CHAPTER– I

INTRODUCTION

The present study is to examine evolution of the public health during nineteenth and twentieth century as part of colonial expansion and consolidation of power and spread of recurrent epidemics such as cholera, malaria, small-pox, kala-azar and plague took huge toll of mortality of both Europeans and natives in Northeastern province. It had affected the social, political and economic order of colonial state. Under such circumstances, health policies were evolved, implemented and stand as a tool for British. With western medical interventions evolved new practices and new ideals to control epidemics diseases which need to be understand as a part of exploratory and regulatory mechanism of colonial rule. To keep in mind the complex nature of colonial mechanism, the present study explores how colonial interests led to expand the purview of public health policies and practices from colonial enclaves to general public during nineteenth and early twentieth century's in Northeast India.

Colonial expansion and consolidation in Northeast frontier witnessed several epidemic diseases. Frequent outbreak of epidemics in their process of expansion and conquest led to devastating impact on European army and the lives of the population and took heavy toll of population. Among all the epidemics encountered, the most devastating diseases were cholera, kala-azar, small-pox and malaria. Cholera, a dreaded disease appeared frequently since 1820s. It swept the lives of the plain population in Tippera, Manipur, Dacca, Sylhet and in Assam. At an average until 1920s, more than twenty thousand lives were carried off by cholera in every five years. Another disease, Kala-azar, also known as 'Assam Fever' had also swept the lives of the populace since 1880s. At the first appearance, the disease was not recognized by the inhabitants of Assam. It was recognized as an unknown disease caused by evil spirits. In 1882 it appeared in the Garo hills and mercilessly took lives of the natives. Kala-azar, till 1880s, it was confined in western part of Assam. Areas mostly hit by kala-azar were Garo hills, Goalpara and Nowgong. Later on, it was extended upto Sylhet, Kamrup and Darrang. Between 1914 to 1933, forty six thousand four hundred and nine lives were lost. Small-pox, another disease also claimed the lives of the natives in many. The disease had done more ravages in Kamrup and Sylhet. During 1879 to 1894, nine thousand three hundred ninety nine

died of small-pox. It also appeared in the Naga and Khasi hills. Moreover, malaria also caused havoc on the lives of the people. In Tura and Goalpara, malaria prevailed every year. To the south of Sylhet, malaria prevailed as an epidemic since 1869. In the year 1880, in Kamrup district alone, five thousand eight hundred fifty five persons were attacked by malaria fever. To an extent, in Jorhat municipality, the incidence of malaria per hundred mile population increases. By the year 1933, the incidence per mile was four hundred fourteen.

Early nineteenth century colonial military expansion in the province and gradual occupation in Northern Eastern province led to the developmental projects of railways, road and other communications. The commercial interests of the British also initiated the expansion of tea plantation caused immigration of the huge laborers from different parts of India without proper sanitation. All these added to the further spread of epidemic diseases and worsened the conditions. A report on the outbreak of cholera in Golaghat sub-division in tea garden in 1871 showed that the epidemics of kala-azar had caused much mortality as it was widespread. It was commonly widespread in Assam since 1858. During the period of 1880 – 1885, it swept the lives of the population and continued to occur in the districts of Goalpara and Kamrup in 1918-19 and in the district of Nagaon in 1901-11. Another epidemic of Cholera popped its ugly head seven times during the period of 1911-1921 and took huge mortality in the districts of Dibrugarh, Lakhimpur, Sadiya and Darrang. Although the occurrence of epidemics was a common factor, medical facilities were provided in the region. However, distribution of medical facilities was limited to the larger population. The reason being, the medical facilities were provided only for military hospitals of the region which allowed only a few patients to be treated under such circumstances. It was till 1904 that few dispensaries were established. In order to control epidemic diseases, colonial government initiated the health policies and that was how, the process of western medical facilities were implemented. Gradually, in 1924 due to high kala-azar mortality, the Government appointed a commission to work in Assam. These simultaneously leads to the development of public health policies which led to the decline of mortality in the region.

Therefore, the present research is an attempt to examine how public health policies were implemented and effected the beliefs and healing practices of the natives and their interaction with western medicine in Northeast India.

1.1 Literature review:

The basic concept in understanding the history of epidemics and public health in the context of colonialism is complex in nature. There are various issues related and relevant with the present theme which is reviewed.

