between the two genders (Bird & Rieker, 2008) so, if among women the deaths caused by endocrine, metabolic and cardiovascular disorders are prevailing, among men there are those caused by tuberculosis, road accidents, and mental and behavioural disorders that predispose to suicide and homicide (Ionac, 2000) and diabetes, biliary affections or benign tumors are more characteristic for women, while for men,the most frequent disease are ulcers, hernias, artherosclerosis, lung cancer (Dumitrache, 2002).

Female superiority in longevity seems to be both genetically (female chromosomes make women benefit of an efficient protection against cardiovascular disease, providing them with more performant immune defenses than men) and phylogenetic (generation after generation , women have strenghtened their cardiovascular system), have increased the resistance to stress and infections and improved their defence mechanisms against tissue ageing agents – free radicals), educational, social and cultural one (Ladoucette, 2008)

Nevertheless, some studies realised on women's health state, show that measurements regarding health state and healthy behaviour and implicite the research results obtained vary depending on the geographical scale at which the study has been accomplished (Rosenberg & Wilson, 2000), so that the spatial and temporal ”variability” seems to impose this time too.

The age is another important characteristic in the study of health state, knowing that it causes metabolic changes, brings changes in terms of responsiveness or body resistance (Dumitrache, 2002) but unfortunately, our cultural background regarding advancing in age is completely obsolete and instead of enjoying the existence extenction, many believe that the price paid at the end of life is too high. (Ladoucette, 2008)

Some studies realised on the ageing of the Aboriginal population (see Wilson et al., 2010b), corroborate with other factors such as access to health services, various demographic phenomena (e.g increasing life expectancy and fertility decline) showed that it faces with problems such as loss of traditional methods of healing, geographic isolation, political identity, constitutional and legal divisions in the Aboriginal community regarding health state and access to health services (Wilson et al., 2010a), problems that may occur at the world’s populations, too.

As an addition of the above, some studies regarding **ethnicity/race** (e.g. Donovan, 1984) identify a number of links between the health state of the ”immigrants”, ”Asians”, ”African-Caribbeans”, ”members of ethnic communities” or ”black population” from northern and eastern England and its members’ perception of health state and sanitary services.

Religion appears as one of the main factors that has transformed the space, and is however a specific human mobile (Wakermann, 2002) and through dietary, behaviour rules or the intensity of subjective feelings imposed by each religion, it may influence the health state of its members. Effects of Ramadam for example, on the health of fundamentalists Muslims are specified by some studies (e.g.Toda& Morimoto, 2000) in which there were noticed significant weight loss, dehydration, increase of the concentration of uric acid and cholesterol or increasing illness risks for people with certain disease such as hypertension, hypercolesterolemya, hyperuricemia, liver and kidney disease, effects that have been observed throughout this period.

Socio-professional status and inequity

The social encompasses the relationship between individuals and groups and social territories are constantly ”suspected” to promote strenghtening of communities (Rivet, 2007) but, it seems that what matters the most is not only what we have, but especially, what we have comparatively to others (Foot, 2012).

Professor Michael Marmot stated in the foreword of Jeani Foot’s book ”What makes us healthy ?” that in England, the poorest people can expect to become ill or experience a disability 17 years earlier than rich people or they can expect to die 7 years earlier (Foot, 2012),the reason why the differences of socio status seem to be indeed, important factors for the predictability of mortality and morbidity.

There is strong evidence showing that where the income differences are very large, violence tends to be a more common fact, the probability that people trust each other decreases, social cohesion decreases and low social status affects patterns of violence, respect, shame, poor social relationship and depression (Wilkinson, 2006a) disadvantage that can take two forms:a material one (reflecting deprivation of goods and facilities) and a social one (refers to the community) (Pampalon, 2007).

Similar researches complete the above observations,through studies on the impact on the changing of the socio-professional status for young people in the rural areas(Renaly,2005),on the connection between family income and mortality(Goy et al.,2008)or on the individual’s socio-economic status and morbidity(the incidence of mental disease being three times higher in the countries with a high level of inequity).

Besides these we may mention the studies related to chromosomal disorders, occupational disease, access to public health (Krieger, 2002),the impact of poverty and social discrimination as a form of social injustice,a health inequity (Krieger,

2011), economical impact and importance of social networks in developing of marketing strategies and Personal Brand Marketing (Ioan et al., 2013, 2014) or material and educational capital that influence health capital (Popa, 2007).

