# SOCIAL AND CULTURAL FOUNDATIONS OF THE HEALTH SERVICES SYSTEMS OF INDIA

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#### CHAPTER I

# HEALTH PRACTICES BEFORE THE BRITISH RULE

Every community has a health culture of its own—its own cultural meaning of its health problems, its health practices and its corps of practitioners. As a component of its overall culture, the health culture of a community is shaped by the interplay of a number of social, political, cultural and economic forces 1. The history of the health services system in India provides an account of the influence of such forces in giving shape to it. Henry Seigerist 2 has drawn attention to this important aspect by contrasting the manifestly high standards of environmental sanitation of the Indus Valley period with the level of sanitation that exists in India today.

Describing the five thousand year old planned city of Mohenjo Daro, Marshall 3 has remarked that the public health facilities of the city was superior to all other communities of the ancient Orient. Almost all households had bathrooms, latrines, often water closets and carefully built wells. The elaborate nature of the Indus Valley public health organisation provides an indication of the extent of health consciousness among the ancient Indian people. It is difficult to conjecture the nature of the health problems of those days, but the great emphasis on the preventive aspects of disease indicates a fairly mature attitude of the society towards the health problems that might have been prevailing at that time.

The Vedic medicine that developed after the advent of the Aryans to the Indus Valley (? during the second millennium B.C.) had begun to show a tendency to develop rational methods of approaching health problems at quite an early stage 4. p. 162. Even in the Vedic Samhitas, purely religious books, are found reflection of anatomical, physiological and pathological views which are neither magical nor religious and there are references to treatments which are impressively rational.

Furthermore, there exists the famous decree of Emperor Ashok Maurya (279-236 B.C.) in his second Rock Edict (257-236 B.C.) "celebrating the organisation of social medicine shaped by the Emperor along with the lines of Budhist thought and kindred ethics (dharma)" 4, p. 86. The works of the famous Charaka of the first century A. D.

and of Susruta of the fourth century A. D. laid the foundation of the highly developed science of medicine which flourished in the tenth century after Christ—a period of all round social and economic progress often called the age of Indian Renaissance. There are also epigraphical evidences indicating that social medicine was practised in medieval South India 4. p. 87.

During the subsequent centuries, a series of political, social, and economic changes profoundly disrupted the ecological balance in Indian society. Perhaps the lowest point of this ecological crisis was reached during the decline of the Moughal Empire, a situation which set the stage for the British conquest of India. Even during this period the system of Indian medicine had retained some fragments of its past heritage; for example, the surgeons of the British East India Company learnt the art of rhinoplasty from Indian exponents of surgery <sup>5</sup>. It is noteworthy that during the early period of British rule in India, the western system of medicine, which was still dominated by such procedures as purging, leeching, scarification and blood letting, could not be considered to be any superior to the prevailing methods of the Indian systems of medicine.

#### CHAPTER II

### HEALTH PRACTICES DURING THE BRITISH RULE

The social, cultural, economic and political changes that followed the introduction of the British rule in India dealt an almost a fatal blow to the practice of the Indian systems of medicine. With the imposition of the British rule, almost every facet of Indian life, including medical and public health services, was subordinated to the commercial, political and administrative interests of the Imperial Government in London. In developing health services for certain limited purposes (for example, for the army), the patronage was shifted from the Indian systems of medicine system. to the western The decision to make this shift appears to be amply vindicated by the spectacular advances in the different branches of western medicine during the nineteenth and twentieth centuries. As a result of these changes the already stagnant Indian systems of medicine got caught in a whirlpool of a vicious circle: its very neglect accelerated its further decline and the decline, in turn, made it increasingly difficult for it to compete with the highly favoured and rapidly flourishing western system in capturing the imagination of the educated population of India. In the long run, therefore, not only did the professions of the Indian systems of medicine get infilterated by various kinds of quacks, but the very basis of the sciences got considerably eroded by forces of superstition and of beliefs in supernatural powers and dieties 5.

The British had introduced western medicine in India in the latter half of the eighteenth century principally to serve their colonial aims and objectives. Medical services were needed to support the British army and British civilian personnel living in India. Later on, medical services were made available to a very tiny selected segment of the native population. At the time of Independence, only the affluent and the ruling classes could get adequate medical services. Of the rest, constituting more than 90 per cent of the population, only a small fraction could get some form of medical care from hospitals and dispensaries run by government agencies, missionaries, philanthropic institutions and private practitioners 7, pp. 35-44. Similarly, public health services consisted of some form of environmental sanitation in a few big cities. For the rest some public health services were provided only when there was an

outbreak of massive epidemics of diseases as plague, cholera, and small-pox 1, p. 49. Because of these conditions, in spite of the availability of knowledge from the western system of medicine, there was wide-spread prevalence of such easily preventable diseases as malaria, tuber-culosis, leprosy, smallpox, cholera, gastro-intestinal infections and infestations, trachoma and filariasis; India was among the countries of the world with the highest infant and maternal morbidity and mortality and gross death rates. In addition, there was the enormous problem of undernutrition and malnutrition. India was among the lowest per capita calorie consuming countries in the world 7, pp. 88\_146.

At the time of Independence, British India (population 300 million) had 17,654 medical graduates, 29,870 licenciates, 7,000 nurses, 750 health visitors, 5,000 midwives, 75 pharmacists and about 1,000 dentists 7. P. 13 and 35.

The colonial character of the health services had also profoundly influenced almost all aspects of medical education in India—in shaping the institutions, in developing the course content and, perhaps most important of all, in shaping the value system and the social outlook of the Indian physicians. The first medical college in India was established way back in 1835. It was quite natural that British teachers should have nurtured such institutions in their infancy. However, along with the "scientific core" of medical sciences (which was a most welcome diffusion of a cultural innovation from the western world), there came certain political, social and cultural overcoatings which were definitely against the wider interests of the country.

Also, opportunities for medical education in these institutions were made available to the very privileged upper class of the society. Additionally, the Medical Council of India accepted the British norms of medical education in order to gain recognition of the Indian medical degrees from the British Medical Council. This enabled some of the physicians, who were "the select among the select", to go to Great Britain to get higher medical education. Acquiring Fellowships or Memberships of the various Royal Colleges was generally considered to be the pinnacle of achievement in their respective fields.

These four considerations—colonial value system of the British rulers, class orientation of Indian physicians, their enculturation in British modelled Indian medical colleges and a more thorough and more extensive indoctrination of future key leaders of the Indian medical professions in the Royal Colleges—provided a very congenial setting for the creation of what Lord Macaulay had visualised as "Brown

Englishmen''s. These Brown Englishmen acquired dominant leadership positions in all the facets of the health services in India. This arrangement proved convenient to both the parties. To the Indian physicians it ensured power, prestige, status and money at home. Their montors from foreign countries retained considerable influence on the entire health service system of the country by ensuring that the top leadership of the medical profession in India remained heavily dependent on them.

