

# Systemic Analysis of the Tourism and Health Relationship

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## Abstract

Health is an important element that should be taken care in consideration when planning the tourist activities, because it involves the resident population in the hosting destinies, as well as the visitors. The infrastructure and the health care services are a constant that should be integrated to the attention offered to travelers.

From the perspective of the social well-being, during the high tourist incidence season, the lifestyle in the cities that constitute important destinations is altered by a great amount of visitors, by a nurtured vehicular traffic and by the multiple social activities that are superimposed to the residents. This urban and sometimes rural metabolism alteration is determined by the characteristic lifestyles of the visitors.

The deterioration in the visitor's health, studied by the medicine branch known as constitutes a risk for the whole tourist industry. Somebody that gets sick in a certain place might not return. This fact, when known in his/her hometown, could keep other potential tourists from traveling to that place.

This paper, as a part of an research work in process, exposes the importance of developing of a systemic analysis that allows to know the subsystems involved in the health-tourism binomial, since it reflects the narrow link that exists between social well-being and economic development.

*Keywords:* Paradigm of systems, tourism, health, emporiatry.

## Introduction

Every year millions of people travel for diverse reasons and according to the Tropical and Geographic Medicine Center, of the Massachusetts General Hospital and Harvard University, Boston, approximately from 20% to 70% of the travelers get sick, and 1% to 5% require medical attention. The death for infectious illnesses in travelers is very strange (1 to 4%), most die for traumatismos or cardiovascular alterations. However, in 50% of the travelers, these illnesses cause certain type of inability of 3 for every 14 days of stay, in average.

In the tourist centers, the geographical location, the environment, the human establishments characteristics and the social dynamics, at the same time that the local volumes and flows, constitute the decisive factors as for health problems refer. This way, the analysis of the relationship between health and tourism, in the

national or international field, is carried out according to the four subsystems: tourism and local health; environmental health and risks of the environment; the tourist's health; and tourism for health reasons.

In relation to international sanity, the traffic of travelers through different countries, can promote an infectious agent establishment, specially if the health care services lack of quality and the surveillance activities fail, producing national and international level consequences. Therefore, the observance of international sanitary regulation specially in entrance and exit ports for tourist and perishable products is decisive.

The world tendencies in the context integrated by all these factors and the actions concerning the health-tourism system are carried out scatteredly and vary according to each country. Nevertheless, it is necessary to highlight that some nations of advanced development have included, as a branch of the public health for the study of the relationship between health and tourism, the denominated " emporiatry ". This branch treats the concerning to the protection and the care of the tourist's health, inside the traditional role that medicine has performed, always, like one of the most important human activities.

## ***Tourism***

The tourism is the group of human integrations as: transport, lodging, amusement and others derived from the transitory human displacements, temporaries or of strong population nuclei pedestrians, with purposes so diverse as multiple the human desires are and that embrace varied ranges of motivations. It is the activity that is carried out, according to the motivations that the individual experiences to satisfy his/her necessities and in search of his/hers desires consummation. This concept allows us a complete approach of the activity that can be performed at the same time of relaxing or enjoying in a given moment, either with a displacement or not. (Jolin,2004) .

The HWO formalizes all the aspects of the tourist activity as the introduction of the possible motivational elements of the trip, leisure and business, the delimitation of the activity developed before and during the period of the stay, as well as the localization of the tourist activity that is carried out outside of the habitual environment of a person, which consists on a certain area around its residence place plus all those places that he/she frequently visits.

There are several definitions that delimit the tourist activity and that distinguish it from other sectors. In this sense there have been many discussions on what the definition of Tourism should include because there are plenty of these, it is necessary to affirm that a correct or incorrect definition doesn't exist, since all of them are complementary and somehow contribute to the understanding of tourism.

In synthesis, we can say that tourism is the sum of the relationships and benefits of services that are derived from the voluntary and unwittingly made, human displacements, in a temporary way and for varied reasons.

## ***Health***

The classics didn't have special difficulties in reaching a clear idea of what health is. They spoke Latin, and the single word *salus* already gave them idea of its meaning. We should go back to the etymology in order to reach what was evident for them. *Salus* and *salvatio*, very likely in Latin (consider that the U and the V, whose sounds and graph we now distinguish, were a single letter for the classics), they mean "to be in conditions of being able to overcome an obstacle". From these Latin words, their Castilian equivalents: health and salvation, are derived (Alarcón,1988).