1.1.1 Colonialism, medicine and epidemic diseases:

David Arnold argued the role of medicine and disease in the context of colonial encounter. He sees disease and medicine as a site of contact, conflict and eventual convergence between western rulers and indigenous people.[1]Other like Pati Biswamoy and Mark Harrison pointed other major appraisal, beside the relationship between medicine and imperialism. The significant constituent was the nature of colonialism.[2] Arnold David illustrated the nature of colonialism from the history of colonial medicine and epidemic diseases. As a way to understand the general nature of colonial power, hegemonic as well as its coercive process. Moreover he compared the process of western medicine intervention in India as the disclosure of the nature of colonialism. He also discussed the stages of western medicine into two, the first part till 1914 as enclavist and the rest as state medicine. He contrasted the differences between indigenous and western knowledge and relate with colonial rule is no doubt enhance a better significant understanding of the history of medicine in India. But in his discussion of the nature of colonialism he talk less on the political and economic expansionist nature that was also one of the factors responsible for the spread of epidemic diseases during their process of expansion and delimited as not probable to discuss in order to avoid vague. The present studies therefore attempt to fill the gap.[3]His other work, was the central role of medicine and their contribution in the field of western scientific thought in nineteenth century India.[4] Deepak Kumar focus on Western medical intercourse. That split into numerous ways of medicine was used as a tool to control between coercion and persuasion. But coercion was more appropriated by colonial ruler. Another was intervention and often resistance.

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[1] Arnold David, (ed), *Imperial medicine and indigenous societies,* Oxford University Press, Delhi, 1989

[2] Pati, Biswamoy, et al.(eds), *Health, Medicine and Empire, Perspectives on Colonial India,* Orient Longman, Delhi, Reprint 2006.

[3] Arnold David, *Colonizing the body, State medicine and epidemic disease in nineteenth century India,* University of California Press, London ,1993

[4] *Cambridge history of India, science, technology and medicine in colonial India,* Cambridge University Press, New York, 2004

Intervention was explained in terms of state service and western dominance over Indigenous medicine.[5]

David Arnold in. The causes were due to climate, topography and culture of the people. He further described Europeans systematic observation on this point as that cholera was aerial highways and not routes from human communication. What he remarked was there were various pattern of cholera that travels in India.[6] But studies from other scholars in different parts of the world Arnold David himself disclose a statement made by Lange, in *Imperial medicine and indigenous societies,* "We know as yet too little about the nature and extend of disease and other cases of mortality among the inhabitants of the Americans, Black Africans or Polynesia before European arrival, even about cholera and small pox in India before the establishment of British rule. To make such claim with confidence. It is probably a mistake to assume that pre-colonial societies, even those that existed in virtual isolation from the rest of the world, enjoyed an idyllic existence free from endemic disease and the periodic and the periodic suffering caused by famine, warfare and pestilence". He argued the above statement as 'it may be that the spate of epidemics which was afflicted many societies by the arrival of Europeans was assumed simply because Europeans were keeping systematic record after their establishment'. But it is also understandable from David Arnold that a growing number of scholar writers had taken and in fact more critical view by highlighting the disastrous and demographic and social consequences of initial European contact and sees colonialism itself as a major health hazard for indigenous population. European imposed devastating effects of epidemic diseases unwittingly introduced by Europeans and unleashed on societies without prior experience of their ravages and with little pitifully little ravages against them. [7]Moreover the other important argument he made was Epidemics of the nineteenth century and gave significant on the points that. In the very instance for Europeans it was a great challenge for achieving their hegemonic power. Epidemic diseases which caused havoc the social and political life of the state and also for the Europeans. The

[5] Kumar Deepak 'Medical Encounters in British India' *Economic and Political Weekly*, vol. 32, No. 4 199 pp.166-170

[6] Arnold David, *The new Cambridge history of India, science, technology and medicine in colonial India*, Cambridge University Press, New York, 2004

[7] Arnold David (ed), *Imperial medicine and indigenous societies*, Oxford University Press, Delhi, 1989

response of western medical practice in times of epidemics was used by colonial rulers as one of the instrument to make success colonial rule in India.[8]