### CHAPTER III

# EVOLUTION OF THE EXISTING HEALTH SERVICES SYSTFMS OF INDIA:

# A Profile of the Policy Formulators and Health Administrators:

After Independence, the health services system of the country was shaped by the two key political decisions of the new leadership. Following the political commitments made during the struggle for Independence, provision of health services to the vast masses of the people—particulary for those living in rural areas—was made an important plank of the Directive Principles for the State Policy of the Indian Constitution. The other political commitment, which turned out to be an even more sacred and of over-riding importance, was to bring about the desired changes in the health services system without making any basic changes in the then existing machinery of the government.

The personnel of the Indian Medical Service of the British days and the "Brown Englishmen" were called upon by the Indian leadership to provide the initiative in shaping the proposed new health services system for India. These personnel, who, like those of the Indian Civil Service, belonged to elite class of administrators. were former officers of the British Indian Armed Forces who had opted for civilian work. They were also trained in the traditions of the western countries. Political independence brought to the fore two additional issues which profoundly affected the cadre of the Indian Medical Service. Firstly, the withdrawal by the British officers after Independence caused a sudden vacuum in their ranks. This came as a windfall to a number of not so competent officers, who were catapulated into positions of key importance simply because they happened to become senior in the cadre because of the very large number of vacancies caused by the departure of the British. Secondly, by adhering strictly to the seniority rules, when the health services were expanded very rapidly to meet the requirements of the newly formulated health programmes, the administration drew more and more from the

relatively small group of people who had entered the services in, say, 1930-35, 1935-40 or 1940-45 to meet the very rapidly increasing manpower needs for key posts. As a result, a large number of the key posts in the health services got filled by persons, who, even from the colonial standards, were not considered to be bright.

Such a massive domination of the organisation by men who were trained in the colonial traditions and whose claim to a number of vital posts in development administration was based merely on their being senior in the cadre, led to a virtual glorification of mediocrity, with all its consequences 10. pp. 65-57. What was even worse, such a setting was inimical to the growth and development of the younger generation of workers. Often these young men had to pay heavy penelties if they happened to show, on their own, enterprise, initiative and imagination in their work. Conformism often earned good rewards. This ensured perpetuation of mediocrity within the organisation.

Because of their being inadequate for the job, these Brown Englishmen went out of the way to appeal to foreign experts for help and the latter have generously responded to such entreaties. A large number of foreign experts were invited to play a dominant role in almost every facet of the health services system of the country 11.

# Medical Colleges, Teaching Hospitals and other Medical Care Facilities In Urban Areas

Two divergent forces in the country—availability of relatively very much larger amounts of resources for the health sector and perpetutation by the technocrats, the bureaucrats and the political leadership of the old privileged class, western value system of the colonial days gave shape to a health service system which had a strong urban and curative bias and which favoured the rich and the privileged.

It is significant that when the country had only about 18,000 graduate physicians and about 30,000 licenciate physicians <sup>7, p. 35</sup>, one of the first major decisions of the popular government of India in the field of health was to abolish the three year post matriculation licenciate course in medicine <sup>12, p. 313</sup>. While recognising "the great lack of doctors", the very large majority of the members of the Health Survey and Development Committe (Bhore Committee), probably

"strongly influenced by the recommendations of the Goodenough Committee in the United Kingdom" <sup>13, p. 340</sup>, asserted that resources may be concentrated "on the production of only one and that the most highly trained doctor" <sup>13, pp. 339,349</sup>. The Committee had made elaborate recommendations concerning the training of what it termed as the "basic doctor" and stressed that such training should include "as an inseparable component, education in community and preventive aspects of medicine" <sup>13, pp. 355,359</sup>.

The Medical Council of India, a direct descendent of the Medical Council of Great Britain, which is the statutory guardian of standards of medical education in India, has issued repeated warnings against reviving the licenciate course. The Health Survey and Planning Committee of 1961 (Mudaliar Committee) 12 has also emphatically rejected the idea of reviving such a short-term course because they were "convinced that the proper development of the country in the field of health must be on the lines of what we consider as the minimum qualification for a basic doctor" (p. 349). It went on to state: "India is no longer isolated and is participating in all problems of international health. The WHO has laid down certain minimum standards of qualifications. In view of India being an active member, participating in all public health measures on an international basis, we think it will be unfortunate if at this stage once more the revival of a short term medical course is to be accepted" (p. 349).

One of the saddest ironies of the medical education system in India is that resources of the community are utilised to train doctors who are not suitable for providing services in rural areas where the vast majority of the people live and where the need is so desparate. By identifying itself with the highly expensive and urban and curative oriented system of medicine of the west, the Indian system actively encourages the doctors to look down on the facilities that are available within the country, particularly in the rural areas, and they look for jobs abroad and thus cause the so-called brain drain. As if that is not enough, till recently these foreign trained doctors have been pressurising the community to spend even much more resources to attract some of these people back to the country by offering them high salaried prestigious positions and making available to them very expensive super sophisticated medical gadgets. These foreign trained Indian specialists, in turn, actively promote the creation of new doctors who

also aspire to "go to the States" to earn large sums of money and to specialise. Emphasis on specialisation, incidentally, causes considerable distortion of the country's health priorities thus causing further polarisation between the haves and the havenots.

Those who are unable to go abroad, they try to settle down in private practice in urban areas, often linking their practice with honorary or fullfledged jobs in urban health institutions run by the government. Only some government jobs are non-practicing. As a result of such considerations, a desparately poor country like India finds itself in a paradoxical position in relation to the distribution of the doctors in the country: the urban population, which forms 20 per cent of the total, accounts for 80 per cent of the doctors.

To be sure, pretending to follow the recommendations of the Bhore Committee, soon after Independence upgraded departments of preventive and social medicine were created in medical colleges, at the instance of the government and of the Medical Council of India, to act as spear-heads to bring about social orientation of medical education in India. However, as in the case of so many other ambitious and morally lofty government programmes, concurrently it was also ensured that the very spirit of this programme is stifled, if not totally destroyed, by actively discouraging in various ways its actual implementation. For instance, instead of mobilising the finest brains in the profession to bring about social orientation, most of the positions in the departments of preventive and social medicine were filled by the discards, who were often found intellectually inadequate to get into the highly competetive and prestigious clinical disciplines, or even the paraclinical disciplines. This gave enough opportunities to the threatened foreign trained super specialists to ridicule the entire discipline of preventive and social medicine and bring it down almost to the bottom of the prestige heirarchy of disciplines in a medical college 15. Significantly, the political leadership -- the ministers and legislators, who are beholden to these super specialists for their personel needs of various kinds, winked at this systematic desecration of the philosphy of social orientation of medical education in the country 16.

