

Relevance of Medical Geography in the Present Health Care Scenario of Assam

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Abstract:

Medical Geography is branch of Human Geography that deals with the geographic aspects of health with the use of various geographic techniques around the world. It also studies the impact of climate and location on an individual's health, the distribution of health, influence of various socio-economic factors on human health etc. With the help of these one can able to understand the health problems and improve the health of people at any locality. This research is based on secondary data sources that aims to know the present health care scenario of Assam as well as the relevance of Medical Geography in the present health care scenario of Assam.

Keywords: medical geography, geographic techniques, individual's health, locality

Introduction:

Assam is a land of diverse culture situated in the North Eastern part of India. It covers an area of 78438 sq. Km having total population 31,169,272 according to 2011 census with 86% rural population. The state is rich in natural resources, minerals, forests and has vast tracts of fertile land. Apart from the natural resources, the human resources of the state also play an important role in the development of the state. The health care status of the population of Assam is comparatively poor than other developed countries states. The state is still lagging behind from various advanced technologies in the health care sector. The NRHM (National Rural Health Mission) takes various initiatives on changing the health status of the rural population. There is also a need to up gradate those facilities which are still persists in the health care system of Assam. On the other hand Medical Geography is a branch of Human Geography that deals with the geographic aspects of health with the use of various geographic techniques to understand those health related problems and improve health of the people around the world.

Methodology:

The assessment of the current situation to know the present health care scenario of Assam as well as the relevance of Medical Geography in the present health care scenario of Assam is very important in terms of biological as well as environmental concern. For this descriptive research, secondary data sources are Census of India, NRHM other government, from various books, journals, research papers, web sites etc.

Objectives:

The objectives of the paper are:

1. to know the present health care scenario of Assam
2. relevance of Medical Geography in the present health care scenario of Assam

Defining Medical Geography:

- John M. Hunter famously defined the field as "the application of geographical concepts and techniques to health-related problems" (Hunter, p.3 ; cited under General Overviews)
- Medical Geography is defined as the study of spatial distribution of health, ill health and diseases as determined by the natural and cultural milieu of human-beings (Khan 1971)
- Medical Geography or Health Geography is the application of geographical information, perspectives and methods to the study of health, diseases and health care.
- Medical geography is the study of spatial distribution of diseases.

Present healthcare Scenario of Assam:

First of all if we observe the present healthcare scenario of Assam in case of health infrastructure, public health expenditure and health indicators the followings are observed respectively:

Health infrastructure of Assam:

To provide an effective health care physical health infrastructure is utmost necessary. Health infrastructure indicators are subdivided into two categories viz. Educational infrastructure and service infrastructure. The healthcare service infrastructure includes details of allopathic hospitals, hospital beds, Indian system of Medicine and Homeopathy hospitals, sub centres, PHC, CHC, blood banks, eye banks, and mental hospitals. The healthcare infrastructure i rural areas has been developed as a three-tier system and is based on population norms of 5000,30,000 and 1,20,000 population per SC,PHC, and CHC respectively in plain areas and 3000, 20,000 and 80,000 population respectively in tribal/hilly/desert areas (Table-1).

Table-1: Category of health centre population norms

	Plain Areas	Tribal/Hilly/Desert areas
SC	5000	3000
PHC	30,000	20,000
CHC	1,20,000	80,000

The following table (Table-2) shows the number of Sub Centres, PHC & CHCs functioning in Assam on 31st March, 2017:

Table-2: Number of Sub Centres, PHC & CHCs functioning in Assam on 31st March, 2017

No. of SC	4621
No. of PHC	1014
No. of CHC	158

Source: Bulletin of Rural Health Statics in India 31 March, 2017 Statistics Division, Ministry of Health & Family Welfare
The availability of health infrastructure indicates the level of development of the health care system.

