

## PUBLIC HEALTH IN COLONIAL INDIA

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### ABSTRACT

*The present paper seeks to explore the public health in colonial India. The history of public health in colonial India during the nineteenth - twentieths century and my endeavor will be to underline the sanitary condition, disease, epidemic and nature, course and significance with the help of a little theoretical discussion to be substantiated by a few illustrative examples. The colonial government claimed that under the direct rule of the Crown in Parliament, there was prosperity in India and decline of poverty and death. But reverse was the case. Since 1860, drain of wealth mounted through Home Charges and there was a heavy death toll due to recurring epidemics as Malaria, Plague, Small Pox and Cholera were the worst killers.*

**Keywords:** Sanitation, Railway, Irrigation, Drainage, Disease, Epidemic, Mortality.

### Introduction:

The diseases which are liable to create epidemic in colonial India: Cholera, Malaria, Plague, Fever takes the formidable position. This contagious disease and effects of epidemic to the soldiers creates a bar to the company to implement a well-decorated administrative system. Water pollution, lack of sanitation, was the key reason for braking out of epidemics. Census Commissioner in 1891 says – Among famine and Epidemic disease, the more powerful in a series of years is Epidemic disease and in particular Cholera, small Pox and Fever. (I)The investigations suggest that environment, climate conditions, and British Economic policies both have affected the health of the poor people.

### Methodology:

The present study is based on historical and analytical methods. The data or facts have been collected from both primary and secondary sources. The primary sources included both the published and unpublished written documents in the archives. Secondary sources have been used to supplement the primary sources. They include various books and articles written by different scholars on this topic. Both participatory and non-participatory observation techniques have been used for this research work.

### De-Sanitation:

During the second half of the 19<sup>th</sup> century there was rapid growth of the port and industries, mines, factories cities of Bombay, madras, and Calcutta and many others. The census records show rapid increase of population due to immigrants who came and resided in these cities in search of jobs. (II)As these region were low lying (0- 328 ft. above the sea level) a big problem of improper sanitation occurred. These regions were low laying, as they became over populated, the drainage, removal of wastes and supply of clean house hold water quickly became a problem. (III)The growth of factories and industries were last quarter of 19<sup>th</sup> Century, like cotton textiles, jute mills, and coal mines in Calcutta, Kanpur, Ahmadabad, Bombay, Howrah, Hooghly, and 24 Pargana. So, the large number of villagers was migrated towards the industrial areas.

### Growth of Industries:

David Arnold insists – Crowded and insanitary conditions of mine compounds and on plantations created micro environments favorable to the spread of disease among the work force aided by venereal disease contracted through prostitution by alcoholism and by industrial pollution. The disease of mine and factory and the city were in turn carried back by returning migrant workers to their own families and villages. (IV) In 1911, at least 1466 factories were established in the region of Bengal like as iron coal and steel in Howrah, Hooghly, Asansol, and Calcutta. (V)

### Construction of Roads and Railways:

Ira Klein has also reported that more than 20% of all mortality was caused by chronic epidemic malaria and that from the mid 1890 to 1920, it probably took 20 million lives. (VI) The development of railways and irrigation canals, construction of roads, embankments attributed to the outbreak of malaria in

certain regions. (VII) The East India railways which began in 1854 with the lines from Calcutta to Raniganj on Ganges 121 miles away, and was connected with the Great Britain Peninsular line, from Bombay by 1870 and was linked with Madras by 1872, left the patches of water beside the railways and supported mosquito breeding. (VIII) Raja Digambar Mittra, the Indian member of a committee to look into the causes of fever-impaired village drainage was caused by railway feeders due to which malaria occurred. (IX)

### **Unplanned Towns and Villages:**

The Indian Villages presented the most deadly picture of filth, dirt and mud. There have major sanitation problems. These villages were vulnerable to diseases as well. In the colonial period rise of new villages were around railway stations and along the rail lines, also the rise of many cotton towns. The houses in new towns did not have an adequate sewage system. The waste water generally ran on to the roads. Dirty cesspools and heaps of manure and garbage were seen in the compounds of houses.