If been recovered of the term coming from Latin " *salus*" the meaning would be "to overcome a difficulty", with which a definition can be obtained, in every rule: health is the habit or corporal state that allows us to continue living (Tomás de Aquino) that is to say, that allows to overcome the obstacles that living finds in its way. Because, indeed, to live is not simply "to be", like a stone is. To live implies an internal activity of the living being that manages to maintain a certain independence and differentiation from its external

environment: the homeostasis maintenance, characteristic of the living beings, is an active process that is carried out against difficulties that the mean opposes. Only a healthy organism is in conditions of overcoming this difficulties; the sick organism finds problems difficult to overcome in the atmosphere, that can lead it to failure in the maintenance of the own individuality, in other words to death, after which, the organism progressively gets lost within the atmosphere: its temperatures are equaled, its proteins decompose, its diverse organic compartments and the content of these dissolve and homogenize with the external mean, etc.

But maintaining the individual identity is not the only objective of living: somehow, the identity is also kept when the organism reproduces. When reproducing, it is able to remain alive, in another individual of the same species, which won't get in itself, to always live with its very own species life. For this reason, in the "continuing living" of the definition it should be considered already included the possibility of the reproduction. An organism that can live but cannot reproduce is not healthy.

Lastly, it is necessary to consider that there are alterations of the organism's normal operation, that, without completely impeding its life or reproduction, they suppose nuisances or difficulties for the normal development of its activity. Illnesses or light lesions that don't endanger life, can be considered illness, because the discomfort they produce, turn difficult the normal activity of the animal life. In other words, health includes a certain degree of physical well-being, and of pleasure in the necessary activity to live (psychological well-being); however, health is not well-being. Rather, twell-being is, in certain measure, a part of health, that is to say, is one of the necessary means to be able to continue living.

With the above-mentioned, we can say that health represents or summarizes the man's integral condition in its atmosphere, this is under biological, physical, psycho-social, cultural and economic conditions.

Health appears as a satisfier, because it is located in the necessity of subsistence area. And it is of synergy effect or multiple kind because its advance positively impacts the subsistence, but it also has positive effect in the satisfaction of affection, creation, participation and understanding necessities, among others. Health as a satisfier implies the development of actions that lead to work worthily, to feed, to rest, to be sheltered, and to live in a healthy social environment.

Health is, from this perspective, a social fact that is characterized then as a dynamic social process and variable of physical, psychic and social well-being, as well as relative and multi-cause. From this point of view and at international level, The United Nations have been to the vanguard in the fight against the illnesses by means of the elaboration of politics and systems that approach the social dimensions of health problems. Several of their specialized organisms are centered in this fight (Ruíz, 1994).

The specialized organism that coordinates the world action against the illnesses is the Health World Organization (HWO). The HWO has marked ambitious goals in order to achieve health for everyone, fomenting the collaboration and promoting lifestyles and healthy environments.

The enjoyment of good health is an indispensable component in the life quality. And is associated to longevity, what supposes feeding, immunizations, healthy atmosphere, opportune medical attention, etc .

## **Development**

### *Evolution of Tourism:*

The first manifestations of Tourism are found in the facts that refer trips as and old form of tourism. In literature we can clearly observe those trips: The Eneida, The Odyssey and The Ilíada. Also the Greek Olympics caused many displacements with characteristic motivations of tourism and recreation.

In the middle age the conquest desire motivated human displacements with the objective of conquering regions, for instance: The " Crusades" war, pilgrimages to Santiago of Compostela originated existence of inns in the roads, expansion and search of new commercial routes.

In Italy by the middle of the XVI century the use of cars and carriages appears in Italy; in Germany, the use of a light car denominated Berlina arises. The XVII century is characterized by the Gentleman's trip and the Diligence.

In the XIX century the rail lines are developed especially in Europe and United States. By the middle of this century the Museums and Monuments are considered as places of tourist interest and regulations of schedules and prices are established. The first Travel Agency by Mr. Thomas Cook arises in 1841, who offered mediator services between the client's demand and an offer of transport, lodgings and tourist attractiveness.

Among other manifestations we have the emergence of international promoters and the development of large railroad companies . The tendency to sport events, Alpine Clubs and a primitive propagandistic work is developed as well as the creation of information offices.

In the XX century a shy growth is experienced, abruptly cut for the First World War (1914 - 1918). Tourism recovers in the post war, until year 1929 when once again decays because of negative effects of the United States great depression.