Personality traits, the temperament, character and **individual's behaviour** are also important elements in the study of health and its evolution.

At Deci & Flaste's question: How do we promote a healthy behaviour so that both society and individual can benefit ? we can easily answer,at first side, but the contents of the answer can differ from one specialist to another,from one culture to another, in "time and space" even if we find many similarities among them.

Thus, a cross-examination realised in IPSEN laboratories (after Ladoucette, 2008) highlights some specific psychological moods according to which it can be realised a typical image of the centenarian (in fact, a woman centenarian), and who looks like this: she says that she has worked all her life, is rather joyful, optimistic, confident in the future, opened to the world, has much personality, even too much.She is authoritarian, even tyrannical, treating children sometimes like little kids (while they are septagenarians or octogenarians !). Even if she doesn't tend to complain, she likes to be given attention, lives without excesses but without deprivations too, and she is not a partisan of asceticism.

Besides personality and character traits highlightened above, self-perception, self-esteem and confidence are other issues often invoked in the study of health, particulary by socio-human specialists.

Any neuro depressive state decreases the body's resistance to infection (Ionac, 2000) and positive feelings in its own life, self-esteem, the control, resilience and the sense of having a goal influence the levels of mental wellbeing (Foot, 2012), therefore, mental health can be both a consequence and a cause of inequities (Friedli, 2009 after Foot, 2012) of any kind.

From all these psychological traits, two of them appeared to researchers as being decisive: **the resilience** (ability to withstand at stressful events) and **the conative** (designates human's ability to initiate and accomplish a thing, to create and undertake something, makes us curious about the future and stimulates vitality) (Ladoucette, 2008).

The lifestyle refers to the type of repetitive behaviour conditioned by the level of culture and life's standard being however under the limited control of the family and individual in the frames imposed by their economic resources (Dumitrache, 2002) and it is often invoked to explain the incidence and prevailence of different medical conditions, whether chronic or infectious.

In a study realised by Orstein & Sobel (1999), they raised the question why the states Utah and Nevada (though similar from geographical, climatic, economic, educational and industrial point of view) are so different in terms of the health of their inhabitants. Even if the number of doctors and hospital beds per capita are similar,the adult mortality rate in Nevada was approximately 40% higher than in Utah.

Thus, differences in health status can not be explained in terms of medical care but rather by the way in which they live. Utah is mainly inhabitated by the Mormons, who abstain from alcohol and tobacco/smoking and have a rather rigid social organisation and quite strict,in general and also a stable life. In contrast, the population of Nevada consume alcohol and tobacco at discretion and have in consequence a mortality rate due to the cirrhosis and lung cancer between 100 and 600 times higher. In addition, Nevada residents are transient (more than 9 from 10 middle-age people from Nevada were not born there) (Orstein & Sobel, 1999).

The diet seems to be in this case the decisive factor of health state and many studies have demonstrated this. Even Hippocrates stated that: "the nutrition should be your medicine", which recommends eating bread, fruit and vegetables as well as meat, fish and cheese as an alternative, without despising wine in moderation (Ladoucette, 2008).

And other similar studies (e.g. Balia & Jones, 2007) have also shown that lifestyle may be more important than individual's socio-economic status in determining health state.

Physical activity

It is known that physical activity positively influences the relation health-life quality (SRQL) while obesity for example is associated with its damage (Herman et el., 2012, 2013) both its duration and intensity and the type of physical activity (Cruceanu et al., 2014) that the individual chooses to practice (or not),being important.

Some studies (e.g. Herman et al., 2012) show that active individuals, both women and men whether they are underweight, overwieght or even obese have perceived health-state in more positive terms than the inactive and the adult perception regarding weight is not always the same as the real current weight, even when it is self-reported.

Smoking is the main cause of death and illness worlwide (Dumitrache, 2002) being apparently one of the most harmful behaviours,leading to cancer, heart disease, skin cancer (Gary, 2007) with direct and indirect effects on the individual's health state.

Regarding **alcohol consumption**, a large percentage of heavy drinkers was also correlated with a poor health status (Vafaei et al., 2010) but we all know that the effects of excessive

consumption do not stop at the person in question or his health state but also affect those with whom he/she interacts (family, colleagues, neighbours, the community in general).

Individual's perception regarding health state and what makes us healthy.

