Chapter VII

A Summary of Conclusions
VII.1 Introduction

The study was an attempt to find out the relationship between the levels of socio-economic development and health condition among the Scheduled Tribes of Chotanagpur. The study tried to examine some questions on which there has been a general lack of information. The study, therefore, has examined levels of morbidity prevalence, types of morbidity, nutritional status and health care utilisation among the tribal people of Chotanagpur, at the level of various spatial aggregations, such as village, blocks, district and finally the region. While doing so, the study has also attempted to look at the inter-tribal as well as intra-tribal profiles with reference to the above mentioned aspects of health and health care. Finally, it examined the associations of the development indicators with the health condition too.

The study was carried out also in the light of the questions of the levels of morbidity prevalence rates and nutritional status among the tribes. It was also carried out to examine the presumption about the tribes that they did not use the modern medicine and went for sorcery, witch-craft and traditional healing methods.

The major questions to address pertains to their level of socio-economic development and health conditions; linkages with the indicators of the availability of health care services, and the indicators of health; the extent of percolation of modern system of medicine; the efforts of government in health sector in the study area; plausible causes for the existing health condition and the alternatives to the existing system to improve the health condition of the Scheduled Tribes of Chotanagpur. The sample of 1983 persons 368 households belonging to nine tribal communities obtained from eight villages of two districts of Chotanagpur were drawn on the basis of stratified random sampling.

The study had hypothesised that unavailability of modern sources of health care leads to the dependence on traditional sources of health care; utilisation of modern health care is positively associated with education and availability of medical facility; higher proportion of illness is associated with malnutrition; positive relationship of income, occupation mobility (services) and education with health status; strong association of availability of infrastructure and amenities with health status, etc.
VII.2 Morbidity Patterns

Morbidity prevalence in the tribal population was examined with reference to spells of illness per thousand population for a reference period of 30 days. The study did not attempt to distinguish short duration or acute diseases or long duration or chronic diseases separately as has been done by the NSSO\(^1\) or NCAER\(^2\). The analysis is spatial as well as inter-tribal. The prevalence was also analysed on the basis of some socio-economic background characteristics of population and households.

1. Gumla district had higher IMR than Dumka district. In Gumla, there was a very high IMR among females than males whereas Dumka had marginally lower IMR among females than males.

2. The MPR among the tribal people in Chotanagpur was much higher than the NSS results of the Scheduled Tribes of Bihar.

3. Dumka district had the higher prevalence rate than Gumla. There is large difference in morbidity among the villages of Gumla district, where Muriya village has a very high MPR (437 per thousand) followed by Kurdeg (314 per thousand), Bara Barpani (309 per thousand) and Dhorhi (211). The highest MPR is found in Ranga village (469 per thousand), followed by Gariyapani (313 per thousand), Musna (268 per thousand) and Phalan (262 per thousand).

4. The villages with PHC reported higher MPR than villages without PHC. The gap between villages with and without PHC in Dumka was very large, which was not so in Gumla. What emerged here was that Gumla, a relatively developed district, had a higher prevalence rate in the villages without PHC. There were local conditions that affected the variations in MPR. In contrast, Dumka had significantly lower MPR in the remote villages. Therefore, it was found that the remote villages showed lower MPR such as in Dhorhi, Phalan, and Musna. It is

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generally perceived that development leads to higher morbidity reporting because of increasing longevity and self-cognition.

5. The tribal males of Chotanagpur had the higher prevalence rates than females. Disease prevalence was less pronounced among the females of Dumka district unlike Gumla. The causes might be because of poor levels of perception of morbidity of females. They do not perceive many symptoms as morbidity.