The sanitary commissioner summarized in 1887, the sanitary condition in Indian towns and villages is very defective and as the young are more especially sensitive to noxious influences, a large number of young children die who, under more favorable sanitary conditions, would be preserved. (X)

However, the fact remained that people's ignorance and unawareness towards sanitation was also responsible for the spread of diseases. The Army Sanitary Commissioner for Bengal in 1894, Wrote: Sanitation is still almost unknown or if heard at all, is dislike as a newfangled, troublesome and expensive innovation. The people prefer to live and die as their forefather lived and died. (XI)

### **Irrigation and Water Problems:**

Wilcox William the renowned hydraulic engineer made a scientific study of the ancient system of irrigation and submitted his Report Restoration. (XII) He had emphasized that "The country had been deprived of its rich red flood water". Ganges water have gradually become sterile and non productive; others improperly drained, show an accompaniment of malaria. Nor has any attempt been made to construct proper embankments for the Ganges in its low causes, to prevent the enormous erosion by which villages and groves and cultivated fields are swallowed up each year by year. (XIII) He says that in the old system of irrigation the flood water was able to enter the fields by inundating the canals carrying with it rich, organic, silts sediments and fish swam into the lakes to feed on the larva of mosquitoes. Now the channels were choked with silt. (XIV) Malaria mostly struck the children and the pregnant women. It was noted in the Bengali Journal "Sadharani" in 1876 that the epidemic swept over the village and killed together 3900 persons, thus depopulating the village. There had been no birth in families till the two or three year before the present day.

### **Tea plantation:**

The sanitary commissioner of Bengal reported in 1869 that: in 1864 when the tea speculation was at its height the number of laborers arrived amounting to upwards a 600 a month, the steamers were over loaded with coolies and were treated badly. Cholera spread as they appeared into the tea garden. (XV) The plantation agriculture had been instrumental in the spread of malaria and dengue as well, by providing opportunities for mosquitoes to breed. The rapid progress of Malaria, Kala-azar and yellow fever towards the areas close to tea gardens alarmed the government that the tea garden workers who were unskilled and poor were being infected by the Kala-azar. (XVI)

### **Lack of Drainage:**

The sanitary inspectors also reported that due to the lack of proper drainage system rain water mixed freely with the contaminated drain water and flowed into wells and tanks. The organic pollution of the soil caused brackish water to accumulate in wells and this mixture produced albuminoic ammoniac and other water based chemicals that further contaminated the wells. (XVII)

Contaminated water was the major cause of disease, especially cholera, diarrhea and dysentery. Apart from the contaminated surface water seepage, the wells were also polluted by wind-borne refuse as most of the wells not covered. Often water from the streams running near the villages was used for drinking purpose, and the water in the stream which ran along these villages was of dirty color with a considerable deposit. (XVIII)

### **Diseases and Epidemics:**

#### **Cholera:**

The major problem which occurred in these areas was improper sanitation. Cholera which is mainly a water borne disease had its home in the low lying delta regions of Bengal where temporary reservoirs and

irrigation channels were used for drinking purposes. The unclean habits of poor people also attributed to the outbreak of disease. The garbage and filth that was overthrown outside the homes supported unhealthy environment, suitable for the spread of cholera. The sanitary commissioner of Bengal in his report of 1890, describes that the water supply obtained from the polluted river led to the cholera out-break in many of the villages of Bengal, while the villages the obtained water from the stream of the nearby forest were free from cholera. (XIX)

The first full account of cholera dates back to the year 1817 - 1823 in Bengal, from where it towards North West Province, Bombay Presidency, Sind and Punjab, by 1829. From Calcutta it spread along Coromondal and Malabar and reached Madras in 1819. (XX)

#### **Malaria:**

It took heavy toll of human lives and caused serious depopulation in Assam, Bengal and Bihar. As malaria is a disease associated with rain heat and wind, the worst hit had always been Bengal: - And it has calculated that 4000 million cubic feet of wind are yearly brought down to the Bay of Bengal suspended in water of Brahmaputra and Ganges. Bengal proper had been formed out of this mud which largely consists of animal, vegetable matters, imperfectly decomposed with a minor portion of mineral and earthly matters. When exposed to sun rays, after the fall of rain, continue to decompose the moisture, the resistant gases rise in the air and give birth to malarial fever. (XXI)