An extremely important role in studies regarding health and its determinants is the understanding of mechanisms underlying the patient's perception of his health state, on his wealth and on his wellbeing in general (Cruceanu et al., 2014)

We consider equally important the perception of public opinion, of media and print media on certain medical conditions where the information transmitted can be not only unnecessary but also dangerous (example of tuberculosis given by Lawrence et al., 2008) as well as the subjective social status or how people perceive their position in the social hierarchy (significantlty associated with multiple health problems) (Wolf et al., 2010) or even our empathy/affinity to people with certain disabilities (for example, if our perception to a doll very similar to human physionomy is one of affinity, it is not the same thing in the case of protheses, where the reaction is not very favourable).

The stress

Elaborated in 1936 by Hanse Selye, the stress theory states that all alarm states always cause the same defensive reaction of the body as a nonspecific syndrome, regardless of the nature of the stressor (trauma, noise, psychological trauma, outside aggression of the environment like solar or radioactive reactions, temperature and pressure variations), physical and intellectual efforts etc., stress which can be both stimulent (induced by certain values of climatic elements with maintenance value or therapeutic) and harmful, pathological (when the resistance state is exceeded through its size and duration – for example exposure to a prolonged heat or a very low temperature) (Teodoreanu, 2011).

The influence of chronic stress on physical and mental health is a well known fact, but the question is how and why psychological exposure to certain social conditions can have so many various effects (Fisher & Braum, 2010) for the society and the individual. A possible explanation is given by Wilkinson (2006b), noting that the most important determinants of chronic stress in the development of societies seem to be those related to social environment, namely: low social status, friendship relations/social contacts and stress in early life (or early maturation).

At the same time, when,in history,were people not stressed ? Maybe when man had to leave the caves for the nature full of wild and dangerous animals ? or when he started to farm and to wait for the results of his work (the harvest) or maybe when he began to build houses, buildings (religious, cultural, urban, secular etc.) or to ”start” wars (under various pretexts) or maybe when he began to create art, literature, music, technology etc.

The contextual, history and customary factors

Some studies and theories state that the health problem is a social and cultural construction and geographical studies regarding space and health should focus on practical research of ”cultural safety” (Dick & Kearns, 1995) and mortality rate owed to infectious disease may be caused in a higher degree by social and cultural changes (eg, increased resilience of the population to defend themselves against microbes/pathogens, environmental transformation into a less harmul etc.) than by the medical interventions (Orstein & Sobel, 1999).

Instead of conclusions

Both natural and anthropogenic factors influence the individual's health state, but the manner, mode and intensity with which they do it may significantly differ in time and space, from one culture to another or from one society to another.

Any change of a component involves immediate changes in others and the apparent equilibrum of the population is a dynamic one, resulting in permanent readjustment of its components (Muntele, 2009) and even if a factor is an active determinant in a causal system, it can not be detected if it is distributed in the same homogeneous manner in the population where the persons are compared (Philibert & Breton, 2007)

The relativity of phenomenon is directly proportional to the degree/measure in which we study more carefully its determinants for the simple reason that what an independent variable represented at a certain moment (namely a possible explanatory cause) to explain the effect (element, phenomenon and/or process of any kind) can also become the effect,that is a dependent variable.Health state self evaluation is subjective and evaluation standards can change depending on our physical, psychological, personal and socio-economical changing, to context, the cultural influence, to conceptions or preconceptions, gained experience and not in the least, the development of society in general.

And because we started this paper with a quote from Sienkiewicz,it is worth concluding in the same manner, with a suggestive reply related to health state and its perception (this time shown by the voice of Vinicius): ”*but the moment I have to leave this hospitable house, I see that the suffering here is more valuable than partying anywhere, elsewhere, that disease here is more pleasant than health in any other place*”.

Acknowledgements

This work was supported by strategic grand POSDRU 159/1.5/133391, Project *"Doctoral and Post-doctoral programs of excellencefor highly qualified human resources training for reserch in the fild of Life sciences, Environement and Earth science "* cofinanced by the European Social Fond with the Sectorial Operational Program Human Resource Development 2007-2013

Bibliography

[1] Abbott, S., Freeth, D., 2008, Social capital and Health. Starting to make sence of the role of generalized trust and reciprocity, *Journal of Health Psychology, Volume 13*, Issue 7, Pages 874-883.

