

Overview of Medical Geography and Healthcare & Diseases

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ABSTRACT

Medical geography is the specialized branch of human geography, though there is difference in the scope of medical geography and geography of health. A medical geographer always emphasize on the spatio-temporal analysis of medical data and concentrates on the diagnosis of diseases and Health Care facilities. The scope of geography of health is wider than that of medical geography. This paper reflects overview of Medical Geography and Healthcare & diseases.

1. Introduction

Medical science or health science is related to the epidemiology of diseases and Health Care services. Social, economic and cultural components are invariably related to medical or health sciences. So, there is deep relation between social science and medical science. Geography is the branch of Social science which studies various facets of physical as well as social components of environment. Medical geography is the specialized branch of human geography, though there is difference in the scope of medical geography and geography of health. A medical geographer always emphasize on the spatio-temporal analysis of medical data and concentrates on the diagnosis of diseases and Health Care facilities. The scope of geography of health is wider than that of medical geography. A health geographer deals with physical, social and cultural components which influence the human health and discusses the diseases and Health Care services with curative measures (Misra, 2017). In 1946, the World Health Organization (WHO) has defined „Health is complete physical, mental and social well-being and not merely the absence of disease or infirmity“. Health condition depends on the socio-cultural well-being of a society. If the socio-cultural components like housing conditions, food habits, education and awareness are to be good in a society, then the health status of this society would be in a better condition. If the level of education of a community is high educated then awareness about health and hygiene of that community is expected to be enhanced which would improve the overall health status of the community more affirmatively in comparison to that of less educated community. The epidemiological conditions of the major communicable diseases which are related with environment have been discussed to explore knowledge about the disease ecology of prevalent diseases in the Bankura district of West Bengal. In this state, the administrative power for health rests on the hands of Chief Medical Officer of Health (CMOH) in each district. After Independence, the Government of India has under- taken initiative for improvement of health status with various five-year plans. During the five-year plans, Government of India has introduced some health related programmes to reduce morbidity and mortality and to provide accessible health care facilities all over India. In many cases the cost estimation for implementation of these programmes

are borne by both the Governments at the Centre and in the individual States.

2. Conceptual framework of health and disease

The concept of disease and health is interrelated with social science. The health status is influenced by the socio-economic factors. The socio-economic factors which are operational in the nook and corner of India are not similar in all parts of the country. So, the incidences of communicable and non-communicable diseases vary from one place to another. Child rearing, taking care of the adult persons, physical and emotional supports also influence human health. Health status of a community also depends on the economic development of a society. If the community is economically prosperous, then the household risks of ill-health in this society will be reduced. Due to the social and economic development the process of urbanization is accelerated. As a result of rapid urbanization, the magnitude of air and water pollution increases because of emission from the industries and automobiles. Thus even urban areas people suffer from various diseases .

2.1. Concept of health

The concept of health has been transformed from time to time. In the past, health meant the absence of diseases from human body. But the socio-cultural and physical environmental factors which can create an impact on human health were neglected in the aforementioned concept. Thus the ideas of health have been changed as the relative absence of pain and discomfort while the people can easily adjust with the environment. But various factors of social, cultural, physical environmental, political and economic factors also tend to influence human health (Park, 2005). There are two main components of health. These are physical environment and social environment. Human health also depends upon natural environment like physiography, soil and climate and built environment including roads and buildings which are parts of physical environment too. Some pathogens of diseases can spread under particular environmental condition. As for example, malaria and diarrhoea are two dominant diseases in the tropical climatic region. On the other hand economic, social and cultural components are considered

in the context of social environment. All these factors exert immense influence on human health.

3 Social determinants of health

Significant socio-economic determinants of health. People who have a better diet, sanitary facility, good living condition and access to superior health care facilities along with avoiding activities that could risk their lives thus leading to a good health condition. On the other hand, a poor person remains unhealthy as a result of low economic condition and social status (Peter, 2015). From the geographical perspective health deals with the spatial analysis of disparities in health related issues and well-being. Some geographical factors influence the human health as well. The field of geography of health describes a balance among man, environment and diseases to his total environment.

4. Concept of disease

Disease is common term used all over the world. All the human being is familiar to this term. But the meaning of disease varies from person to person. According to Webster dictionary disease is “a condition in which body health is impaired, a departure from a state of health, an alteration of the human body interrupting the performance of vital functions”.

Oxford dictionary defines disease as “a condition of the body or some part or organ of the body in which its functions are disrupted or deranged”. From the ecological point of view, disease is defined as maladjustment of the human organism to the environment”. The imbalance between man and environment is the reason of outbreak of disease. After all it can be said that disease is the opposite of health (Park, 2005). Health and disease cannot go together. Three main factors like causative, preventive and curative factors are responsible for endemecity of diseases in any area.