Arabinda, samanta, account some demographic observations that he made on malaria in colonial Bengal. His work is the outcome from historians who produced some of the important works on the history of diseases and epidemics. But still it was found scarcity in literatures despite several times survivors of epidemic diseases in Bengal and his work contributed a scholarly investigation on malaria in colonial Bengal. Malaria was in fact the known disease in Bengal since the Vedic times. Especially in the nineteenth and twentieth malaria epidemics had swept the live of the people. It effect a wider geographical scale and what more important that he stated was that it was not remember as epidemic disaster but as a phenomenon. Which need to reinterpret the significant from historical perspective. The biographical observations that he made was from the 1820s to 1914. The period between was remarkable as epidemic most of time and sometimes endemic. Another important finding that he had made was the problem he observed in estimation of mortality rate of malaria. Because in most of the cases not only in Bengal even in the Northeast India it was the same problem with estimation of malaria fever. What he account as the problem was in census report he found that most of the cases was account as fever. And among the fever group malaria was the highest account but it was also incorrect to say that all the fever was because of malaria fever. The symptoms of fever and malaria were very difficult to differentiate. He disclosed the difficulties on the basis of the reports from medical men of Leslie malaria expert who was assigned to conduct special enquiries on his working of dispensaries and the estimation he made was that in India one-fourth of the recorded fever death was due to malaria fever. Another malariologist, Lurkis argued more than half of the death associated with fever was actually caused by malaria. Thus his observation and argument that he made for the difficulties in estimation is reasonable acceptable on the grounds of the investigation of medical expert and investigations carried out by different experts in different parts of the country. Demographically malaria had a great impact on Bengal demography. The disease had effected both the rich and the poor but in most of the cases are greatly affected more among the poorer class. It was assumed as due to scarcity of food and

[8] Arnold David, *Colonizing the body, State medicine and epidemic disease in nineteenth century India,* University of California Press, London ,1993

poor nourishment. Which means poverty was the main the cause of the heavy cause of mortality. And among the poorer class the more affected were from landless labourers. The reason he gave among the landless were because of their greater in number, and the absent of provision made temporary safe establishment in healthy places and lack of special medical provisions for this class. From all the reports he observed that the denser the population the heaviest the mortality rate.[9]

Kala-azar an epidemic diseases which was once a dreaded disease in Mediterranean Europe and Africa. It was also known as imported by the European traders and when once it entered it never leave by that disease and it took huge toll of mortality in Eastern India during the British period. The disease was later considered as kala-azar by Leonard Rogers in Burdwan. And most of the first stage it was also known as Burdwan fever. And in Calcutta it was known as Dum Dum fever. In Assam it was lasted till 1990, again appeared in 1917,1931. In Bihar in 1937 and depopulated the villages in its path. The discovery of the cause of kala-azar took long time. There were many beliefs of the cause from supernatural to germs were suspected. He discussed the about various medical men initiatives and encounter the disease kala-azar. Mention may be made of Ronald Ross who identified the germ of kala-azar, Dr. William who encounter numerous patients suffering from acute kala-azar and from his examination from the patients' blood cells he also demonstrated that it were actually germs. But the mode of transmission or infected agent was difficult to found out for certain longer period of time. There were many assumptions made but most of them were proved false. It was in the year 1939 an interesting discovery made by Smith, Haider and Ahmed prove success after twenty years of patience and research. He also argued with the discovery of the drug urea stibamine by U N Brahmachari was one of the reason that can prevent the spread of the diseases over parts of Assam and Bengal.[10]

Achintya Kumar Dutt examined the efficacy of British medical policy and modern medicine in checking the spread of the disease. He also examined the attitudes of the effected people towards the disease and the response of the government anti-kala programme. According to his study kala-azar was a matter of health concern for the

[9] Samanta, Arabinda, *Malaria fever in colonial Bengal 1820-1939:Social history of an epidemic*, Firma KLM pvt ltd,Kolkata, 2002

[10]Kaushik, Roy Chowdhury, Palit, Chittabrata et al.(eds), *History of medicine in India, The medical encounter*, Kalpaz Publications, Delhi, 2005

people in Assam. It had a great impact on the demographic and economic development of the region. The rapid of the spread of the disease was happened by the opening of rail road communication connection for British commercial and military penetration. And the opening of the large area for tea plantation of Assam and the accelerated movement of people from infected areas to uninfected ones also facilitated its dissemination. Thus it depopulated and the decline in population also led to decline in loss of revenue. For the Government it was a matter of concern since the 1880s and they took initiative steps by establishing and dispensaries and medical facilities for the treatment of the disease when it was greatly affected among the productive labourers. But one obstacle in their way of progress was due to not finding the particular aetiology of the disease and also of the limited provision of modern medicine. Because of that reason the effected people expressed disappointment at the doctors' failure and were reluctant to undergo treatment. The only preventive measures adopted were segregation and gradually Government took more effective measures by convening the goanburas and village panchayats about the diseases and spread so that they can prevent to spread. Moreover, put into force epidemic disease Act of 1897 Act iii for prohibition of migration drastic measures for were adopted. Directors, managers and medical officers were advised to take necessary actions for prevention. His findings reveal that there was a mixed response of the sufferers to western medicine. For the Garos it was a foreign disease appeared after the coming of British. They also blame as the disease as caused by superstitious agent and have nothing to do with medicine. Because it was their beliefs that diseases were ascribed to superstitious agent and they had to propitiate by giving sacrifices to their Gods and not to go treatment by modern medicine. It was also because of their disappointment generally with the available treatment for kala-azar. They intended to be cured of the disease and attended the dispensaries. But they were disappointed with the failure of the doctors which was not culturally opposed at all to get cured. It was only when by the successful introduction of antimony treatment since 1919, the people of Assam simultaneously responded to the British medical system. And the Government extended the effective provision of western medical kala-azar campaign in different parts of Assam. His argument was that it was the economic interest of the British, especially for protecting the tea industry, might have been the impulse behind such anti-kala-azar measures. The slow and gradual responses and co-operation of the people, health officials and researchers had undoubtedly contributed to the success of