6. The villages of Gumla district had wide differences in MPR among male and female population, where Kurdeg, Bara Barpani and Muriya villages had higher MPR among females. In the age-group 15-59, this pattern changed as the opposite situation emerged, i.e. in all villages the MPR among females came lower than males whereas it reversed in Muriya with a wide gap. The MPR for females enormously differed in this age-group in Dhorhi than males. Among the older population, the MPR was found to be very high in all the villages with a huge gender gap, where females were more affected in Bara Barpani and Muriya villages. Among all villages, females were found to be in better position in Dhorhi village after the childhood. Similarly, in Dumka district female children had high MPR in Musna only; Gariyapani had higher MPR among females of the 15-59 age-group; and the gaps were wide along with very high prevalence rates in Ranga. Phalan was the only village with better health among the aged population. In other villages, older people seemed to be prone to diseases, where old females had low MPR than old males in Musna and Ranga.

7. Apart from common ailments, there were specific diseases in different villages. The episodes under malaria were extremely high in the villages of Dumka district with proportion of about sixty per cent to the total spells of ailments.

8. The compositions of illness/ailments were found to be typically corresponding to that prevalent in underdeveloped regions of the world, i.e. high prevalence of infectious and parasitic diseases coupled those related to nutritional deficiencies. In the entire region, diseases of viral infection, especially malaria, were dominant cause with little variation. In some villages seasonality of disease prevalence was
also explored like the high prevalence of malaria was reported to occur in Dhorhi village in the winter and in Kurdeg in the summer. The next major group was infectious and parasitic diseases (dysentery, diarrhoea, polio, filariasis and leprosy). The share of this group was comparatively very low than the diseases of viral infection. The diseases related to pregnancy and births were also found in the region. Respiratory diseases, especially cough were found among the girl children and aged females. Fungal infection (skin diseases) on nails was found, but only in Dumka. Polio still existed among the children. The diseases coming under the category of ‘other’ and ‘unclassifiable diseases’ had very high rate of prevalence. Diseases of digestive systems and intestinal disorders seemed to be more prevalent. Visual impairments were mainly found with the aged males.

9. Malaria had nearly half proportion of the total spells of diseases in the region. Therefore, the prime concern was the elimination of malaria and provision and maintenance of safe drinking water supply to every household so that prevalent diseases related to digestive systems and intestinal disorders could be eliminated. If these two are eliminated, a significant decline in disease prevalence can be achieved.

10. There were some specific diseases found in different regions. For example, leprosy was found only in Kurdeg village of Gumla district. Similarly, fungal (nails), filariasis and genetic deformities were mainly reported in the villages of Dumka only. Among these, leprosy emerged as a major health hazard in the affected villages.

11. The overall analysis revealed that the communities of Gumla district were found to be healthier than the communities of Dumka. Wherever human intervention had taken place in one-way interaction, their situations had become grimmer. In contrast, the remote areas were healthy in some respect like environmental health and food intake.

12. There were inter-tribal variations of MPR. The Santhal tribe had the higher MPR followed by Kharia, Munda, Lohar/Lohra and Oraon. The MPR was very high
among all the communities. The lowest MPR was 278 per thousand for the Oraon tribe.

13. The differences in MPR under specific diseases might be attributed to the physical and environmental, socio-economic and administrative factors. The difference in occurrence of malaria might be attributed to the physical factors. Similarly, diseases related to digestive systems and intestinal infection and respiratory diseases, skin diseases (fungal in nails) and filaria might be due to the environmental factors such as water quality, surroundings and amenities inside the house. The economic factors might have contributed to the occurrence of diseases related to malnutrition, impairments and muscular skeletal systems. Social factors like early marriage and pregnancy below age of 18 years were some of the causes of diseases like genetic deformity. The high prevalence of certain diseases was also due to the administrative factors, which invariably have neglected these diseases in the tribal area for their eradication.

14. Literacy had negative association with morbidity prevalence. It had far greater impact among females than males. The lowest and the highest prevalence were found among the wage labourers and service holders seeking further explorations. However, the occupation of the head of the household had different association with diseases. For example, the lowest prevalence was found among those who belong to the head of the household engaged with agricultural activities. The lowest prevalence was marked among the people related to the wage labour and non-worker head of the households. The children of the non-worker mothers had lowest prevalence rates followed by the agricultural workers. The high prevalence rates were observed with the children of the mother engaged in wage labour or non-agricultural activities. A very weak but decreasing MPR with increasing land-holding size after certain size like 10 acres and above was found. The availability of food had also not shown any negative relation with morbidity again posing a question.
More prevalence of diseases in the villages with PHC needed further investigation to find out the reality that whether the remote villages had under reported due to various reasons or the villages with PHC were really worse off in terms of morbidity prevalence.