Along with the very rapid proliferation of very expensive teaching hospitals for medical colleges, each having a number of specialities and super specialities, a number of general hospitals were established in urban areas. The number of hospital beds shot up from 113,000 in

1946 12, p. 72. to the present figure of 330,000 11, p. 34. There has also been a rapid increase in the number of dispensaries for providing curtive services to urban populations. There were over 1807 urban dispensaries in 1966 17, p. 120. The development of medical colleges, teaching hospitals and other hospitals and medical care facilities has accounted for a large chunk of the investment for health services in the country's Five Year Plans 12, p. 76, 11, p. 18. Ther recurring cost for these institutions accounts for over three fourths of the annual health budget of a State 18, p. 5.

# Mass Campaigns against some major Health Hazards:

The fact that despite their obvious over-riding importance, preventive services have received a much lower priority in the development of the health service system of India provides an insight into the value system of the colonels of the Indian Medical Service, the British trained bureaucrats of the Indian Civil Service and, above all, the value system of the political leadership of free India. The colonels did not appear to relish the prospects of dirtying their hands—getting involved in problems which required mobilisation of vast masses of people living in rural areas. The rural population raised in the minds of these decision makers the spectre of difficult accessibility, dust and dirt and superstitious, ignornt, ill-manered and illiterate people. Therefore, when they were impelled to do some preventive work in rural areas, characteristically, they chose to launch military style campaigns against some specific health problems.

Undoubtedly, because of the enormous devastation caused by malaria till the early fifties, this disease deserved a very high priority. But the programme became a special favourite of the colonels not only because it required relatively much less community mobilisation, but it also provided them with an opportunity to build up an administrative frame work to launch an all out assault on the disease in a military style—in developing preparatory attack, consolidation and maintenance phases, in having "unity of command", and surprise checks and inspections and in having authority to "hire and fire". Significantly, some of the followers of the colonels went so far as to compare the malaria campaign with a military campaign 19. Another enthusiast for military methods has written an entire book 20 with a preface from the late Prime Minister Jawaharlal Nehru describing the saga of the growth of the health services in independent India as if he is describing a military campaign.

Experience of implemenation of India's National Tuberculosis Programme brings sharply into focus the limitations of this military approach to developing a health service system for the people of this country. On the basis of a series of operational research studies 21, it was demonstrated that it is possible to offer facilities for diagnosis and treatment to over a million and a half of sputum positive cases who are known to be actively seeking help for their illness from over 12,000 to 15,000 health institutions in various parts of the country. because of failure of the programme administrators to develop a sound health delivery system on a permanent basis for the rural populations of the country, more than a decade after the launching of the programme, less than one fifth of these sputum positive cases, who have an active felt need, are being dealt with by the programme organisation21. This provides an example as to how the militaristic urban privileged class value system has come in the way of building a health service system to meet even some of the very urgently felt needs of the people of the country.

After some pilot projects, a National Malaria Control Programme was launched with the help of the United States Technical Co-operation Mission, the World Health Organisation and the United Nations International Children's Emergency Fund (UNICEF) in 1953 to cover all the malarious areas of the country, then involving a population of 165 million 20. p. 111. It achieved a phenominal success; for instance, the number of malaria cases for every 100 persons visiting hospitals or dispensaries declined from 10.2 percent in 1953-1954 to 4.0 per cent in 1958-1959 20, p. 112. This success emboldened the administrators to think in terms of totally eradicating the disease from the country, onceand for all. The danger of the mosquitos developing resistance to the main weapon for malaira control, DDT, was given as an additional reason for embraking on the eradication programme. Besides, pressure was also put on India by foreign consultants from WHO and elsewhere to embark on the eradication programme as it was to become a part of the global strategy propounded by the WHO 20. p. 1.

It was also stated, to give economic grounds for the decision, that while the control programme was estimated to cost about Rs. 270m in the second Five Year Plan (1956-1957 and 1960-1961) and Rs. 350m during the Third Plan (1961-1962 and 1966-1967) and thereafter continued to remain a heavy item of expenditure, "the cost for the eradication programme was estimated to be Rs. 430m in the last

three years of the Second Plan and Rs. 580m for the entire Third Plan with the annual expenditure becoming negligible thereafter" 20, p. 113. The immediate successes of the National Malaria Eradication programme were even more spectacular, but a disastrous snag developed in implementing the maintenance phase of the programme 22. pp. 4-6. It turned out that among other factors, because of preoccupation of the administrators with specialised mass campaigns against malaria and other communicable diseases, they had not paid adequate attention to building a permanent health service system-the so-called health infrastructurestrong enough to carry on the malaria surveillance work effectively at the village level. This has been responsible for a series of setbacks to the National Malaria Eradication Programme, resulting in the reversion, at a very considerable cost, of large segments of the maintenance phase population on to consoldation or attack phases. Instead of geting rid of malaria once and for all by 1966, as it was envisaged in the late fifties, 40 per cent of the population is still to reach the maintenance phase 22, p. 5. The National Malaria Eradication Programme thus continues to drain huge quantities of scarce resources even today thus making it even more difficult to find resources to develop the health services infrastructure.

During the last four years, for instance, less than 3 per cent of the additional population (9.4 units) has entered the maintenance phase <sup>22, p, 5</sup>. Meanwhile the country is forced to set aside huge chunks of its very scarce recources to prevent the programme from sliding still further. As against the envisaged expenditure of Rs. 1,015 m, the National Malaria Eradication Programme has thus far sucked in over Rs, 2,500 m <sup>23, p, 225 and 27</sup>. In addition, Rs. 967m have been set aside for it for the next five years <sup>22, p, 23,24</sup> and even this allocation might have to by raised still further. In spite of this the chances of eradicating malaria in the foreseable future does not appear to be very bright. So the country will be compelled to keep on pouring in resources on this programme to see that the disease does not come back in an epidemic form as it has happened in some other countries.

Also, following the model of the NMEP, a specialised military style campaign was launched in 1963 to a eradicate smallpox within three years <sup>20</sup>, p. 130. Once again the campaign conspicuously failed to achieve the result of eradication. Only recently (1973-74) yet another campaign has

been launched to eradicate smallpox "once and for all" <sup>22</sup>, <sup>pp. 31</sup>-38. A mass campaign to provide BCG vaccination to cover the entire population of the country, and to continue to do so periodically, was the first effort to deal with the problem of tuberculosis in India as a public health problem <sup>22</sup>. <sup>pp. 120</sup>-121. This programme, unfortunately, also failed to yield the desired results <sup>21</sup>. Special campaigns have also been launched against leprosy, filariasis, trachoma and cholera with even more discouraging results <sup>22</sup>, <sup>pp. 61</sup>-106.