those measures. Which ultimately reduced the mortality rate since 1919 but failed to eradicate. Due to lack of funds during the second world war, lack of qualified staff and poor sanitation in towns and villages.[11]

David Arnold in discussed small-pox disease which was known as the most dreaded among epidemics and the heavy mortality rate from this disease. He also discuss about indigenous perceptions of the disease which they thought epidemic was attributed to the possession of mother goddesses because of her anger. Different perceptions of understanding vaccination in relation to cure small-pox disease were demonstrated. While stating indigenous perceptions of small-pox O.P Jaggi, [12]described various perceptions of the causation of disease. Small-pox was believed as same in other parts of India as in Northeast too. The khasis and assamese do same believed as the mother of goddesses. David Arnold examined their way of opposition and welcome of vaccination was discussed from the indigenous response towards the disease according to their beliefs and understanding. The survivors of vaccinations which reduced the mortality rate from small-pox. It was a hesitant attitude for the state and on the other it was caused due to the divided nature of medical opinion of both western and indigenous. Colonial Government had welcome vaccination as it was their confident and proof for proving western medical superiority over indigenous medical practices towards variolation. Important change that he demonstrated was from the revolt of 1857 because of fear of political insecurities of both the British and indigenous.which resulted into a more reliance attitude for better medical intervention.[13]

1.1.2 Public health in British India:

There were different issues dealing with the study on public health in India. In the history of medicine first part of the nineteenth was renowned as the period of European medical enclave for Europeans in India. Mark Harrison, *a*rgued public health in British India. He interpreted the development of public health in terms of

[11] Dutt Achintya Kumar, *Kala-azar in Assam British medical interventions and people* in (eds) Kumar Bagchi Amiya, et al., Maladies, preventives and curatives debates in public health, Tulika Books, Delhi, 2005

[12] Jaggi, O P, *History of science, Technology and Medicine in India,* vol-iii, Atma Ram & Sons, Delhi, 1982

[13] Arnold David, *Colonizing the body, State medicine and epidemic disease in nineteenth century India,* University of California Press, London ,1993

professionals, cultural and administrative settings related into a broader social and political significant. But the factors responsible for development were varied. One significant factor was the incorporation of section of indigenous elites in shaping colonial state responses by their active participation as policy making. Later develop into the district and municipal level. Another was practical constraints of local revenue. He justified the imperial design of colonial medical policies was a contest between two conceptions of empire itself. These two conceptions was the nature of Public health policy in India. One is authoritarian and a paternalistic, colonial interest was thus interpreted as Europe's civilizing mission in the tropics. The other as liberal and decentralist, and thus the government imposed limitations upon Government actions on health measures because of shortage of revenues and also of indigenous resistance. In favor of imperial dominance in India their claims of local and central governance resources was justified as a competition claims for good governance and not for the sake of colonial benefits in India. All these he derived from the conflicting view points of colonial administrators and medical officers of British India. Thus he concerned about the contradictions and rivalries of public health within the imperial order itself. One significant turning point in the nineteenth century he accounted was the development of sanitary policy after the revolt of 1857 out of European fears of indigenous provoking Indian mass and in the 1970s response of public health by indigenous elites. He examined the status of Indian medical service in the context of Britain and assumed that Indian medical service till the 1912 was problematic. The problematic issue dealt was the competition strong force of indigenous medical practitioners. Availability of unregulated western medical practitioners. Another argument of his work dealt with Anglo- Indian preventive medicine. For understanding the attitude towards India and its inhabitants. Cholera epidemics of the nineteenth century was explored for disclosed the contradiction and tension of British rule in India. The disclosures of medical inadequacy provoke tension not only among the Government but also to the medical officials in India and disrepute of Anglo-Indian which diminish the credibility in abroad. And one significant etiological development was the identification and acceptance of Koch 'comma bacillus 'in India in the 1890s. He also traced the quarantine measures adopted in times of epidemics. Most important measures were adopted in pilgrims, on the passage on ships. And the tension arises by imposing quarantines among the rulers and the ruled. Not only that between the Hindu and Muslim elites too. So he focused more on the debate of

quarantine measure in nineteenth century India. The progress of sanitation in India under the local-self Government was discussed.[14]