Physical environment, cultural life style and habitat along with economic development and political repercussions are included in the causative factors of diseases. Physical environment of a region is associated with the high incidences of diseases. For example, high rainfall is the reason for outbreak of diarrhea. Cultural lifestyle and habitat promote diseases. Lack of education and health awareness are responsible for the outbreak of diseases frequently. On the other hand adequate education and awareness about health and hygiene may reduce the chances of disease. Low level of economic development is the reason for outbreak of poverty related diseases like rickets and tuberculosis. Due to

inadequacy of Vitamin D in food and less exposure to sunlight, children suffer from rickets. Malnourished children suffer from tuberculosis. Political instability sometimes causes dislocation of the sources of food and potable water which may lead to the outbreak of disease epidemics.

Supply of safe drinking water, effluent sewage system and drainage facility, administering of required vaccines, the medical and epidemiological research are included in preventive factors under disease dynamics. Mainly the water borne diseases can be prevented by providing safe drinking water and structured drainage system. Various childhood diseases can be prevented by providing various vaccines to the pregnant mother and children at various stages of their growth. Epidemiological and medical research can be utilized to locate the endemic areas of diseases and prevent the transmission of pathogens of communicable diseases from one place to another.

Curative factors for disease dynamics include indigenous and modern medicine, availability of Health Care facilities and Government policies for prevention and control of communicable and non-communicable diseases. Most of the countries in South and South- east Asia have indigenous medical system. In India, there are so many medical colleges based on modern medicine. New techniques and diagnostic tools of surgery have been introduced for transplant of human organs. Adequate Health Care delivery system can reduce the burden of patients in the hospitals and nursing homes. The advanced medical facilities in India are in fact beyond the access of the poor people. Accessibility of Health Care facilities is better in the urban areas in comparison to that in the rural areas (Dutta et. al. 1986). The Government of India has introduced several disease control programmes. But sometimes the allotted fund could not be utilized for that specific programme due to lackadaisical approach of the Government officials.

On the basis of the nature of transmissibility of pathogens of diseases, the diseases in the study area have been classified into two groups. One is the communicable disease and another is the non-communicable disease. Communicable diseases may be divided into three sub-groups. It is prepared on the basis of two types of classification of world diseases which are suitable or applicable with the nature of physio-cultural environment of the study area. These two classifications are based on Park’s classification (1995) and Classification by J. May (1958).

Table -1.1: Classification of Diseases

Non-communicable	Communicable		
Cancer, Malnutrition, Cardio Vascular Diseases, Accidental Injuries, Hernia, Diabetes Mellitus, Hypertension, psychiatric Disorder Blindness Shistosomiasis, Animal bite etc.	Hepatitis, Diarrhoea, Enteric Fever, Acute Respiratory Infection, Whooping Cough, Pneumonia, Measles, Malaria, Dengue, Kala-azar, Chikunguniya, Tuberculosis, Filaria and Tetanus, Japanese Encephalitis etc.		
	Air-borne	Water-borne	Vector-borne
	Acute Respiratory Infection, Pneumonia, Measles, Whooping Cough	Dairrhoea, Enteric Fever, Hepatitis	Malaria, Dengue, Kala-azar, Chikunguniy

Source: Computed by the Author

K. Park has classified the world diseases into two broad parts-

1. Communicable Diseases and
2. Non-communicable Diseases.

He has given a list of 57 diseases in all by covering the communicable (46) and non-communicable (11) diseases. In 1958, J. May has classified human diseases in the world. He has divided human diseases into four groups as: 1. Air-borne 2. Water-borne 3. Vector-borne and 4. Nutritional

A brief discussion about these diseases has been presented below.

4.1. Communicable Disease

Communicable diseases are those in which causative agent may be transferred from infected person through an intermediate host, which may be a vector, to a non-infected person. Communicable diseases are caused by virus, bacteria, protozoa, fungi and arthropods. Factors which are

responsible for the outbreak of communicable diseases are sources of infection, routes of exit from source, routes of entry and host susceptibility. In the area under study, three sub groups of communicable diseases could be observed (Table-1.1).

4.2. Non-communicable Disease

Due to increasing trend of urbanization and industrialization, non-communicable diseases have increased. These diseases are associated with modern life style as well. These are caused by non-reversible pathological alterations. Non-communicable diseases do not transfer from one person to another hence they are non-communicable and non-contagious in nature. Physical environmental conditions are less important in these types of diseases. But components of social environment are interrelated with the outbreak of non-communicable diseases.

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