The health service system of the country had hardly recovered from the consequences of the very costly failures of the mass campaigns against malaria, smallpox, leprosy, filaria and trachoma, when a large bulk of investment in health was cornered by another specialised campaign—this time it was against the rapidly rising population of the country. The Fourth Plan investment in family planning was Rs. 3,150m as against Rs. 4,500m for the rest of the health sector of the country 10. p. 11. This involved deployment of an army of 125,000 persons 10, p. 15. All of them were specially earmarked for doing family planning work only. Significantly, once again, this programme was also developed by officers belonging to the Indian Medical Service—the colonels, with strong backing from foreign consultants from various agencies. Predictably, once again, this compaign also failed to attain the demographic objectives, with disastrous consequences, both to the programmes for socioeconomic development as well as to the development of a sound infrastructure of health services for the country 10, pp. 222\_224, 24

Recognising, at long last, the weaknesses of this campaign approach, recently the Government of India has veered round the idea of providing an integrated package of health, family planning and nutrition services with particular emphasis on the weaker sections of the community <sup>25, p. 231</sup>. This package, in turn, is a part of a bigger package of the Minimum Needs Programmes of the Fifth Five Year Plan (1974-1979) which is meant to deal with some of the very urgent social and economic needs of the rural populations of the country <sup>26, pp. 87, p1</sup>.

# Development of a Permanent Integrated Health Service System for Rural Areas:

The Health Survey and Development Committee<sup>13</sup>, which was set up by the British Indian Government in 1943 to draw a

blueprint of health services for the post-war British India, had shown exceptional vision and courage to make some very bold recommendations. These included development of an elaborate health service system for the country, giving key importance to preventive aspects with the "countryside as the focal point" 13, p. 6. To forestall any criticism of the recommendations on grounds of practicability, pointing out the achievements in health in the Soviet Union within a span of 28 years (1913-1941), it asserted that its recommendations are quite practical, in fact relatively very modest, provided there was the will to develop the health services of the country 13. p. 10. Unfortunately, however, the leaders who took over from the British did not show this will. They had quoted, often out of context, the recommendations of the Bhore Committee to justify abolition of the licenciate course and to establish a very large number of medical colleges with sophisticated teaching hospitals in urban areas. also invoked the Bhore Committee to justify to setting up an even more sophisticated All India Institute of Medical Sciences in New Delhi on the model of the Johns Hopkins Medical Center of the U. S. A. 12. p. 322. A number of other postgraduate centres medical education were also set up in due course. It, however, took them over seven years even to start opening primary health centres to provide integrated curative and preventive services to rural populations of the country 28. These primary health centres were a very far cry from what was suggested by the Bhore Committee: they did not have even a fourth of "the irreducible minimum requirements" of staff recommended by the Bhore Committee for a given population (and that too only as a short term measure) 13, p. 11. Furthermore, it took more than 10 years to cover the rural populations in the country even with this manifestly rudimentary and grossly inadequate type of primary health centres.

The entry of the National Malaria Eradication Programme into the maintenance phase and concurrent development of an extension approach to family planning provided a transient impetus to providing integrated health and family planning services through multipurpose male and female workers <sup>29</sup>. But the clash of interests of the malaria and the family planning programmes again led to the formation of unipurpose workers for malaria and family planning <sup>30</sup>. What was even worse, application of very intensive pressure on various workers of primary health centres to attain certain family planning

targets led to the neglect of whatever health services which were earlier being provided by the PHCs, thus causing a series of further setbacks to different health programmes 10. p. 40. Maternal and child health services, malaria and smallpox eradication, environmental sanitation and control of other communicable diseases, such as tuberculosis, leprosy and trachoma, are examples of the services which suffered as a result of preoccupation of health workers with achieving the prescribed family planning targets.

Very recently, following the recognition of the fact that a unipurpose, high pressure military type campaign approach which does not ensure a concurrent growth and development of other segments of health and nutrition services (and, growth and development in other socioeconomic fields) will not be able to yield the desired results, as pointed out above, decisions have already been taken to integrate malaria, family planning, maternal and child health, smallpox and some other programmes and thus provide an entire package of health, family planning and nutrition services to the community through male and female multipurpose health workers 25, 28.

# The Indian Systems of Medical Services in India

There are three major indigenous systems of medicine in India: Aurveda-the Hindu medical system; Unani-the Greek system of medicine which was brought to India from West Asia by the Muslim rulers of India; and the Siddha system, which can be considered to be a specialised branch of Aurveda. After Independence, these systems were subjected to two contradictory pulls: their being firmly rooted in the culture of the people of the country for centuries and their rich heritage invoked considerable admiration and even certain degree of emotional attachment from a large section of the population of the country. And, at the same time, long neglect of these systems of medicine led to a very sharp deterioration in the body of knowledge, in their institutions for training and research, in their pharmacopia and drug industry and in their corps of practitioners. while the leaders of independent India built almost the entire health services on the lines of western system, they have, from the very beginning, shown sympathy for the Indian systems of medicine and have made available some grants for conducting research in these systems, for supporting educational institutions and for providing some services to the community31.

### CHAPTER IV

# THE PRESENT STATE OF THE HEALTH SERVICES IN INDIA

Considering the size of the population and the staggering nature of its health problems, the existing health services are grossly inadequate. Furthermore, the bulk of the expenditure is earmarked for curative services and these services are predominantly situated in urban areas and they are more accessible to the more privileged sections of the society. The privileged population has the additional advantage of being able to pay to avail of private nursing home services and services of private practitioners who are located almost entirely in urban areas. 53 per cent of the doctors in India are in private practice; another 7 per cent are employeed in the private sector <sup>32, p. 71</sup>\_7<sup>2</sup>; the community spends about Rs. 100,000 for the training of one doctor.

India has barely half a bed per thousand population, while the corresponding figure is over 10 for industrialised countries 14, p. 69. 90 per cent of these beds are located in cities and towns where only one fifth of the population lives. Even the 10 per cent of the beds which are primarily meant for rural populations are ill-staffed, ill-equipped and ill-financed 17, p. 27 and 121. The expenditure for curative services is about three times as much as for preventive services 18. Again, in terms of the preventive services, while over 90 per cent of the urban population is provided with some degree of protected water, only four per cent of villages get piped water supply; while about 40 per cent of the urban population has a sewerage system, it is almost non-existent for the rural population 33, p. 9.

Primary health centres and their sub-centres form the sheet anchor of rural health services of India. There are over 5,195 PHCs in the country; there are 32,218 sub-centres attached to these PHCs <sup>14</sup>, p- <sup>25</sup>. Each PHC and its sub-centers are expected to provide integrated health, family planning and nutrition services to a population of about 100,000. Provision of medical care, environmental sanitation, maternal

and child health services, family planning services, eradication or control of some of the communicable diseases and collection of vital statistics are some of the functions of a PHC <sup>28, p. 63</sup>. However, both quantitatively as well as qualitatively the resources made available at a PHC are grossly inadequate for serving the population assigned to it <sup>31, 35, 26, 59</sup>.