If it was not much successful in the lines of public health implementation what was responsible and what were the factors responsible for deficient to finance can be understand from ChittabrataPalit, argued the decline of tropical diseases in the west was decline due to heavy investment in sanitary and nutrition. On contrary to that, in case of India and most of the third world countries there was no such decline. The obvious factor discussed was, large amount of wealth was drain away to the West and Indians suffers for the inadequate available funds for such improvements. Another important argument is in the wake of the Germ theory of diseases. The vectors borne diseases was carried by lice, rats, mosquitoes were condemned along with the tropics of the climate. But the host of these vectors were less condemned was disclose. Epidemics of malaria, cholera and small-pox were not the original diseases of India. It was before the outbreak of the disease in India Europe already experienced all those diseases. In relating with that knowledge he also discussed the vectors host of disease. European in the name of territorial expansion was one of the factors. Moreover, the epidemics of cholera, malaria, small-pox and plague were brought in by the policy of colonial Government immigration, railway transportation, and embankments. He further added that the conquest of disease in India was compared as medical imperialism. On the grounds of the provision made by Indian Medical Service. He means Indian Medical service was a wing of British Army in India. And later taken to Urban and in the name of civil lines they carried towards white population. And extended to their vested interests towards mines, plantation, and factories. That way rural population did not received the benefit of the Indian Medical Service in practical. But in the case of India, they discovered only the cause of the disease and not the remedy of diseases was practically provided for the welfare of the rural mass. The administration of Indian Medical service was also segregated, all the Civil Surgeons was rested on the white and sub-assistant Surgeon to the Indians. Carried their work for serving the interests of Europeans in India including the Indians elite. Most of the service was private in character of which for rural it was not possible to meet the demands of consultation of western medicine. For the fate of rural mass

[14] Harrison, Mark et al.(eds), *From western medicine to Global Medicine, The hospital beyond the west*, Orient Blackswan, Delhi, 2009

more often they forced the indigenous practitioners into service and along with the barefoot doctors which were poorly trained in the way of western medical in medical schools after the Local-self Government Act was passed. But again the Indigenous medical practices were condemned by western medical practices as not scientific depending on folklore but only helpful for the ultimate resort for villagers. Thus the policy of health measures adopted by British In Indian which he described as segregation in nature, Indigenous medicine was not given patronage in spite of it cheapness and thus by the 1880s western medicine was provided to the unprotected land was left to the imperial drug industry to flood with pills, capsules and syrup. This what he called as another medical imperialism in India. [15]

Deepak kumar, argued the perceptions of public health in British India. He argued the complex nature of understanding and explaining public health in British India. Define the concept of public health in a wider perspective and linked with colonial medical official notion. Medical officials perceptions was that public health does not depend only on the control of the preventable diseases but it also depend on the state of nutrition and general economic conditions. In the context of India Government escaped from taking complete public health responsibility from their notion. Medical official in India explained their notion as diseases was not prevented and was not certainly cured by the completeness of sanitary surroundings nor the skill of the physicians, so much depends on the sick man's own constitutions and habits. The enthusiastic public health officials would do much more in securing their support of village by appealing to the code of Manu by involving the inquisitorial, oppressive and coercive interference of the state. Gradually changes made in Government medical administration led to apathy towards the progress of public health administration. European medical men did contributed towards research and fundamental discoveries and their work meant a lot for public health too. Mention he made was of Haffkine, Ross, Donovani and Rogers. Ross and Haffkine commitment contribution for the beneficial of finding the betterment of public health status through their discovery. But unfortunate requirement expenditure of large scale sanitary measures for practical and preventive approach could not make much progress. For that reason the Government of India and in England preferred to ignore Ross suffered