#### **Burdwan Fever:**

Malaria caused havoc in the Bengal districts, particularly in Burdwan, where it came to be known as Burdwan Fever. The vital statistics of the period from 1860 - 1947 demonstrate the failure of public health and sanitary policy of the Government. (XXII) The epidemics are said to have been caused by the construction of embankment for the railways which led to stagnation of rainwater and breeding of mosquitoes. The other cause was the movement from other provinces and their crowding in coolie quarters of the factories, mines and plantations. The third factor was the transmission on diseases of alien people in the intercommunication zone. (XXIII)

#### **Mortality in Burdwan:**

The District Gazetteer of Burdwan says that the outbreak of malaria fever estimated total mortality at about 1/3 of the whole population, between 1862 to 1872. Due to siltation the old river beds dried up which were held responsible for the epidemic of malaria. The irrigation commission proposed to build Eden Canal in 1881 to flush up old river beds for the purpose of production from malaria fever. (XXIV)

#### **Other Diseases:**

##### **Plague:**

The drastic plague disease has also not been unknown to the region. During the 19<sup>th</sup> century it occurred for the first time in cutch in 1812 and spread into Gujarat and Sind and latest for 10 years. (XXV)

##### **Small Pox:**

However some social and cultural factors were responsible for the spread of small pox and other diseases, because of the lack of education social beliefs and social inequality. (XXVI) In India the dry spring months were traditionally a time of congregation and travel for religious fairs, Pilgrimages and Marriages and these types of social contacts helped in transmitting the small pox by the *Virola Virus*. (XXVII)

#### **Roll of Government:**

But most of all, the shoestring budget of the government for public health despite heavy revenue earnings led to neglect of healthcare in the district. (XXVIII) Only the district headquarters had a hospital and the interior had only a few ramshackle dispensaries. The government had no infrastructure to tackle a raging epidemic.

#### **Charitable Dispensaries:**

The establishment of charitable dispensaries from the 1830s has been regarded as one of the earliest attempts to extend western care to the Indians. In Bengal, the total number of dispensaries rose from 61 in 1867 to over 500, in 1900 though from 1870 the colonial administration distanced itself from the financial responsibility of running these dispensaries and they were left to raise their own. In Bengal up to 1875, the Sanitary Department underwent no change, remaining a one-man department with purely

inspecting, reporting and advisory functions. In that year, however, a port health officer was appointed for Calcutta and was placed under the administrative control of the Sanitary Commissioner. (XXIX)

### Roll of Local District Boards:

It may be noted that, apart from the feeble medical intervention on the part of the imperial government, the actual responsibility for public health was left to the initiative of the local District Boards were being set up in the rural and semi-urban areas since 1881. They were required to raise their own resources and provide for drainage, water supply, general sanitation, maintenance of hospitals and dispensary etc. in addition to other development activities. The 19<sup>th</sup> century over view reveals that there was chronic poverty all around the region and the poor people were subjected to many fatal diseases due to the problem of water scarcity, overcrowding and filth. The following table shows the mortalities due to the diseases.

### Mortality in All Provinces of British India (1881 - 1900). (XXX)

DISEASES	1881 - 1890(Years)	1891 - 1900(Years)
Cholera	306,518	450,502
Various Fevers	3,359,927	4,363,055
Small Pox	122,772	82,588
Dysentery and Diarrhea	263,608	278,298

### Conclusion:

The social economic and material conditions in Colonial India were ripe for the spread of diseases, unsanitary conditions, contaminated water, overcrowding, wretched houses, poverty, indebtedness and severe food shortages. Innumerable diseases were common in the region particularly cholera, smallpox, fever, malaria, dysentery and diarrhea and plague. These diseases claimed thousands of lives every year. But apart from being enumerated very little information is available on these diseases.