There are now 103 medical colleges which have an annual admission capacity of over 13,000 <sup>14</sup>, <sup>p. 20</sup>. The number of doctors available in India has now increased to 137,930 <sup>14</sup>, <sup>p. 20</sup>. There are 88,000 trained nurses, 32,000 sanitary inspectors and 54,000 auxiliary nurse midwives <sup>14</sup>, <sup>p. 20</sup>.

The government is at present financing about 9,000 dispensaries and 195 hospitals which offer the services according to the Indian systems of medicine. There are 44,460 institutionally qualified and 111,371 non-institutionally qualified Aurvedic registered practitioners in the country; the corresponding figures for the Unani and the Siddha systems are 6,013 and 18,507 and 625 and 14,785 respectively <sup>31</sup>. The government runs two postgraduate colleges in Aurveda and one in Unani; there also 91 Ayurvedic, 10 Unani and one Siddha undergraduate colleges <sup>31</sup>.

That the present health services system of India needs considerable improvement is dramatically brought home by the fact that in the year 1974 India happens to be one of the few countries in the world which has not yet succeeded in eradicating smallpox. Much remains to be done before it will be possible to control such apparently easily controllable diseases as tuberculosis, leprosy, trachoma and filariasis 23. p. 221. The fact that the National Malaria Eradication Programme continues to be a very heavy drain on the very limited resources even today, instead of being eradicated by 1966, also provides an indication of the serious weaknesses in the system.

## CHAPTER V

# THE COMMUNITY AND THE HEALTH SERVICES SYSTEMS IN INDIA

Health administrtors sought to secure some degree of social legitimacy for their actions by getting some not very well defined or even relevent social, cultural and psychological considerations raised by social scientists and health educators. Their appeal was particularly directed towards the then dominant group of social scientists which was engaged in generating social science knowledge to legitimise the existing social structure and social relations 37, 38. The response was generous. Eminent social scientists from the west, such as McKim Marriot<sup>39</sup>, Morris Carastairs<sup>40</sup>, Morris Opler<sup>41</sup>, H.A. Gould<sup>43</sup> and Elvin Wood<sup>43</sup> came out to draw attention to certain basic cultural and social factors which mitigate against acceptance of modern medical practices in the mostly tradition bound, caste ridden, rigidly heirarchical, illiterate and superstitious rural communities of India. Indian disciples dutifully carried on the refrain by drawing similar conclusions on the basis of their own "studies". Studies of Hasan(44) Dhillon 45, Khare 46, Kakar 47 and Prasad 48 offer examples of such Indian workers.

The report on the Conference on Social and Cultural Factors in Environmental Sanitation 49 represents an instance of the collective wisdom on this subject of a group of eminent Indian social scientists which was brought together by the Ford Foundation. the vital necessity of "distinguishing between true clinical core of scientific medicine and the surrounding folklore, magic, custom, and faddism that are included in our institution of medicine" 50, they went on to find ways of overcoming the cultural resistance of villagers to installation of sanitary latrines. They overlooked some basic epidemiological, clinical, social, economic and even cultural issues which ought to have called into question the very rationale of selling such latrines to rural populations 6.50. Their deep seated bias, which perhaps contributed to their inability to have a holistic view of the social, cultural and technological interaction in the sanitation programme, made them behave more like salesmen, than like scientists who possess the competence to use conceptual and methodological rigor of their discipline to make an objective analysis of the situation<sup>51</sup>.

The profession of health education also came very handy to health administrators in giving a facade of legitimacy to the health service system built by them. As practioners of social science knowledge which was generated by scholars like Marriot, Carstairs, Hasan and Khare, the administrators found it convenient to assign to them the task of "educating" the community to pave the way for acceptance the western system of medicine. When the administrators in India, with strong backing from consultants from abroad, launched a country-wide family planning programme which required acceptance of family planning practices in a poverty stricken population, with very poor health services, extensive unemployment and social injustice 10, pp. 31\_35, they once again found it quite convenient to call upon the health educators to sell this brand of family planning to the masses. It is significant that the leaders of the health education profession, both in India as well as from other countries, willingly allowed themselves to be identified with a programme which involved motivating individuals to accept family planning practices by using persuasion, administrative coercion and monetary enticements24.

A carefully conducted sociological study of tuberculosis patients in a rural district in South India 51, 21 revealed that more than half of the these cases visited a government institutions of modern medicine, where they were almost invariably dismissed with a bottle of cough mixture. These findings were diametrically opposed to what was forecast by social scientists like Marriot and Carstairs. Again, a number of studies of treatment default among tuberculosis patients getting domiciliary treatment revealed that by far the most important causes of default are attributed to limitations at the technical level and in the field of administration of the services, rather than to the patients' own behaviour 53, 54, 55. Yet, despite these very clear-cut findings, health educators and community health workers have kept harping on the need for "educating" the public about tuberculosis 58, 57. They could not think of "educating" the programme administrators to take into account the community health behavior and accordingly formulate suitable services. They have written numerous accounts as to how the villagers in India refused smallpox vaccination because of their superstitious faith in the goddess "Sitala", but they could not take note of the very glaring fact that a much larger number of persons remain unvaccinated because nobody even cared to offer facilities of vaccination to them35.

#### CHAPTER VI

# A RECENT STUDY OF HEALTH BEHAVIOUR OF RURAL POPULATIONS IN INDIA

Taking note of the limitations in social science studies in health fields in India, an attempt was made by the author to narrow this gap by considering the activities of primary health centre as a purposive intervention to change for the better some aspects of the pre-existing health culture of the community served by it. A research study was designed to examine the current status and the nature of this interaction between the health services that are interoduced through the PHCs and the pre-existing culture of rural populations in India. A report on this study has been published elsewhere <sup>36</sup>. Only the broad outline of the study design and the principal findings are being summarised here to draw attention to some aspects of the health behaviour of rural populations of India which appear to be of significance in shaping the future pattern of the health services system of the country.