[15] Palit, Chittabrata et al.(eds), *History of medicine in India, The medical encounter*, Kalpaz Publications, Delhi, 2005

exhaustion and frustration. Both Haffkine and Ross sought active state intervention but could not be fully met. There were various institution of hygiene and public health was institutionalized in India from special grants for all India basis. But in most of the times because of insufficiency of the funds in most of the times establishment were abandoned and made slow progress in the field Institution development. Moreover he argued about the impact of Second World War for the development of public health consciousness of the Government. Several changes and enquiries were made for the betterment of public health status in India but all were just remain writing for paper only and not practically applied. His findings revealed the important issue of public health was keep important agenda for long. For which the Government tried to solve the problem according to their explanation or understanding and according to the budget available. Of the most important was that the neutral justification of both the British and poor Indians who stand as an obstacle for the progress of public health implementation in India.[16]

Sandeep Sinha, located his study in the context of Imperialism dealt with diseases and public health in Bengal. His main argument is that medicine was seen as the key means of imperials ideas and action for understanding the nature of British expansion. Evaluate public health measures in Bengal. He traced the conceptions of public health in Britian and illustrates its impact on Indian society in the nineteenth century. Impact on Ayurveda, Siddha, Unani of which he made special references to Ayurveda on the ground of accepting by Indians as the most scientific and popular of all systems and it was till until the first part of British period it was still retain its strong position in the society. In spite of the acceptance by Indigenous, after the coming of the British and in the mid century how western medicine degenerate the popularity and replace a stronghold position by western medicine was his main discussion. From the author points of view western medicine with more accurate and scientific knowledge in understanding diseases encouraged the British to build up health service in India was traced as the beginning of Indian Medical Service in India. The nature of recruitment was of first imperial in character in the nineteenth century and later in the twentieth century only, Indians were eligible to enter in Indian medical service. He also claimed that the study of epidemic disease of malaria was appropriate to disclosed the nature

[16] Deepak kumar, *Perceptions of public health a study in British India*, in (eds) Kumar Bagchi Amiya, et al., Maladies, preventives and curatives debates in public health, Tulika Books, Delhi, 2005

of epidemic. He revealed the crisis imposed upon indigenous society and the response of public health measures was accounted as the development of public health. He further stated that the role of state medicine and the provisions made for the welfare of its people was significant in terms of understanding the state and public relations was what he examined in Bengal. The nature of different stages of medical practices in Bengal was divided in stages. The pre-colonial indigenous medical practices as personal and later public. In his context of Bengal diseases were considered to individual problems and nothing to do much with the state. And the practitioners were also much private in nature. They need not to worry much about the control of epidemics. And his statement in favor of the above argument was because pre-colonial did not yet usher Industrial revolution which lad laid a major health impact on the people. Second stages with imperial expansion and military nature of Indian medical service. Third stages with development of state public health natures. Sided the superior medical knowledge of western medicine and the political articulation of public health was examined. Another important account he made development of state medical education and research. Sanitary reforms of the state implementation. Highlighting the neglected sections of the native population of which he stated as the racial attitude of Colonial Government. Malaria was studied and disclosed the faulty policies of colonial Government. Over all he tried to disclosed the resistance of indigenous medical practitioners and the unconscious natives who cannot understand the value of the indigenous medicine and want only quick relief was also disclosed. [17]

Tinni Goswami, added another important dimension of tracing the root cause of epidemic diseases and sanitation aspects of public health in British India. Sanitation aspect of public health and disclosed sanitary policies of British with critical analysis. The period chosenwas from 1880 remarkable as the first step towards decentralization of health policies till the forming of Montague-chemsford Reforms Act of 1919. With increase in the scope of Government measures, develop institutions. She remarked an eminent British personalities Ross and Ninghtingle their kind effort of starting sanitation movement. With that further led to an increase in making sanitation progress. But what he assumed was that British Government neglected the sanitation aspects in spite of its significant contribution for the growth of public health. One

[17] Sinha, Sandeep, *Public health policy and the Indian Public, Bengal 1850-1920,* Visions Publications (p) ltd, 1998