[2] Andrews, G., 2002, Towards a more place-sensitive nursing research: an invitation to medical and health geography, *Nursing Inquiry, Volume 9*, Issue 4, Pages 221-238.

[3] Bailly, A. Boumaza, N., & Gay, F.J., (2008), *Les concepts de la géographie humaine,troisième édition revue et augmentée, (The concept of humangeography, Third Edition Revised and Expanded)*, Pages181, Editura Masson, Paris, France.

[4] Bailly, A. Boumaza, N., & Gay, F.J., (1984), *Les concepts de la géographie humaine (The concept of humangeography)* Pages151-152, Editura Masson, Paris, France.

[5] Balia, S. & Jones, A., (2007), Mortality, lifestyle and socio-economic status**,** *Journal of Health Economics.* Volume 27, Issue 1, pp. 1–26.

[6] Barbat-Bussièr, S., (2009), *L'offre de soin en milieu rural. L'exemple d'une recherche appliquée en Auvergne (The provision of care in rural area. The example of applied research in Auvergne)*. Editura PRESSES UNIVERSITAIRES BLAISE PASCAL CLERMONT – FERRAND 2009, CEREMAC 27.

[7] Baudelle, G., (2004), *Géographie de peuplement (The Geography of population)*, Armand Colin, Paris

[8] Bauer, K.W, Yang Y.W., & Austin, S.B., (2004), How we can stay healthy when you're throwing all of this in front in front of us ?. Findings from focus groups and interviews in middle schools of environmental influences on nutrition and physical activity, *Health Education & Behavior, volume 31*, No.1, Pages 34-46.

[9] Bemme, D. &D'souza, N., (2014), Global mental health and its discontents: An inquiry into the making of global and local scale, *Transcultural Psychiatry*, doi:10.1177/1363461514539830.

[10] Besancennot, J.P, (2007) Environnement et santé, in *Géographie de la santé – Un panorama(Medical geography - a panorama)*, Fleuret, S. & Thonez, J.P, Anthropos, Economica, Paris.

[11] Bird, C. & Rieker, P., (2008) *Gender and Health. The effects of constrained choices and social policies*, Cambridge University Press.

[12] Bodin, F., (2007), Architecture, urbanisme et handicaps. L'accessibilité environnementale comme critère de santé publique (Arhitecture, urban and handicaps. Environmentalaccessibility as a criterion for public health), in *Géographie de la santé – Un panorama(Medical geography - a panorama)*, Fleuret, S. & Thonez, J.P, Anthropos, Economica, Paris.

[13] Bruner, R., Ferras, R., & Théry, H., (1992), *Les mots de géographie – dictionnaire critique (Words of geography – Criticaldictionary)*, RECLUS-La Documentation Français.

[14] Cheng, Y., Rosenberg, M.W., Wang, W., Yang, L., & Li, H., (2010), Aging, health and place in residential care facilities in Beijing, China, *Social Science & Medicine, Volume 72*, Issue 3, Pages 365-372

[15] Cruceanu, A., Muntele, I., & Cozma, D.G, (2014), Health – an autoevaluation predictor of personal life quality, *Cross-Cultural Management Journal, Volum XVI*, Isuue 1(5), Pages 67-78

[16] Curtis, S., 2007, *Géographie sociale et géographie de la santé. Illustration à parti de la recherche sur les « effets de voisinage » sur la santé et sur les « paysage thérapeutiques* (Social Geographyandgeography of health. Illustrationpartyresearchon "neighborhood effects" on health and on the "therapeutic landscape), in *Medical geography - a panorama*, Fleuret, S. & Thonez, J.P, Anthropos, Economica, Paris,

[17] Davenport, J., Rathwell, T.A., & Rosenberg., M.W., 2009, Aging in Atlantic Canada: service-rich and service-poor communities, *Health Care Policy, Volume 5*, Issue 1, Pages 145-160,

[18] Deci, E.L. & Flaste, R., (1995), *Why we do what we do ? The dinamics of personal autonomy*, American Psyhological Asociation, New York.