VII.3 Health Care Utilisation

The health care behaviour of the tribal people has been changing now. Almost all previous literature on the health care behaviour showed that the tribe did not go for modern medicine because of age-old strong belief and faith on ghost and supernatural beings in the causation and treatment. The traditional healers had been their main source of treatment according to the literature. However, the present study found that in more than 70.00 cases, tribes sought the assistance of modern medicine (qualified and unqualified). Their non-preference of modern medicine in less than 3.00 per cent cases in Chotanagpur revealed that this percentage might be found not only with the tribes but with others also. Even in urban areas today, for certain minor ailments, people do not go for allopathic medicine.

The preventive health care was also taking place in the tribal society, especially the antenatal care and child immunisation. However, the institutional deliveries and medical assistance at births were yet to take place in majority of the tribal villages because investigation revealed that they did not find problems in delivery (may be due to their perception, where they think that this much problem in delivery is inevitable).

1. In Chotanagpur 17.94 per cent cases were left untreated. The untreated cases were partially higher among females. It was also found in Dumka district where untreated morbidity was higher than Gumla district. The villages with relatively higher untreated cases were Gariyapani Ranga, Muriya and Kurdeg, where Gariyapani had the highest percentage of morbidity without treatment.

2. The villages with higher proportion of untreated cases among females were Kurdeg, Muriya, Gariyapani, Ranga and Phalan. Village Dhorhi had just opposite situation of male-female difference in untreated cases where the gap is too large (male- 20.83; female- 7.69 per cent).
3. Self-medication was found with a considerable percentage of spells of diseases (11.08) in the region, which was marginally less practiced among females. There was a significant difference between Gumla and Dumka where the morbidity under self-medication as first treatment were about double in Gumla than Dumka. The self-medication was practiced more in the villages of Gumla district whereas it was very low and even negligible in the villages of Dumka. It was less marked in the villages of Gumla district and Ranga village of Dumka district. There was no case of self-medication among males in Musna.

4. Traditional healers also emerged as one of the major first sources of treatment (15.44 per cent). It was higher in Gumla in considerable manner than in Dumka. The highest consultation of traditional healers were reported in Dhorhi (42.22 per cent). The next village with high percentage of traditional healers as first source of treatment was Muriya (18.00 per cent). It was a general observation that the utilisation of the services of traditional healer was higher in the remote villages except Musna. Musna had less utilisation of the services of traditional healer than the Gariyapani (a village with PHC).

The utilisation of the services of traditional healer is higher among females than males. The utilisation among the females of all villages of Gumla district was higher than the males but it was lower in the villages of Dumka district.

5. Quack was found to be the most preferable first source of treatment (35.10 per cent). The utilisation was high in both the districts but it was reported much higher in Dumka district (44.86 per cent) and its villages than Gumla (26.93 per cent). The quacks were consulted marginally higher for the ailments related to males in Chotanagpur. There was no male-female difference in Dumka district. A marginal difference in Gumla, however, was marked where male had higher utilisation. The villages with higher utilisation of quacks in the illness of females were Dhorhi, Bara Barpani, Muriya, Musna and Ranga. Quacks are more preferable because of their omnipresence; and their integration with the local community and flexible terms for payment for services that they provide.
6. One-fifth of the cases went for the first treatment to the qualified sources of treatment (govt. and private doctors and missionary hospitals). The consultation was higher in Gumla district than Dumka. There was an extreme poor utilisation of qualified sources of treatment in some remote villages like Dhorhi demanding a proper examination with respect to availability and transport facility for such large hilly villages where the population was very scattered.

There was small difference between male and female in the utilisation of the qualified practitioners. The villages where females utilize the qualified practitioner more often than males were Kurdeg, Gariyapani and Ranga. The negligible utilisation by females was found in Muriya and Phalan.