Public Health Expenditure:

To meet the needs of the rural underprivileged population public health expenditure is very essential. For the implementation of various programmes under NRHM, funds are allocated under five heads:

- (i) Reproductive and Child Health programme
- (ii) NRHM Additionalities
- (iii) Universal Immunization Programme
- (iv) National Disease Control programmes
- (v) Inter sectoral convergence

The budget allocation under NRHM for Assam from the year 2007-08 to 2011-12 is shown in the following table (Table-3)

Table-3: The budget allocation under NRHM for Assam from the year 2007-08 to 2011-12(Rs. In Lakh)

Year/ programme	Reproductive and Child Health programme	NRHM Additionalities	Universal Immunization Programme	National Disease Control programmes	Intersectoral convergence	Total
2007-08 (BE)	20147.59	56471.00	2362.70	7668.00	29.70	86,679.24
2008-09 (BE)	27438.00	82061.00	2136.00	6706.00	23.00	118,364.00
2009-10 (BE)	31026.90	64687.31	2333.03	7324.35	2431.32	107,802.91
2011-12 (BE)	52753.28	67884.47	2238.32	7482.84	3887.15	134,246.06

*BE: Budget Estimates

Source: various issues of state implementation plan

From the above table it is seen that the total budget estimates increased from 86,679.24 lakhs in 2007-08 to 134,246.06 lakhs in 2011-12. The mission made the provision that the high focus states can spend one-third of their total fund for appropriate physical health infrastructure, the share of NRHM Additionalities that cover different physical infrastructure facilities is the highest as a percentage of total fund allocation and it was 65.15% in 2007-08 and 50.57% in 2011-12.

Health indicators:

The indicators like birth rate, death rate, infant mortality rate, maternal mortality rate, population coverage by hospitals, population and hospital bed ratio, doctor-patient ratio etc. are used to measure the health status of a community. Infant mortality rate and maternal mortality rate are widely considered as the indicator of the level of development of the health care system and the status of the women in the society. According to the sample registration system's data, The birth rate decreased from 24.8 in 2003 to 20.4 in 2016 in India whereas for Assam the figures were 26.3 in 2003 and 21.7 in 2016. The death rate is also decreased from 8.0 in 2003 to 6.4 in 2016 for India and from 9.1 in 2003 to 6.7 in 2016 for Assam. The infant mortality rate also fell from 60 to 34 for India and from 67 to 44 for Assam in the same period. The following table (Table-4) represents these indicators:

Table-4: Birth Rate, Death Rate and Infant Mortality Rate in Assam

	Year	Birth Rate			Death Rate			Infant Mortality Rate		
		Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
India	2003	24.8	26.4	19.8	8.0	8.7	6.0	60	66	38
	2016	20.4	22.1	17.0	6.4	6.9	5.4	34	38	23
Assam	2003	26.3	27.2	18.0	9.1	9.5	5.9	67	70	35
	2016	21.7	22.8	15	6.7	7.1	4.9	44	46	22

Source: SRS 2005 and SRS 2017

Relevance of Medical Geography in the Present Health Care Scenario of Assam:

From the present healthcare scenario of Assam it is noticed that there is a greatest relevance of Medical Geography to cater with various healths related aspects which are pointed below:

1. **For spatial-temporal variation:** Medical geography provides the way to find out the spatial distribution and variation of diseases in relation to different time to time, year after year etc.

2. **For information gathering:** Medical geography can provide information about various diseases and its trends of occurrence in a particular locality or area.
3. **To know the influence of socio-economic factors:** Medical geography tries to study the influence of socio-economic factors which are related with human health. It provides the basis how and why these factors are incorporated with each other and takes necessary steps for the solution of evil effects.
4. **For identification of diseases:** It also helps in identifying the risk factors, frequency of occurrence of a disease, to know the outcomes of treatment etc. of a particular disease.
5. **For assessment of health risk exposures:** Medical geography helps in assessing the interrelations inherent in many health related risk exposures.
6. **For determining pattern and costs:** With the help of Medical Geography people can able to attain the pattern of health care and about the costs necessary for it.
7. **For mapping:** With the help of mapping by plotting the spread of disease in an area we can find out the interaction between geography and public health condition of that area.
8. **For policy making, planning and decision making:** Medical geography is also essential for the public health policy, planning and decision making support system of various health related areas.
9. **For understanding and improvement of health:** It also helps in understanding the health problems and to improve the health of people worldwide on the basis of various geographic factors influencing them.
10. **To bring equity among the masses:** Medical geography helps in bringing equity among the mass population by providing the information about various schemes/programmes related with the development of health such that they will not be excluded from the opportunity to attain their benefits.

Conclusion:

Medical Geography is an essential to portray an understanding and prevailing of the patterns of diseases over locations and time. With the help of Medical Geography we can prevent disease and can take planning for better decision making in the health care sector. Now a day's various government and non government organisations take the initiative at the grass root level for the improvement of human health. There is also a need of an integrated approach for all round development in the health care sector to bring sustainability in medical scenario all over the world.

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