[19] Dick, I. & Kearns, R., (1995), Transforming the relations of research: towards culturally safe geographies of health and healing, *Health & Place, Volume 1*, Issue 3, Pages 137-147

[20] Donovan, J. (1984), Ethnicity and health: a research review, *Social Science & Medicine, Volume 19*, Issue 7, Pages 663-670,

[21] Di Méo, G. & Buteon, P., (2005), L'espace social – Lecture géographique des sociétés (The social space – Geographical reading of society), Armand Colin, Paris 2005

[22] Dumitrache, L., 2002, *Geografiemedicală. Metodeşitehnici de analiză*(*Medicalgeography. Analysismethods and techniques)*, EdituraUniversitara.

[23] Eyles, J., (2007), La recherche qualitative en géographie de la santé, in *Géographie de la santé – Un panorama(Medicalgeography - a panorama)*, Fleuret, S. &Thonez, J.P, Anthropos, Economica, Paris.

[24] Fisher, M. & Braum, F., (2010), The social determinants of mental health: implications for research and health promotion, *Australian & Neew Zealand Journal of Psychiatry, Volume 44*, Issue 12, Pages 1057-1063

[25] Fleuret, S. (2007a), Bien-être, santé et géographie, in *Géographie de la santé – Un panorama(Medicalgeography - a panorama)*, Fleuret, S. &Thonez, J.P, Anthropos, Economica, Paris.

[26] Fleuret, S. (2007b), Organisation des systèmes, réseaux, coordination des services et des acteurs de la santé (Organisation of systems, networks, service coordination and healthactors),in *Géographie de la santé – Un panorama(Medical geography - a panorama)*, Fleuret, S. & Thonez, J.P, Economica, Paris.

[27] Fleuret, S. (2006), Spatialité des enjeux de pouvoir et des inégalités : pour une géographie sociale de la santé (Spatial issue of power and inequality : for a social geography of health), in *Penser et faire la géographie sociale. Contribution à une épistémologie de la géographie sociale (Thinking and doing social geography. Contribution to an epidemiology of social geography)*.Séchet, R. &Veschambre, V., PressesUniversitaires de Rennes.

[28] Foot, J (2012), What makes us healthy. The asset approach in practice: evidence, action, evaluation,
http://scholar.google.com/scholar?start=0&q=what+makes+us+healthy+%3F&hl=en&as_sdt=0,5.

[29] Fournier, P. & Haddad, S., (1995), Les facteurs associés à l'utilisation des services de santé dans les paysage en développement (Factorsassociatedwith the use of health services in the developmentlandscape), in *La sociologie des populations (The sociologie of populations)*, Gérard, H. & Piché, V., Les Presses de L'Université de Montréal AUPELF/UREF, Montréal.

[30] Frémont, A., J. Chevalier, R. Hérin, & J. Renard, (1984), *Géographie sociale (Social geography)*, MASSON, Paris, 1984

[31] Gary, T., (2007), Do we realy know what makes us healthy ?, The New Yourk Times. Gary T., este și autorul cărții ""Good calories, bad calories"

[32] Gesler, W., & Kearns, R.A, (2005), *Culture, place, health*, London and New York, http://books.google.pl/books?hl=en&lr=&id=sF6FAgAAQBAJ&oi=fnd&pg=PP1&dq=Culture,+place,+health&ots=NIMjKkXAWv&sig=PqWjsFtmb8kWfJamAJIfgbVGGC0&redir_esc=y#v=onepage&q=Culture%2C%20place%2C%20health&f=false.

[33] Goy, J., Dodds, L., & Rosenberg, M.W., (2008), Health-risk behaviours: examining social disparities in the occurence of stillbirth, *Paediatric and Perinatal Epidemiology, Volume 22*, Issue 4, Pages 314-320,

[35] Harrington, D.W, Wilson, K., & Rosenberg, M.W, (2014), Waiting for a specialist consultation for a new condition in Ontario: impacts on pacients' life, *Health Care Policy, Volume 9*, Issue 4, Pages 90-103.

[36] Herman, K.M., Hopman W.M., & Rosenberg, M.W., (2013), Self-rather health and life satisfaction among canadian adults: associations of perceived weight status versul BMI, *Quality of Life Research, Volum 22*, Issue 10, Pages 2693-2705

[37] Herman, K.M., Hopman, W.M, Vandenkerkhof, E.G., & Rosenberg, M.W., 2012, Psysical activity, body mass index, and health-related quality of life in Canadian adults, *Medicine and Science in Sports and Exercices, Volume 44*, Issue 4, Pages 625-636

[38] Ioan C.AM., Luca, F.Al., & Sasu, C, 2014, Personal Brand Marketing, a Necessity for the Corporate Differentiation in the Context of the globalization of Society, *SEA- Practical Application of Science, vol. II*, Issue 1 (30), Pages 239-245.