7. The utilisation of the services of government doctors was found to be poor (10.30 per cent).

8. More than half of the total episodes of illness went to the modern sources (including quacks) for the first treatment, where there was small male-female difference. It was much higher in Dumka than Gumla due to very high quackery in the villages of Dumka district.

9. The percentage of treatment among the Missionary hospitals was not significant (4.06 per cent). Utilisation was found higher in Gumla than Dumka. The percentage is higher for females in both the districts.

10. Among the major communities, Lohar/Lohra had the highest percentage of utilisation of modern health care services for disease treatment followed by Santhal, Oraon, Kharia, and Munda. The utilisation in case of females was higher among Santhal and Kharia people; equal in Lohar/Lohra community and, lower in Munda and Oraon community.

11. Among all kinds of sources of treatment, quacks were the major sources of treatment equally consulted for the ailments related to males and females. Thus modern sources of treatment (including quacks) were the major health care services sought by the tribal people in 69.29 per cent cases, where Dumka has yet
higher utilisation (79.61 per cent cases). It was above 60.00 per cent in the villages of Gumla except Dhorhi and above 70.00 per cent in all villages of Dumka.

12. Therefore, the earlier perceptions do not match with present situations, where significant proportion of cases is treated by the modern sources of medicine.

13. A very poor utilisation of qualified sources of treatment was found in the remote villages except Musna. It was also very small among the females of Muriya and Phalan. In Dhorhi, there is no utilisation of qualified doctor among the females for treatment of ailments.

14. The common problems of access to modern medicine were everywhere in Chotanagpur. The first and foremost was financial constraint followed by negligence, ignorance, and non-improvement after the treatment. The reason specific constraints also existed like lack of facility nearby reported in Gumla and lack of time in Dumka. The financial problem was found in both kinds of villages (villages with PHC and remote villages). It was relatively high in Muriya and Gariyapani. In Dhorhi village the financial factor was weak and other factors were dominant. Lack of facilities was reported from the remote villages but Musna did not report such factor. Conveyance problem by the villagers was found in Phalan. Financial problem and ignorance were everywhere but were unexpectedly higher in Bara Barpani and lower in Dhorhi and Musna. Negligence was equally high and low in the remote villages. Non-improvement after treatment had been the reasons for non-preference in the villages with PHC in Gumla district and all villages of Dumka. Lack of time was reported mainly from the villages of Dumka.

15. The other major factors are poor accessibility, poor or absence of infrastructure and non-availability of medical consumables (like slides and equipments for minor pathological tests), charges by the public health personnel, apathetic treatment etc.

16. The widely assumed reason ‘non-preference of modern medicine’ was very weak in the Chotanagpur (2.16 per cent), which was little higher in Gumla (2.38 per
cent) than Dumka (1.75 per cent). The highest percentage was found in Gariyapani (5.00 per cent) and lowest in Bara Barpani. While there was no reporting of non-preference of modern medicine in Musna village.

17. Financial problem was higher in all communities, but this was not significantly higher among the Oraon. Lack of facility was the problem mainly of Oraon followed by Munda. Ignorance was widespread reason but observed prominent with Munda. Negligence was also widespread. Non-improvement despite treatment was reported by Kharia, Lohar/Lohra, Santhal and Oraon. Non-preference of modern medicine was highest with Munda (4.44 per cent) followed by Oraon (2.27 per cent) and Santhal (2.06 per cent). There was no reporting of this reason from Kharia and Lohar/Lohra.

18. The antenatal care was more in Gumla district. There were some villages like Musna where it is very poor. Bara Barpani had the highest antenatal care followed by Gariyapani, Kurdeg, Muriya, Ranga, Phalan and Musna. It was too poor in the villages of Dumka except Gariyapani and Musna had extremely low level of antenatal care (5.56 per cent) compared to all other villages.

The antenatal care was highest among the Kharia women (88.89 per cent). All other communities had above 50.00 per cent antenatal care except Santhals (37.7 per cent).