The Marine Transport is established as the only transcontinental transport mean, among the ships we can mention: The Lucitania, Mauritania of the Cunard Line; Titanic of the White Star Line.

The routes begin in the Mediterranean and with the initiation of the tourist routes the Cruises appear. The old vapor vehicles are substituted by those of internal combustion (Henry Ford).

The events that mark the initiation of air transportation are: 1919 a NC4 of United States crossed the Atlantic in a flight from New York to Plymouth; and a British airplane travels from Terranova to Ireland without scale (Mcintosh, et al, 2002).

From the end of the II world war and on, the European continent enters in a reconstruction stage and economic as well as social recovery, the improvement of life levels increases tourism and a stage of advances inside marine and transportation begins.

Tourism has gone through a series of historical stages that has marked its evolution. The following can be mentioned as a synthesis:

- a) Elitist stage: is given by the middle of the XIX century, it was practiced by the minorities that had the economic power, among them the nobility (mainly in Europe).
- b) Transition stage: is presented with the beginning of the tourist activity in a more popular way and embraces up to the first half of the XX century (mainly in Europe and America).
- c) Tourism in development or automated: in this stage, tourism is already a reality for most of people, is developed in the second half of the XX century until our days (practically in the entire world).

The evolution of the tourism has increased the space and characteristics diversity among the destinations and it has become so large that it turns out important to classify the destinations so that a systemic analysis of tourism psychology and motivation can be undertaken. A way of doing it, is based on the Valene L. Smith identification of several kinds of tourism. In other words, a classification of the destinations can be established and at the same time to determine the most characteristic types of tourism at the present time (Mcintosh,et,al, 2002).

1. - Ethnic tourism: It is to travel with the purpose of observing the cultural expressions and the lifestyle of the truly exotic towns. The typical activities of destination will include visits to native homes, to attend dances, ceremonies and possibly to participate in religious rituals.

2. - Cultural tourism: It is to travel with the objective of experience and, in some cases, to participate in an almost extinct lifestyle that is in the human memory. The activities in the destination commonly include having meals at rustic inns, festivals of typical suits, folk dances, old style arts and crafts demonstrations.

3. - Environmental tourism: Is similar to the ethnic tourism, since it attracts tourists to remote areas. But the emphasis here lies in natural and environmental attractions, more than in ethnic. The trips with the purposes of returning to nature and appreciating (or to be sensitized to) relationships between people and earth belong to this category.

4. - Historical tourism: Are the trips to museums and cathedrals that highlight the glories of the past. This tourism is facilitated because the attractions are in the big cities or its accessibility is immediate. As a rule, such attractions seem specially adaptive to the organized massive tourism.

The four previous denominations can be included in what is now known as alternative tourism (ecotourism, adventure tourism and rural tourism), since this it is based in the opportunity to participate and to foment in the travelers, the necessity to safeguard the natural and cultural resources with a global approach of sustainable development that is defined as that "Development that satisfies the current population's necessities without committing the capacity of the coming generations to satisfy their own necessities", (Jolin 2004).

5. - Recreational tourism: Is centered in the sports participation, healing spas, sun baths and social contact in a relaxed atmosphere, centers and recreational parks, shows, events, etc., They are the best example of this category.

6. - Tourism of Business: Congresses, assemblies and seminars, characterize this type of tourism and it is another important form of trips. (The United Nations include the business traveler in their tourist definition). The business trips are frequently combined with one or more kinds of tourism already identified. (Mcintosh, et, al, 2002)

It should be clarified that the previous classification of tourism's types is neither definitive nor unalterable in any way, it shows that tourism is a phenomenon that is in constant evolution and for such a reason, definitions or totalitarian classifications cannot be given, because there is a lack of theory that contributes definitive elements under a scientific and universal conceptualization characteristic of the tourism.

## ***Emporiatry***

Emporiatry is the medicine of the trips, a part of the medical science that studies the illnesses that can happen to the travelers, the specialty arises due to the scandalous of the numbers given in some countries like The United States, where every year, 25 thousand lesions and 750 deaths are reported for that concept in travelers, besides the countless transferable illnesses to those that they are exposed as a consequence of traveling to endemically dangerous places where there are illnesses that can be easily detected in those recently arrived and that they can even diffuse to their origin places. In the XIV century the merchants of the Mediterranean and Dead Sea ports arrived to China, the objective was to trade silk cloths of great value.