obstacles recognized by colonial officials was the inefficiency of funds. And also of the corruptions of municipal and union Boards who were selfish with their own interests and unwillingness to perform their duties had obstructed. And resulted with the policy of public health confined to where Europeans settled in Calcutta and mass rural population was neglected. In that context Tinu, sate 'British Raj consoles the natives with half- hearted initiatives'. Another issue is on nutrition and nutrition important is seen from the points that. Most of epidemic diseases were related with poor nutrition. Adequacy of food also the cause of famine. In that context he argued the official policy of Bengal famine on the economic grounds of British and criticized. He discussed the role of sanitation and its relation with mortality decline and the problems of sanitation in Bengal. He assumed the importance of sanitation was the measures for the prevention of various diseases. Major and important parts of Bengal were affected and improve by the development of sanitation policy by the Government. He further discussed the merits of sanitary improvement in Fairs and festivals in Bengal. Tinni contradict the advantages role of British sanitary health measures in Bengal in the one hand and the observation and remark made by Bengal intelligentsia for the proper understanding of colonial Bengal sanitation policy of the British on the other. He also examined the role of Local- self Government in Bengal and the assumption she made was British concerned for rural sanitation is really strong but the practical achievement were few. It was described as a sick institution. Mark as the failure of colonial health policy of Local- self Government. Another issue was on popular response to sanitation against epidemics in Bengal. What she actually dealt was the notion of public opinion about sanitation. According to her illustration insanitary state was the most popular cause of epidemics because of social illiteracy and it stand as an obstacle to obstruct health progress in Bengal.[18]

From the above reviewed it is unambiguous that few works had been conducted in Northeast India in a broader network of historiography of medicine. Historian's main concern of diseases in Northeast India is on kala-azar. But, if we see from the archival records of Government documents. Like all the other parts of India cholera was too the dreaded disease in Northeast India which took more than a thousands of military, labourer and native per year during the later part of the nineteenth century. Likewise

[18] Goswami, Tinni, *Sanitising society: Public health and sanitation in Colonial Bengal 1880-1947*, B.R Publishing Corporation, Delhi, 2011

malaria and small-pox do ravages the same. From the related literature review it is found that the historiography of medicine in Norhteast India is still thin linking in the context of colonialism. So, the present study is an outcome of great effort to link with the basic historiography of medicine by specifically deal with Northeast India and made possible to understand the clearer picture history of medicine in India generally with this contribution.

The present study is significant to understand the integrated nature of colonialism and its health policies to control epidemic diseases in Northeastern Province. It deals with major epidemic diseases and how public health were implemented in the province.

The period chosen for this work is from 1826-1947. This has been made considering the fact that colonial expansion and occupation of the Brahmaputra valley and frequent occurrences of epidemic diseases

The occurrences of epidemics in Northeast India since the nineteenth century. Right from the beginning of British entered Assam which had serious effect of tropical diseases. When the Treaty of Yandaboo was signed in 1826 between the Burmese and the British in Assam, nearly 15,000 British soldiers were already died of tropical epidemic diseases. On the other hand, Northeast is justified on the ground that, since the Treaty of Yandaboo the British consolidated their hold in Northeast begins from the last decade of the Nineteenth Century. Gradually, the Brahmaputra Valley was annexed in 1826, and Cachar plains in 1832, Khasi Hills in 1833, Jaintia plains in 1835, Karbi Anglong in 1838, North Cachar in 1854, Naga Hills in 1866-1904, Garo Hills in 1873- 73 and Lushai Hills in 1890-96. Upper Assam, except Sadiya and Muttuck country was allowed to be ruled by Raja Purandar Singh till its annexation in 1838. Sadiya and Muttuck countries were also annexed soon after. The region was the part of the Lt. Governor- ship of Bengal up to early part of 1874. The Chief Commissionership of Assam was formed on 6th February, 1874. It was merged with East Bengal in 1905 and again separated in 1912. Assam became a Governors Province in 1921. Except the two, Manipur and Tripura but remained princely states under British paramountcy.

1.2 Objectives of the study:

1) To explore the major epidemic diseases that spread in Northeast India during the colonial period.
2) To study the etiology and perception of indigenous people on epidemic disease in the advent of western medicine.
3) To examine indigenous interacting with western medicine.
4) To examine the relation between epidemics and implementation of public health policy and its effects on people.

1.3 Research question:

1) What were the major epidemics that posed threat to health?
2) How and why epidemics did spread and what were the perceptions on epidemics?
3) What was the nature of colonial medical intervention? Why and how colonial public health extended to the masses from colonial enclaves- army and Europeans?
4) How did colonial state implement public health?
5) How did the indigenous people responses towards western medicine?

1.4 Research methodology:

The present work employed historical, analytical and empirical method based on the following sources. Empirical method based on archival works and made empirical generalization first from different state archives. Historical method is employ to evaluate the secondary source materials. Lastly, analytical method is employ to analyze the epidemic diseases and disclose colonial health policy.