19. The institutional deliveries were very low. It was higher in Dumka district with a large gap. It was negligible in Gumla district (below 3 per cent). There were large variations with some exceptional villages like Gariyapani, where the institutional deliveries were exceptionally very high (40.00 per cent). In other hand, some of the villages including the villages with PHC had no institutional deliveries like Kurdeg, Dhorhi, Muriya, and Musna.

Institutional deliveries were not satisfactory among the tribal communities and very poor with Lohar/Lohra (7.14 per cent) and negligible with Oraon (1.72 per cent).
20. Medical assistance at birth was also poor in Chotanagpur. Here also Gumla was lagging behind Dumka. Gariyapani had a very high percentage of medical assistance at birth (42.11 per cent). It was very low in other villages like Bara Barpani, Ranga, Kurdeg and Dhorhi. There were some villages where no medical assistance was sought such as Muriya and Musna.

21. The Santhals had the highest medical assistance at birth (17.39 per cent). Relatively poor medical attendance was sought by Oraon and Munda.

22. About 79 per cent of the children were immunised till early 2001, which was higher in Dumka district. It was higher among females in Dumka district and marginally lower in Gumla district. The immunisation varied between 66.67 per cent in Kurdeg village to 92.86 per cent in Gariyapani. There was 100 per cent immunisation among the female children of Gariyapani village.

23. The availability of health care facilities, literacy and educational levels have the clear positive relations with the health care utilisation. Occupation has varied association with various health care. The positive association with of most of the indicators of health care with large land-holding size and higher income is found.

The proper exploration and evaluation was needed to disseminate the modern and qualified health care facilities to the tribal areas for greater success. The results showed that wherever the facility was available and accessible, these were utilised in curative care. But the preventive care, especially the institutional deliveries and medical assistance at birth needed to be examined further that what conditions would motivate the tribal people to go for these for better preventive care.

VII.4 Nutritional Status

The nutritional status of tribes of Chotanagpur was examined using the Body Mass Index (BMI) of adult population and Gomez Classification and SD-Classification of children population. The tribal population was compared with the international reference
population and with the Indian standards of all population as well as the pooled sample of the tribal population taken by the NNMB.

1. BMI (Body Mass Index) revealed that about two-third adult tribal population was undernourished where females had more percentages in this group. The percentage of severely undernourished population was 13.43 per cent where again females were more deprived with higher percentages. In both the sample districts the undernutrition was high but Dumka had significantly higher percentage of undernourished population than Gumla. A wide gender gap also exists in Dumka.

2. The villages of Gumla district seemed to be relatively better off among all the sample villages. All remote villages were found to be better than the villages with PHC or close to PHC in terms of nutritional status. The higher percentage of severely undernourished females was found in the remote villages also, especially in Dumka district. There have been tremendous external interferences in various forms in the villages close to PHC, which have led the tribes to the marginalisation in many respects. The remote villages have also been disrupted by the external forces but in small dimension. The major source of livelihood of tribes- agriculture and forest- have been disturbed in the villages with PHC, which were the major sources of food and medicines too. The one-way interaction of development activities have, thus, less benefited the tribes in the exposed village. On the other hand, the remote villages still depend on their less disturbed economy and sources of livelihood and maintain their nutritious food.

3. The Oraon was the only community with half of the population falling under normal nutritional status. And it had lower percentage of undernourished females than males.

4. The Indian children lacked in their height and weight with the international reference population. The weight of the Indian children had large variations than height. The tribal children of Chotanagpur had shortage of heights and weights compared to the Indian standard heights and weights for the respective ages. Below half of the tribal children were above the heights and weights of the ICMR standard. The children of
Gumla district had good heights and weights compared to the children of Dumka district. The height and weight of female children had also followed suit.

5. The SD-Classification revealed that more than 56.93 per cent children (0-10 years) were normal where girls were better off everywhere. In moderate and severe forms also girls had less percentages than boys. The nutritional status among the children of this age group also was relatively better in Gumla than Dumka district. It was also marked that the nutritional status improves with age.