In order to get data on health behaviour of rural populations under relatively more favourable conditions, a deliberate effort was made to select, in the first instance, PHCs and villages which are much above the average. The study has been completed in 16 villages, 10 of which also serve as the headquarter village of a PHC. These PHC are from seven states of the country, belonging to seven regions. Considerable attention was paid to developing a methodological approach that is specially tailored for studying the health behaviour of villagers (including their behaviour in relation to the PHC services) against the background of the total village culture. Research investigators lived in these villages for three to five months. Apart from making special efforts to get themselves accepted by all the segments of the village community and collecting data through village informants, the investigators identified informants and some "ordinary" members from each segment of the village community and made observations and conducted depth interviews to understand the health culture of each segment of the village against the background of its total culture. They also prepared case reports to provide a deeper insight into the response of the different segments to health problems in the fields of medical care

family planning, maternal and child health, communicable diseases, environmental sanitation, etc. Documents have been prepered to enable all the investigators to cover uniformly all the major areas in relation to these problems. Their stay in the village also enabled them to make direct observations, followed by depth interviews, of the actual behaviour of the villagers when they encoutered certain specific health problems. They could also study the interaction between the PHC personnel and the villagers, both when the former visited the village and when the villagers visited the PHC. Apart from these efforts to ensure that in-depth qualitative data are obtained from all the segments of the entire village community according to well defined work procedures and check lists and they were, as far as possible, checked and cross-checked, a quantitative dimension was given to the main qualitative data by framing an unstructured interview schedule on the basis of these data and administering it to a twenty per cent stratified random sample of the village households.

As an additional safeguard, after completion of the field work in the villages of a PHC, some of the data concerning the health behaviour of the community were cross-checked with personnel at the level of the corresponding seven State Directorates of Health Services. An additional three States were added to the original seven to examine how far the findings from these seven were applicable to the others. These ten States covered 77.8 per cent of the population of the country. Recognising that the complex nature of the problem for this study calls for a new and rather exacting methodological approach, special safeguards were adopted to ensure that the data collected by all the investigators are of a minimum acceptable quality.

Taking into account the social and economic status of the people, the epidemiology of health problems and the nature of the health services available, it is not surprising that problems of medical care should be by far the most urgent concern among the health problems in rural populations. But the surprising finding is that the response to the major medical care problems is very much in favour of western (allopathic) system of medicine, irrespective of social, economic, occupational considerations. Availability of such services and capacity of patients to meet the expenses are the two major constraining factors. On the whole, the dispensary of the PHC projects a very unflattering image. Because of this and because of its limited capacity it is unable to satisfy a very substantial proportion of the demand of the villagers for



medical care services. This enormous unmet felt need for medical care services is the main motive force in the creation of a very large number of the so-called Registered Medical Practitioners (RMPs) or "quacks". The RMPs are thus in effect created as a result of the inablity of the PHC dispensary or other qualified practitioners of western medicine to meet the demands for medical care services in the villages. It is worth noting that all these RMPs use allopathic medicines rather than aurvedic or unani medicines. When these RMPs prove ineffetive, depending on the economic status of the individual and the gravity of his illness, villagers actively seek help from government and private medical agencies in the adjoining (or distant) town and cities.

There are, however, numerous instances of adoption of healing practices from qualified or non-qualified practitioners of the different Indian systems of medicine and homeopathy and from other non-professional healers. But among those who suffer from major illnesses, only a very tiny fraction preferentially adopted these practices, by positively rejecting facilities of the western system of medicine which are more efficacious and which are easily available and accessible to them. Usually these practices and home remedies are adopted: (i) side by side with western medicine; (ii) after western medicine fails to give benefit; (iii) when western medical services are not available or accessible to them due to various reasons; and, (iv) most frequently, when the illness is is of minor nature.

Another very significant finding of this study is that the family planning programme has ended up in projecting an image which is just the opposite of what was actually intended. The image of the family planning workers in rural areas is that of persons who use coercion and other kinds of pressure tactics and who offer bribes to entice people into accepting vasectomy or tubectomy. Because of the failure of family planning workers to develop a rapport with the villagers, sometime the villagers are unable to meet their needs for family planning services. There are several instances of mothers who, failing to get suitable family planning services from the PHC, took recourse to induced abortions to get rid of unwanted pregnancieas. This not only points to the failure of the programme to meet their needs for the services but it also draws attention to the failure of the programme to offer suitable abortion services to mothers with unwanted pregnancies, despite the passage of the abortion bill.

Another significant finding of this study is that there is codsiderable unmet felt need for services of the Auxiliary Nurse Mid-wife (ANM) at the time of chidbirth. Villagers are keen to have the ANM's services because they consider her to be more skilled than the traditional dai. Wherever the ANM's have provided the services, the has become less significant. The overall image of the particularly in North India, is that of a ANM in villages. person who is distant from them-meant only for special or for those who can pay for her services. She is not for the poor. She can be called only when there are complications and then also she should be paid. Because of the inaccessibility of the ANMs. the majority of the deliveries even in the villages where the PHC is located are conducted by dais and relatives and neighbours. In villages with no PHC, their swav is almost complete. As in the case of the Registered Medical Practitioners, confinement by relatives and friends and by indigenous dais is popular among the villagers not because of their intrinsic superiority but in the absence of suitable services from the ANM/Lady Doctor, they are compelled to settle for something which they consider to be inferior but which is all that is available and accessible to them. They actively seek more specialised services either from the PHC or from the towns and cities when the dais are unable to tackle complicated cases.

The only two programmes which can be stated to have reached the grass-roots level in the villages are those concerning malaria and smallpox. Despite several complaints regarding the sincerity of these workers, there is almost a universal agreement among the villagers that these workers do visit the community. A significant finding is that these workers do not encounter any major obstacle in getting participation of the community in these programmes. Except when there are understandable compulsions, such as the prospect of a poverty stricken mother losing wages for 4-5 days at the peak agricultural season due to the child's vaccination reactions and some cases of orthodoxy, there is general acceptance of smallpox vaccination in village communities. The number of children who are left unvaccinated due to lapses of the parents appear to be a very small fraction of those who remain unvaccinated due to lapses of the vaccinators and their supervisors.

Patients suffering from tuberculosis, leprosy and trachoma get very little services from the corresponding national programme. It is remarkable that despite this, they actively seek help from elsewherefrom the nearby towns or even big cities. Such help is not only much more expensive and bothersome but it is also much less efficacious, both clinically as well as epidemiologically. Other preventive measures, of course, are almost non-existent.

Extensive prevalence of abject poverty, as a result of which more than half of the population is unable to meet even the minimum dietetic calorie needs and appalling conditions of sanitation, water supply, housing and education present an ecological setting which is conducive to widespread prevalence of various types of health problems in the community. These health problems form only a small component of the overall gloomy picture of the way of life in Indian villages. Ignorance, superstition, suspicion, apathy and fatalism should thrive in such a milieu. It is, therefore, a tribute to the strength of the culture of the rural populations in India, that, despite these overwhelming odds, their health behaviour has retained so much of rationality.

Because of their urban orientation, workers of rural health and other developmental agencies generally have a strong distaste for rural life. This distaste is for the entire way of life and not simply for the very poor facilities available there. Health workers tend to keep a distance from the rural population as a whole. However, as they are required to work for rural populations, they take advantage of the village power structure and confine themselves, as far as possible, to satisfying the privileged gentry of the village. In doing so they: (a) win approbations and rewards from the so-called community leaders who have the ear of their superior officers and of the political leaders at the higher scales; (b) deal with the least disagreeable segment of the village community; and (c) get a free hand to "tackle" the rest of the community.