In 1343, silk genovese merchants dealing were chased by the tartars, to survived they refuge in Caffa, Crimea, their chasers sieged the city for three years, constantly attacking it with catapults, so it was maintained on warrior balance, a tie, until the besiegers stopped throwing rocks in the catapults, they began throwing cadavers of the besiegers that died when having been attacked in turn by a bubonic pest epidemic, that was possibly the first bacteriological battle, the inhabitants of the besieged city got sick of cholera, with such a serious epidemic that the geneveses, who wee the reason of the war in the first place, went up to their ships escaping to move to their origin places, every day some died, but they also went disembarking in different ports: Constantinople, Genova, Venice and many more, their dissemination began and diffused the most horrible pandemic pest in the history of infections in the world.

From Asia where it began, it passed to Crimea, from there to the Mediterranean ports and then to all Europe, without leaving intact a single village, until 1348 when two third parts of the Europeans had got sick and most of them died. The way this story is example of a pandemic, it indicates at the same time how the infections have always threatened the health of those who travel and it also indicates what we all should do, to be informed, to be able to consider the necessary preventive measures to each case, such it is the responsibility of Emporiatry that considers a large list of illnesses: diarrhea, cholera, strong respiratory illness as influenza, hepatitis in its five varieties, diverse encephalitis transmitted by mosquito's sting and ticks, measles, different streptococcus, poliomyelitis, rages, tetanus, diphtheria, histoplasmosis, yellow fever, typhoid fever, malaria. Those better known, when being diffused, make us obey elementary measures so that those who travel, avoid not only getting sick, but also the diffusion of such illnesses (Cruz, 2005).

### **Systemic Analysis of the Tourism and Health Relationship**

From a social well-being perspective, during the high tourist incidence seasons the life in the cities that constitute important destinations, is altered by the great amount of visitors, by a nurtured vehicular traffic and by the multiple social activities that are superimposed to the local ones. This urban and sometimes rural metabolism alteration, is marked by the characteristic lifestyles of the visitors.

For the sanitary authorities, the beginning of a tourist season implies the local population's growth, with the consequent increase in the demand of health services, to assist a mass with generally not well-known epidemic profile, that generates accidents, intoxication or violence linked to addictions cases, and that implies illnesses transmission risk from their own origin places.

Although it is true that important economic resources enter to tourist places, it is also true that these places can become receivers of illnesses and noxious habits for the health of their inhabitants, such as alcoholism, drug addiction, and others. In turn, the visitors can get some illness during their stay.

As it is noticed, the health-tourism system reflects the narrow linking there is between social well-being and economic development, so the sum of efforts in this field has, therefore, multiple effects. With the result that, in the planning of tourist poles and in the operation of services, a careful investigation from the inherent sanitary and ecological consequences to each project should not be ignored.

A fundamental aspect of the health-tourism system, is its impact in the health of the inhabitants of the cities with great affluence of visitors.

The hosting areas can import, along with tourism, transferable illnesses that in occasions can pass inadvertent because of being in incubation period, but that affect the resident population as well as the tourists.

Tourism as a temporary recreation form has associates, basically, three behavior problems: the first one, relative to the excessive ingestion of alcohol and its consequences, like the automobile accidents produced by "drinking and driving", and another common risk of serious repercussions, derived from "drinking and to swimming"; the second one, constituted by the sexual transmission illnesses, since there are evidences that indicate a relationship between tourism and the infection of these illnesses. Regarding this, currently, the relationship between the transmission of the Acquired Immune-deficiency Syndrome (AIDS) and traveling is subjected to debate; and, the third behavior problem, referred to the consumption of drugs and their consequences.

In the tourist places they are frequent the prostitution and the consumption of drugs; consequently, in the population of these areas he/she registers a bigger incidence of the illnesses linked with such behaviors, especially those of sexual, included transmission the AIDS.

Derived of the analysis, they can intend some recommendations to improve the sanitary conditions of the tourist environment, making emphasis in the preventive measures and in the combined actions among the involved sectors, standing out the paper of the emporiatry in the concerning thing to the protection and promotion of the tourist's health:

### ***The use and demand of health-care services.***

Tourism affects the population of the cities, when the necessary medical services for the visitors are not prevented and planned as a part of this industry's infrastructure. The demand from the visitors becomes an overload for the facilities and the generally limited existent resources.

### ***Development of the infrastructure projects***

Within the aspects that should be considered, negative effects are found, they're product of tourist projects development that lack of planning and of adapted instrumentation, in which frequently the consideration of future impacts about the availability of basic services for the local population is omitted.