[39] Ioan C.AM., Luca, F.Al., & Sasu, C., (2013), Social Networks – Challenge and Oportunity in the Development of Personal Brand Marketing Strategies in the Virtual Environment, *Annals of Ovidius University of Constanta, Economic Sciences Series, vol XIII*, Issue 1, Pages 800-805.

[40] Ionac, N., Mihoc, A.C. & Tăbleţ, P., (2012a) Ambient well-being parameters in the indoor spaces of office building. Case study, *Present Environment & Sustainable Development, Vol. 6*, Issue 1, Pages 81-93.

[41] Ionac, N., Mihoc, C.A. & Tăbleţ, (2012b) The bioclimatic comfort of on IT office and its occupants' perception about their working environment, *Present Environment & Sustainable Development, Vol. 6* Issue 2, Pages 81-92.

[42] Ionac N., (2000), *Mictratat de geografiemedicală (Small dissertation of medical geography)*, EdituraUniversității din București.

[43] Jeffry, D., Morenoff, J.D, & Lynch, J.W., (2004), What makes a place healthy?

Neighborhood influences on racial/ethnic disparities in health over the life course, in *Critical perspective on racial and ethnic differences in health in late life*, Anderson, N., Bulatao, & R., Cohen, B., National Research Council –Of the National Academies, Washington, pages 406.

[44] Jones, K., & Moon, G., (1993), *Medical Geography: taking space seriously*, Progess in Human Geography, http://scholar.google.com/scholar?q=Medical+Geography%3A+taking+space+seriously&btnG=&hl=en&as_sdt=0%2C5.

[45] Kearns, R., & Moon, G., (2002), From medical geography to health geography: novelty, place and theory after a decade of change, *Progress in Human Geography, Vol.26*, no 5, pages 605-625.

[46] Kearns, R., & Gesler, W., (1998), Putting health into place. Lanscape, identity & well-being. Syracuse University Press, New York.

[47] Kearns, R., (1993), Space in its space: Developing the link in medical geography, *Social science & Medicine, Volume 37*, Issue 6, pages 711-717.

[48] Krafft, T., Garcia Castrillo-Riesquo, L., Edwards, S., Fischer, M., Overton, J., Robertson-Steel, I., & König, A., 2003, European Emergency Data Project (EED Project): EMS data-based health surveillance system, *European Journal of the Public health, Volume 13*, Issue 3, Pages 85-90.

[49] Krieger, N., (2011), Methods for the scientific study of discrimination and health: an ecosocial approach, *American Journal of Public Health, Volume 102*, No.5, pages 936-944

[50] Krieger N., (2002), Genders, sexes, and health: what are the connections – and whay does it matter ?, *International Journal of Epidemiology, Volume 32*, Issue 4, pages 652-657.

[51] Lamarre, D., & Pagney, P., (1999) *Climats et sociétés (Climats and societies)*, Editura ARMAND COLIN, Paris.

[52] Ladoucette, O., (2008), *Forța minții. Cum să rămai tânăr și să te bucuri de viață (Stregth of mind. How to stay young and enjoy life)*. Editura TREI, București.

[53] Lawrence, J., Kearns, R.A., Park, J., Bryder, L., & Worth, H., (2008), Discourses of disease: representations of tuberculosis within New Zealand newspapers 2002-2004, *Social Science & Medicine, Volume 66*, Issue 6, Pages 727-739

[54 Léevy, J., & Lussault, M., (2003), *Dictionnaire de la géographie et de l'espace des sociétés (Dictionary of geography and spaces of society)*, Editura BELIN, Paris.

[55] Luca, F.Al., Ioan C.AM., (2012), The Management of Air Quality at the Level of Iasi City, *Environmental Engineering and Management Journal , vol 11*, no.2.

[56] Marmot, M., & Wilkinson, S., (2005), *Social determinants of health,http://scholar.google.pl/scholar?hl=en&q=Social+determinants+of+health%2C+Chapter+2.+Social+organization%2C+stress%2C+and+health%2C+%282.5+Animal+models%3A+2.5.1+Genes%2C+Constitution%2C+and+destiny+&btnG=&as_sdt=1%2C5&as_sdtp=*.