The findings of this study bring out some of key issues which are of far reaching significance for the future development of the health services system of the country:

 It brings out clearly that there is no significant cultural resistance to acceptance of modern medicine as long as they are efficacious and they are available and accessible to them. This finding, therefore, seriously calls into question the belief of a very significant section of health administrators, social scientists and health educators that there is considerable cultural resistance to the acceptance of modern medical practices in rural populations in India;

- That the existing health services are working at a grossly low level of efficiency, which has led to considerable underutilisation. Priority should, therefore, be given to ensuring that this problem is overcome <sup>59</sup>;
- 3. There is also considerable scope for bringing about qualitative improvements in the existing health services system in rural areas by bringing it more in tune with the social and cultural setting of the village communities; and,
- 4. Finally, after ensuring a reasonable utilisation of the existing capacities quantitatively and after bringing about qualitative changes, there is a strong case for making quantitative expansion of the health services to meet the requirements of rural populations. This will imply rectification of the existing imbalance in allocation of resources: this will imply a shift in investment from urban to the rural, from curative to the preventive and bringing about a shift in providing services from the privileged to the underprivileged.

#### CHAPTER VII

### SUMMARY

There has been a cumulative increase in the knowledge of the medical sciences which had at times grown almost at an exponential rate. However, the actual application of this knowledge to societies is determined by a number of political, social, cultural, economic and technological factors. In ancient India, when these factors were favourable, despite the very rudimentary nature of the available knowledge, the people enjoyed a much higher level of health services than what is available at present. In fact these favourable conditions created a setting which enabled the society to make significant contributions to the body of medical knowledge-through Charaka and Susruta, for instance. Decline of the society in the subsequent centuries saw a decline in the health service system. Colonisation of the country by the British, when every facet of its activities was subordinated to the interest of the Imperial Government in London, dealt almost a fatal blow to the still active Indian systems of medicine. The entire health service system of the country was purposely developed to provide the western system of medical services to a small privileged group—the armed forces, the British civilians and the Indian gentry. Medical colleges were opened to prepare Brown Englishmen, medical institutions were established to serve the gentry living in urban areas and officers of the armed forces medical services were brought in to administer the health services.

With the advent of Independence, the new leadership readily committed themselves to providing good health services to the vast masses of people of the country, but for this they did not consider it necessary to bring about basic changes in the system. The colonels of the Indian Medical Service, by then greatly depleted by the withdrawal of the British, and the Brown Englishmen were assigned the very much more challenging task of building the new health services system for India. Medical colleges grew very rapidly and these colleges poured in a large number of physicians who are mostly alienated from the masses of the people. A number of hospitals were opened in urban areas. Out of the limited resources that were made available for providing preventive services for rural areas, the colonels, with strong "persuasion" from foreign consultants, set aside big chunks for

running mass campaigns against specific diseases—malaria, population growth, smallpox, leprosy, trachoma and filariasis. Not only have these campaigns hindered the development of a permanent health services system in rulral areas but almost invariably they have also failed to achieve the set goals. The country was persuaded in the late fifties to invest about Rs. 1010m to eradicate malaria by 1966, but, even after an investment of over Rs. 3500m, the prospect of doing so even by 1979 do not appear to be particularly bright. The campaign against populations growth turned to be a similar costly blunder.

Social scientists and health educators from abroad helped the colonels to divert attention from the basic malady of the system by raising the bogey of resistance of the villagers to acceptance of the western system of medicine. Following that reference model 58, their counterparts in India dutifully echoed their findings and a large number of positions were created to accommodate such professional health educators and social scientists within the system. Findings of a carefully conducted emperical study of health behaviour of rural populations of India have been presented to underscore the fact that already there is considerable active interest among villagers in acquiring both curative and preventive services. Mostly it is the services which have let them rather down, than the reverse. Not only are the rural health services very much below what the Bhore Committee's short-term programme had called in 1946 the "irreducibly minimum requirements" and much below the actual demands of the people, but even these very limited services are working at an alarmingly low level of efficiency—one of the main causes for this being the alienation of the health workers and of the institutions for education and training of such workers from the masses of the people of the country.

## REFERENCES:

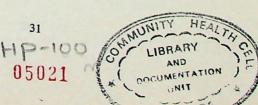
- 1. Galdston, Iago (1961): Doctor and Patient in Medical Hisiory: The Seventh Annual Max Danzis Lecture, Newark N.J.: The Newark Beth Israel Hospital.
- Marti-Ibanez, F. (1960): Henry Seigerist on History of Medicine, New York: MD Publications.
- 3. Marshall, J.H. (1931): Mohenjo Daro and the Indus Valley Civilization, London: A Probsthein
- 4. Zimmer, H.R. (1948): Hindu Medicine, Baltimore: Johns Hopkins Press.
- Basham, A.L. (1954): The Wonder That Was India, London: Sidgwick and Jackson, p. 500.
- 6. Banerji, D. (1964): Health Problems and Health Practices in Modern India: A Historical Interpretation, *The Indian Practitioner*, XXII, 137-143.
- 7. India, Government of, Health Survey and Development Committee (1946): Report, Volume I, Delhi: Manager of Publications.
- 8. Banerji, D. (1973): Social Orientation of Medical Education in India, Economic and Politicial Weekly VIII: 485-488.
- Basu, D.D. (1970): Shorter Constitution of India, Calcutta:
   S. C. Sarkar, pp. 230-235.
- 10. Banerji, D. (1971): Family Planning in India: A Critique and a Perspective, New Delni: People's Publishing House.
- 11. Banerji, D. (1973): Population Planning in India: National and Foreign Priorities, International Journal of Health Services, III: No. 4.
- 12. India, Government of, Ministry of Health, Health Survey and Planning Committee (1961): Report, Volume 1, New Delhi: Ministry of Health.

- India, Government of, Health Survey and Devlopment Committee (1946): Report, Volume II, Delhi: Manager of Publications.
- India, Government of, Ministry of Health and Family Planning (1973): Pocket Book of Health Statistics, New Delhi: Central Bureau of Health Intelligence, Directorate General of Health Services.
- Ramalingaswami, P. and Neki, K. (1971): Students' Preference of Specialities in an Indian Medical College, British Journal of Medical Education, V: 204-209.
- 16. National Institute of Health Administration and Education (1966): Report and Recommendations of the Conference on the Teaching of Preventive and Social Medicine in Relation to Health Needs of the Country, New Delhi: National Institute of Health Administration and Education.
- India, Government of, Ministay of Health, Family Planning and Urban Development, The Study Group on Hospitals (1968): Report, New Delhi: Ministry of Health, Family Planning and Urban Development.
- 18. West Bengal, Directorate of Health Services (1971): Health on the March 1948-1969: West Bengal, Calcutta: State Health Intelligence Bureau.
- 19. Ramakrishna, S. P. (1960): An Examination of Resemblance and Divergence Between War and Malaria Eradication, Bulletin of the National Society of India for Malaria and Other Mosquito Borne Diseases, 8: 3-4.
- 20. Borkar, G. (1961): Health in Independent India, Revised Edition, New Delhi: Ministry of Health.
- 21. Banerji D. (1971): Tuberculosis: A Problem of Social Planning in India, NIHAE Bulletin, 4: No. 1, pp. 9-25
- 22. India, Government of, Ministry of Health and Family Planning (1973): Memorandum on Centrally Sponsored and Purely Central Schemes for the Fifth Five Year Plans, New Delhi: Ministry of Health.