The departments or files which are consulted from unpublished archival documents are the files from different departments of home medical proceedings, Home department public health branch. Proceedings of lieutenant Government of Bengal, Government of Bengal, medical department (political) medical branch. Government of Bengal paper, Dacca commissioner, Sylhet paper, Assam secretariat Local self department medical A, LSG, Public health, Deposit medical, LSG, Medical branch, medical B, Medical department, Public health B, Assam secretariat proceedings home A and B, Proceedings of General department medical branch, Government of India

Home wise B, Government of India, Home Department (General Department), Sanitary, Government of India, Medical Department, Sanitary B, Assam Secretariat, Revenue A Proceedings, Government of Eastern Bengal and Assam, Proceedings of General department, Medical A, Proceedings of the Hon'ble Lieutenant Governor of Bengal and Assam, General Department, Medical A, Government of Eastern Bengal and Assam, Judicial Department, Sanitation-A, Government of Eastern Bengal and Assam, General department, Military A, Medical Department, Sanitation B, Assam secretariat, Government of Assam, Medical Department, Deposit B, Governor Secretariat, Assam secretariat proceedings, Municipal department, Medical A, Assam secretariat proceedings, Education department, Public health A, Assam secretariat proceedings, Local self department, Public health A, Assam secretariat proceedings, Education department, Medical branch.

Of published materials comprised of reports. Census, ethnography, memoirs, Gazetteer. The consulted are:- Annual Report of the Public Health Commissioner with the Government of India, Annual Public Health Report of the Province of Assam, Annual Report on the Civil Hospitals and Dispensaries of the Province of Assam, Dispensary Returns of the Province of Assam, Annual Sanitary Report of the Province of Assam, Vaccination Report of the Province of Assam, Report on Kala-azar in Assam-Leonard Rogers, Report on Kala-azar in Assam- G.M Giles, Report of the Health Survey and Development Committee, Report on Labour Immigration into Assam. Triennial Report on the working of dispensaries in Assam, Administration Report of the Province of Assam. Twentieth-fifth Annual Report of the National Association for supply Female Medical aid to the women of India, Annual Report of the Chief Inspector of Mines in India, Report of the Royal Commission on Labour in India from National medical Library, New Delhi. Reports of the foreign mission of the Presbyterian Church of wales on Sylhet, Bangladesh and Cachar-India in the period between 1886-1955, Census of India, Gazetteer of Naga Hills and Manipur, Assam state Gazetteer, Cachar District Records Letters subsequent to the annexation of Cachar, Gazetteer of Manipur. Gazetteer and memoirs of Colonial Government officers in North east frontier and related secondary books.

The above different department files give the information on about the administration of medical matters by the Government of the province of Assam. The files which were arranged those days by the medical administrators, the physical surgeon and

some files are directly related to the report on observation made by the medical surgeon, chief commissioner of Assam. It contains the evidence of Government files where it report about the outbreak of kala azar, cholera epidemics in the province. Further ask the government in letters to take the possible action for solving the problems. The worst affected area and their concerned on government to solve the problems in specific places. It is also interesting to collect the files of epidemic Diseases act and various other acts of health related matters that was enforced in this province by the colonial government administration in times of epidemics. It also gives acknowledgement on the sanitary implementation, enforcement of vaccination acts and their affect on the health of the population. The implementation adopted tea garden laborers, railway station awareness implementation programmers and their rules. The possibility contributed by immigration and laborers for the outbreak of epidemics in this province. The availability of medicines for curing those epidemics diseases for treating malaria how far the government ordered the quinine in this province. Initiatives roles of government, municipal and local board in health related matters of the province.

Administration report contains the medical and public health report in each year. Labour immigration report gives an understanding the labour contribution for the outbreak of epidemics disease and the government concerned on them. Annual sanitary report gives us an understanding to know how far the government aware about the sanitary arrangement in this province. Annual public health report gives us an understanding how the government envisaged public health in each year. Triennial dispensary report is the report of the government dispensary and their record on health administered in the government dispensary of the province. Census of Assam the rise and fall of the population from there we can see when there is decrease in population we have to see what the cause of decline was. Is it because of epidemics? If it so some of the explanation had been given in the report itself.

1.5 Organization of chapter:

Chapter one introduce the theme and contextualized the study.

Chapter two examines the history, origin and spread of the diseases and its effects on claiming lives. Various perceptions of cholera, malaria, kala-azar and small-pox in Northeast India.

Chapter three discusses the nature of how colonial medical intervene and colonial medical expand in the province.

Chapter four examined implementation of public health in times of epidemics in Northeast India. And their policies and also discuss on how far it did effect in checking the spread of the diseases.

Chapter five discusses on how colonial medicine was received by the indigenous and how they responses towards colonial medicine.

Chapter six conclude with major findings.