[58] Mayer, J., (1982), Relations between two traditions of Medical Geography: Health Systems Planning and Geographical Geography, *Progress in Humain Geography, vol. 6*. No 2, Pages 216-230.

[59] McMichael, A.J, Friel, S., Nyong, A., & Corvalan, C., (2008) Global environmental change and health: impacts, inequalities.and health sector, BMJ.; 336(7637): doi: 10.1136/bmj.39392.473727.AD, Pages 191–194,

[60] McNeill, L.H., Kreuter, M., &Subramanian, S.V., (2006), Social environment and physical activity: a review of concepts and evidence, *Social Science & Medicine, Volume 63*, Issue 4, Pages 1011-1022

[61] Meade, M., (2014), The Wiley Blackwell Encyclopedia of Health, Illness, Behavior, and Society, DOI: 10.1002/9781118410868.wbehibs204.

[62]Mishra, S., (2013), Solution to the Hazard of Climate Change, *Science Horizont*, Odisha Bigyan Academy, Special Issue: Climate Change, 12th Issue.

[63] Mohanty, P.K. (2013), Debate and mandate on climate, *Science Horizont*, Odisha Bigyan Academy, Special Issue: Climate Change, 12th Issue.

[64] Moon, G., & Kearn, R., (2007), A la recherche d'une nouvelle géographie de santé (In searching of a new geography of health), in *Géographie de la santé – Un panorama(Medical geography - a panorama)*, Fleuret, S. & Thonez, J.P, Anthropos, Economica, Paris.

[65] Muntele, I., (2009), *Geografia populației (Geography of population)*, Editura Sedcomlibris, Iasi.

[66] Mureșan, P., (1989), *Manual de metode matematice in analiza starii de sanatate (Manual of mathematical methods in the analysis of health)*, Editura Medicala, București.

[67] Nerlander, L., (2009), Climate change and health, Commission on Climate Change and Development,

http://www.climatecentre.org/downloads/Climate%20change%20and%20health.pdf.

[68] Ornstein, R., & Sobel, D., (1999), *The healing brain. Breackthrough discoveries about how the brain keeps us healthy*, ISHK, New York

[69] Pampalon, R., (2007), Un indice de défavorisation matérielle et sociale pour l'étude des inégalités de santé au Québeque (An index of material and social deprivation for the study of healthinequalities in Quebeque), in *Géographie de la santé – Un panorama(Medical geography - a panorama)*, Fleuret, S. & Thonez, J.P, Anthropos, Economica, Paris.

[70] Philibert, M.D. & Breton, M., (2007), Echelles géographiques et santé des populations (Geographicalscale and populations' health), in *Géographie de la santé – Un panorama(Medical geography - a panorama)*, Fleuret, S. & Thonez, J.P, Anthropos, Economica, Paris.

[71] Pickett, K., & Wilkinson R., (2008), People like us: ethic group density effects on health, *Ethnicity & Health*, *Volume 13*, Issue 4, Pages 321-334.

[72]Popa, N., Bioteau, E., Pavel, S., &Işfănescu, R., 2007, *Identité. Développement. La collaboration régionale (Identity. Development. Regional collaboration)*. EdituraMirton, Timişoara.

[74] Rivers, J., & Joseph, R., (2010), Dominance and health. The rol of social rank in physiology and illness, IN *The Social Psychology of Power*, Chapter except from Guilford publications Guinot, A., & Vescio, T.K., http://homepage.psy.utexas.edu/HomePage/Faculty/Josephs/pdf_documents/Guinote_ch03_070810.pdf.

[75] Rivet, G., (2007), Le social et le politique face au territoire. De nouvelles alchimies en cours d'expérimentation (The social and political face to the territory. New alchemybeingtested), in *Territoires et action sociale (Territories ans social action)*, Bouquet, B., Madelin B., Nivolle, P., &L'Harmattan, Paris.

[76] Rosenberg, M.W., (1998), Medical or health geography ? Population, People and Place, *International Journal of Population Geography*, *Volume 4*, Issue 3, Pages 211-226.

[77] Rosenberg, M., & Wilson, K., (2000), Gender, poverty and location: how much difference do they make in geography of health inequalities ?, *Social Science & Medicine*, *Volume 51*, Issue 2, Pages 275-287.