### ***International sanity***

The traffic of travelers through different countries can turn them into propagating agents of illnesses. Is possible to determine the risk of an infectious agent to settle down in a country by the quality of the national epidemic services and, in particular, by the illnesses surveillance activities daily carried out, as well as for the capacity to implement immediate and effective control measures. In this sense, the observance of the international sanitary regulation is decisive, particularly in the entrance and exit ports, to avoid the arrival of illnesses in account of the tourist affluence, as much as for the introduction of polluted perishable products.

### ***Educational programs' development***

The continuous training for medical attention providers of the travelers is essential. Four stages or areas of the Emporiatry should be considered by the primary attention doctor:

- A) General Preparation for the trip like the immunizations and illnesses permanency in the hosting area (one month before traveling).
- B) Clear Indications on the risks and cautions during the air trip the same one, such as "jet lag", flebotrombosis and others.
- C) To know something about the area to visit and, when possible, medical contacts in it.
- D) The feedback and cares later resultant of the abroad trip.

Programs directed to travelers should be designed aiming to build knowledge and awareness about the importance of taking the necessary preventive measures for before and during the trip with the purpose of remaining healthy. On the preventive measures we can mention:

### ***Before***

1. To elaborate an exact itinerary of the trip destination, including stops that involve exhibition risks to illnesses in a job, business or pleasure trip, recognizing urban and endemic rural areas.
2. To consider the contact type that will be held with the inhabitants of the hosting places.

3. To make sure of having got the vaccines depending on the place to visit, in some countries a previous vaccination is demanded.

4. To carry out a medical exam at least six weeks before traveling to distant areas. The traveler as well as the attending doctor will have to fill a format. The information should include the places in those that the traveler has been, the purpose of the trip and a final diagnosis.

### ***During***

5. To wash the hands with soap.

6. To drive carefully, respecting signs and speed limits, to use the safety seat-belt (the traffic accidents are one of the main lesions' causes in tourists).

7. If having sexual relationships, to use preservative.

8. To drink bottled water; to only eat food that can peel; and to never ingest raw food neither milky, not pasteurized products.

### **Preliminary Conclusions**

Health is an important element that should be taken into account when planning the tourist activity, because it includes the population that lives in the hosting places, as much as the visitors. The health infrastructure and services are a constant that should be integrated to the attention offered to the traveler.

Travelers not only leave their country for leisure but for business, religious activities, health, education, employment, political asylum, search of adventures, and other reasons. Travelers face an endless number of destinations and activities; each region is affected by different infectious illnesses that vary according to diverse factors related to climate, cultural, social, historical and alimentary aspects. The characteristics of the trip and of the activities to carry out in addition to the current health condition should be added to an appropriate prevention, with the purpose to achieve a trip without setbacks. Therefore is important to evaluate the departure in advance, to be aware of the illnesses or risks that the traveler is exposed to, and the actions to be taken in order to prevent them.

The Emporiatry or Traveler's Medicine is a new specialty of medicine dedicated to take care of the health of those who travel. This specialty is of great importance if considered that the health deterioration of the travelers constitutes a risk for the whole tourist industry and in consequence for the economic development. Somebody that gets sick in a certain place might not return. This fact, when known in his/her hometown, could keep other potential tourists from traveling to that place.

### **Thankfulness**

This work has been supported Instituto Politecnico Nacional (Program 206 and Projects CGPI No. 20060283 and CGPI No. 20060364).

### **References**

Alarcón, E. (1988) *Teoría de la vida orgánica* (Apuntes de Psicología). promanuscrito, Pamplona.

Cruz López, Antonio. (2005). *Emporiatría*. La Jornada de Oriente. Puebla 23 de Agosto.

Jolin, L (2004). *La Ambición del Turismo Social: un Turismo para Todos sustentable y*

*solidario*. Departamento de Estudios Urbanos y Turísticos, febrero, Escuela de ciencias de la Administración, UQAM.

Mcintosh, et al, (2002) *Turismo, Planeación, Administración y perspectivas*, pp 219-222 Limusa, México,.

OMS (1995) *Clasificación Estadística Internacional de Enfermedades y Problemas Relacionadas con la Salud*, Décima Revisión. Organización Panamericana de la Salud/ Organización Mundial de la Salud.

Ruiz de Chávez, Manuel (1994) *Salud Pública de México*, publicación Enero Febrero Vol. 36, N-. 1.