### References

1. Census of India 1891, Vol. - XVI, Pub. - 1894, p. 79.
2. Census of India 1911, Bengal Vol. - V, Pub. 1913, Census of India 1911, Vol. - VII Bombay, Pub. 1912, Census of India 1911, Vol. - XII Madras Pub. 1912.
3. Bamber Scott, "Diseases of Antiquity and Pre-Modern Period in South-East Asia" in Kiple, k. F. (edited), "Cambridge World History of Human Diseases", Pub. 1993. p. 433
4. Arnold David, "Introduction: Disease, Medicine, and Empire". Published in Arnold David (edited) by "Imperial Medicine and Indigenous Societies", Pub. 1889 p. 6
5. Census of India 1911, Vol. -V, Bengal, Calcutta, Bengal Secretariat Book Depot, Pub. 1913 pp. 322-328.
6. Klein Ira - "Malaria and Mortality in Bengal 1840-1921", in Indian Economic and Social History Review, IX, no.2 June 1972, p.135.
7. Roy Tirthankar, "State Society and Market: The After Math of Natural Disaster in Colonial India", in Indian Economy and Social History Review (IESHR) Vol. - XLV, no.2, Pub. April 2008, pp. 261 - 294.
8. Denial Headrick, "Tools of Empire, Technology and European Imperialism in 19<sup>th</sup> Century", Oxford University Press, New York, Pub. 1981, p.186.
9. Hindu Patriot, 1864.
10. Report of the Sanitary Commissioner of Hyderabad, Assigned District for the year of 1885, Pub. July 1887, p.14.
11. Memorandum by the Army Sanitary commissioner, on the Sanitary Report for Bengal 1894, Pub. February 1897.
12. Wilcox William, "The Restoration of the Ancient Irrigation of Bengal", Calcutta, Central press, Pub. 1928, pp. 7-8.
13. Ibid pp.11-15.
14. Ibid pp.15-17.
15. 6<sup>th</sup> Annual Report of Sanitary Commission with the Government of India, for the year of 1869 Bengal, Calcutta Office of Superintendent of Government Printing - 1870 Bengal, pp. 243-253.
16. Dutta, Achinta Kumar, "Medical Research and Control of Disease: kala - azar in British India", in Harrison Mark (edited) Social History of Health and Medicine in Colonial India, London, Pub. 2009, p.97.
17. Report of the Sanitary Commissioner of Hyderabad, Assigned District for the year 1891, Hyderabad: Residency Government press, 1892, Para no. 16.
18. Report on Cholera Enquiry in Buldana District, made on the 12<sup>th</sup> September 1890 by the Civil Surgeon Mr. Montgomery, Para 23, in Report of the Sanitary Commissioner of Hyderabad, Assigned District for the year of 1890, Hyderabad: Residency Government Press, 1891.

19. 23th Annual Report of the Sanitary Commission of Bengal 1890 – by Surgeon Major W. H. Gregg, Printed at the Bengal Secretariat Press, Pub. 1891.
20. Kumar Anil, “Medicine and the Raj: British Medical Policy 1835 -1911”, New Delhi, Pub. - 1998, p.17.
21. Report on Sanitary Commission of Bengal 1873, Office of the Superintending, 1873, Calcutta.
22. Ray Kabita, “History of Public Health: Colonial Bengal 1921 – 1947”, Kolkata, Pub. 2008, pp.60-63.
23. Palit C. & Dutta (eds), “History of Medicine in India”, New Delhi, Pub. 2006, Introduction and C. Palit, “Epidemics and Empire”, Passim.
24. Peterson J. C. K., (Compiled), “Bengal District Gazetteers”, Burdwan, Calcutta, Bengal Secretariats Book Depot, Pub. 1910, p.89.
25. Hunter W. W., “Imperial Gazetteer of India: The Indian Empire”, Vol. – IV (Administrative), Published, under the Authority of his Majesties Secretary of State of India in Council, Clarendon Press, Oxford, Pub. 1907, p.475.
26. Barbara, D. M., “Health Fertility and Society in India: Macro Studies and Micro Studies in the Journal of Asian Studies”, Vol. – 45 no, Pub. 5<sup>th</sup> November 1986, p.1028.
27. Arnold David, “Diseases of the Modern Period in South Asia”, in Kiple K. F. (edited) “Cambridge World History of Human Diseases”, January 2011, p.419.
28. Palit C., “Scientific Bengal: Science Education, Technology, Medicine and Environment,” New Delhi, Pub. 30<sup>th</sup> October 2006, “Ronald Ross and Malaria”, Passim.
29. Palit C. & Sarkar Mahua (eds), “Indian Vistas of Environment”, New Delhi, Pub. 2007, C. Palit, “Empire, Environment and Sanitation in Colonial Bengal”.
30. Hunter W. W., “The Imperial Gazetteer of India: The Indian Empire”, Oxford University Press, Oxford, Pub. 1881, Vol. - 1, Op. Cit. p.512.