[78] Rougerie, G., (2007), *L'homme et son milieu - L'Évolution du cadre de vie – Une approche de la géographie globale ou comme l'homme interagit avec l'écosystème*, Editura NATHAN UNIVERSITÉ, Paris.

[80] Skinner, M.W, Yantzi, NM., & Rosenberg, M.K., (2009), Neither rain nor hail nor sleet nor snow: provider perspectives on the chalenges of weather for home and community care, *Social Science & Medicine, Volume 68*, Issue 4, Pages 682-688.

[81] Subedi, R.P., & Rosenberg, M.W, (2014), Determinants of the variations in self-reported health status among recent and more established immigrants in Canada, *Social Scinece & Medicine*, *Volume 115*, Issue 103, Pages 103-110.

[82] Swain, N. (2013), Climate change and health,*Science Horizont*, Odisha Bigyan Academy, Special Issue: Climate Change, 12th Issue.

[83] Teodoreanu, E. (2011), *Clima și omul, prieteni sau dușmani (Climate and man. Friend or enemy)*, Elena Teodoreanu, Paidea, București.

[84] Teodoreanu, E. (2004), *Geografie medicală (Medical geography)*, Editura Academiei Române, București.

[85] Teodoreanu, E. (2002), *Bioclimatologie umană (Human bioclimatology)*, Editura Academiei Române, București.

[86]Tihan, E., (2004), *Anatomia Populației. Concepte cheie în sociologie, demografie, politici sociale (Anatomy of population. Key concepts in sociolgy, demography, social policy)*, Editura Focus Opinfo, București.

[87] Toda M. & Morimoto**,** K., (2000), Effects of Ramadam Fasting on the Health of muslims, *Environmental Health and Preventive Medicine*, 4,Vol.54, No 4, Pages 224-227.

[88] Vafaei A., Rosenberg, M.W.,& Pickett, W., (2010), Relationships between income inequality and health: a study of rural and urban region in Canada, Rural and Remote, *Health*, *Volume 10*, Issue 2,

[89] Vert, C. (2002), *Geografia populației – teorie și metodologie (Geography of population – theory and methodology)*, Editura Mirton, Timisoara.

[90] Vlădescu, C., & Enăchescu, D., (2002) *Sănătatea publică și managementul sanitar (Public health and health management)*, Centrul pentru Politici și Servicii de Sănătate, București.

[91] Wackermann, G., (2002), *Géographie régional (Regionalgeography)e*, Ellipses, Paris.

[92] Wiles, J., Rosenberg, M., & Kearns, R., 2005, Narrative analysis as a strategy for understanding interview talk in geographic research, *Royal Geographical Society, Social Science, AREA*, *Volume 37*, Issue 1, Pages 89-99

[93] Wilkinson, R., (2006a), Why is violence more common where inequality is greater ? *Annals of the New York Academy of Science, Volume 1036*, Pages 1-12.
[94] Wilkinson R., (2006b), Health, Hierarchy and Social Anxiety, *Annals of the New York Academy of Sciences, vol 896*, pages 48-63.
[95] Wilkinson, R., & Picket, K., (2010), Inequality: an underacknowledged sourse of mental illness and distress, *The British Journal of Psychiatry, Volume 197*, Pages 426-428
[96] Wilson, K., Rosenberg, M.W., & Abonyi, S., (2010a), Aboriginal people, health and healing approaches: the effects of age and place on health, *Social Science & Medicine, Volume 70*, Issue 3, Pages 355-364.
[97] Wilson, K., Rosenberg, M.W., Abonyi, S., & Lovelace, R., (2010b), Aging and health: an examination of differences between older Aboriginal and non-Aboriginal people, *Canadian Journal on Aging, Volume 29*, Issue 3, Pages 369-382
[98] Wolff, L., Subramanian, S.V., Acevedo-Garcia, D., Weber, D., & Kawachi, I., (2010), Compared to whom ? Subjective social status, self-rated health, and diferent group sensitivity in a diverse US sample, *Social Science & Medicine, Volume 70*, Issue 12, Pages 2019-2028.
[99] Zimmerman, F., & Bell, J., (2006), Income inequality and physical and mental health: testing associations consistent with proposed causal pathways, *Journal of Epidemiology & Community health, Volume 60*, Issue 6, Pages 513-521.
[100] *** , 2006, Fundamentele abordării integrării a Serviciilor Medico-Sanitare la nivel local, Centrul pentru Politici și Servicii de Sănătate, București