- 23. India, Government of, Planning Commission (1972): The Fourth Plan: Mid-term Appraisal, Volume II, New Delhi: Planning Commission.
- 24. Banerji, D. (1972): Prospects of Controlling Population Growth in India, Economic and Political Weekly, VII: 2067-2074.
- 25. India, Government of, Planning Commission (1973): Draft Fifth Five Year Plan: 1974-1979, Volume II, New Delhi: Planning Commission.
- India, Government of, Planning Commission (1973): Draft Fifth Five Year Plan: 1974-79, Volume I, New Delhi: Planning Commission.
- 27. Dbir, S.L. (1971): Malaria Eradication Programme and Integration of Mass Eradication Campaigns in General Health Services, *The Journal of Communicable Diseases*, 3: 1-12.
- 28. Dutt, P.R. (1965): Rural Health Services in India: Primary Health Centres, Second Edition, New Delhi: Central Health Education Bureau.
- India, Government of, Ministry of Health, Committee on Integration of Health Services (1963): Report, New Delhi: Ministry of Health.
- India, Government of, Ministry of Heatlh and Family Planning, Committee on Basic Health Services (1966): Report, New Delhi: Ministry of Health and Family Planning.
- 31. India, Government of, Central Council of Health (1974):

  Indian Systems of Medicine and Homoeopathy, Agenda item
  No. 6, New Delhi: Ministry of Health.
- 32. Institute of Applied Manpower Research and the National Institute of Health Administration and Education (1966): Stock of Allopathtic Doctors in India, IAMR Report No. 2/1966, New Delhi: Institute of Applied Manpower Research.
- 33. India, Government of, Ministry of Health and Family Planning (1973): Report 1972-73, New Delhi: Ministry of Health and Family Planning.

- 34. The Johns Hopkins University, School of Hygiene and Public Health, Department of International Health (1970): Functional Analysis of Needs and Services, Baltimore: The Johns Hopkins University
- 35. National Institute of Health Administration and Education (1972): Study of District Health Administration, Rohtak (Phase I), NIHAE Research Report No. 7, New Delhi: National Institute of Health Administration and Education.
- Banerji, D. (1973): Health Behavior of Rural Populations:
   Impact of Rural Health Services, Economic and Political Weekly, VIII: 2261-2268.
- 37. Valentine, C.A.S (1969): Culture and Poverty: Critique and Counter Proposals, Chicago: The University of Chicago Press, pp. 48-127.
- 38. Andreski, S.C. (1972): Social Sciences as Sorcery, London: Andre Deutsch, pp. 59-154.
- 39. Marriot, M. (1955): Western Medicine in a Village in Northern India, in *Health Culture and Community*, (ed) B.D. Paul, New York: Russell Sage Foundation.
- 40. Carstairs, G.M. (1955): Medicine and Faith Rural Rajasthan in *Health Culture and Community* (ed), B.D. Paul, New York: Russel Sage Foundation.
- 41. Opler, M.E. (1962): Cultural Definition of Illness in Village India, *Human Organization 21*, No. 4.
- 42. Gould, H.A. (1957): Implications of Technological Change for Folk and Scientific Medicine, *American Anthropologist*, 59: 507-516.
- 43. Wood, E. (1960): Rural Health Promotion, Kurukshetra, 8(5): 23 & 26.
- 44. Hasan, K.A. (1967): Cultural Frontiers of Health in Village India, Bombay: Asia.
- 45. Dhillon, H.S. and Kar, S.B. (1963): Behavioural Sciences and Public Health, *Indian Journal of Public Health*, VII: 19-24.



- Khare, R.S. (1963): Folk Medicine in a North Indian Village Human Organization, 22: No. 1.
- Kakar, D.N., Srinivas Murthy, S.K. and Parkar, R.L. (1972): People's Perception of Illness and their Use of Medical Care Services in Punjab, Indian, Journal of Medical Education, XI: 286-298.
- 48. Prasad, B. G. (1961): Some Common Beliefs and Customs in Relation to Health and Disease in Uttar Pradesh, *The Anticeptic*, 58: 225-238.
- 49. India, Government of, Ministry of Health (1956): Conference on Social and Cultural Factors in Environmental Sanitation in Rural India, New Delhi: Publication Division.
- 50. Foster, G. M. (1958): Problems of Intercultural Health Programmes, New York: Social Science Research Council.
- Banerji, D. (1973): A Critical Review of the Role and Utilization of Social Scientists in Promoting Social Science Research in Health Fields in India, Journal of the Indian Medical Association, 60: 145-147.
- 52. Banerji, D. and Andersen, S. (1963): A Sociological Study of Awareness of Symptoms Suggestive of Pulmonary Tuberculosis, Bulletin of the World Health Organisation 29: 665-684.
- 53. Andersen, S. and Banerji, D. (1963): A Sociological Enquiry into an Urban Tuberculosis Programme in India, Bulletin of the World Health Organization, 29: 685-689.
- 54. Banerji, D. (1967): Behaviour of Tuberculosis Patients
  Towards a Treatment Organization Offering Limited Supervision, Indian Journal of Tuberculosis, XIV: 156-172.
- 55. Singh, M. M. and Banerji, D. (1968): A Follow up Study of Patients of Pulmonary Tuberculosis Treated in an Urban Clinic, Indian Journal of Tuberculosis, XV: 157-164.
- State Health Education Bureau, U. P. (1968): Attitude Towards Tuberculosis, Lucknow: State Health Education Bureau, U. P.

- 57. Mitra, A.C. and Gupta, B. P. (1965): People's Knowledge and Attitude Towards Tuberculosis, *Health Centre Journal* (*Punjab*) September, 1965.
- Singh, Yogendra (1973): The Role of Social Sciences in India: A Sociology of Knowledge, Sociological Bulletin 22: 14-28.
- 59. India, Government of, Ministry of Health and Family Planning, Committee on Utilization of PHC Beds in India (1974): Report, New Delhi: Ministry of Health and Family Planning.