6. The female children were far ahead of male children in terms of nutritional status in Chotanagpur. However, the nutritional status changes among the adult males and females as more undernutrition was found among female than males. It was also remarkable that the nutritional status was found better in the remote villages.

7. There were some remote villages with good nutritional status among children like Phalan, where external interventions were less marked.

8. The villages with other kind of amazing nutritional status among adult and children population was Musna, where children showed significant deterioration in nutritional status compared to the adult population, which meant there have been either negative interventions or some other factors involved.

9. The literacy had positive impact on nutrition as less proportion of literate population was undernourished compared to the illiterate population. Similarly undernutrition was found less among the employed in permanent services. Relatively high undernutrition was found among the people engaged in non-agricultural activities followed by the non-workers. Agricultural workers had also significantly low proportion of undernourished people. People engaged in agricultural activities had much lower level of malnutrition compared to the above occupation. Wage labourers were better off than the non-workers and the people engaged in the non-agricultural activities. Nutritional status was also affected by the occupation of the head of the household. Undernutrition was lowest among those who belong to the family of a wage labourer head of the household; followed by agriculture and allied activities and
services. The nutrition had positive relation with higher level of income. Similarly the positive relation was observed with large size of land holdings.

Table VII.1

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Accessible Villages (Villages with PHC)</th>
<th>Remote Villages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Kurdeg</td>
<td>Bara</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>F</td>
</tr>
<tr>
<td>Literacy</td>
<td>84.4</td>
<td>76.2</td>
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<tr>
<td>MPR</td>
<td>299</td>
<td>330</td>
</tr>
<tr>
<td>Treatment of Diseases by qualified Sources</td>
<td>34.6</td>
<td>38.2</td>
</tr>
<tr>
<td>Treatment of Diseases by Modern Sources (including quacks)</td>
<td>69.2</td>
<td>60.0</td>
</tr>
<tr>
<td>Undernourished Population (Adult)</td>
<td>66.0</td>
<td>52.4</td>
</tr>
<tr>
<td>Severe Undernutrition (Adult)</td>
<td>12.0</td>
<td>14.3</td>
</tr>
<tr>
<td>Undeweight (children)</td>
<td>53.6</td>
<td>34.6</td>
</tr>
<tr>
<td>Severe Undeweight (children)</td>
<td>21.4</td>
<td>7.7</td>
</tr>
<tr>
<td>Stunting (children)</td>
<td>72.4</td>
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<tr>
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<td>7.7</td>
</tr>
<tr>
<td>Wasting (children)</td>
<td>8.0</td>
<td>16.0</td>
</tr>
<tr>
<td>Severe Wasting (children)</td>
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<td>4.0</td>
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<tr>
<td>ANC</td>
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<td>88.5</td>
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<td>Institutional Births</td>
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<tr>
<td>Child Immunisation</td>
<td>68.2</td>
<td>64.3</td>
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</table>


Access to food at every household should be ensured for the improvement of nutritional status of tribal people of Chotanagpur. The maternal and child care might also improve their status as the maternal care was very poor in the tribal villages and child care, especially the supplementary food scheme was also poor or absent due to many factors. Education in both terms – general and health creating awareness should be given to the tribals to be coupled with proper health care facilities. The overall development was also needed to enhance their capability to increase their income round the year. It would enable them to afford the minimum level of nutritional
status. The availability and accessibility of health care services are needed to improve the health condition by proper health care because it has significant relations with the indicators of health (Table VII.1).

The question for further research then arose from the study that there were some remote villages with good nutritional status among children like Phalan, which needed to explore the reasons for maintaining good nutritional status. It should have been with the villages with PHC where more economic and other opportunities were available.

The villages with other kind of unusual nutritional status among adult and children population needed further examination. For example, in Musna- a remote village, children showed significant deterioration in nutritional status compared to the adult population. Hence, the question arises that what are the factors involved for good nutritional status among the adult population and very poor status among the child population?

VII.5 Levels of Socio-Economic Development and Health Condition

The study found that the levels of health status had largely followed the levels of socio-economic development in the tribal villages of Chotanagpur. The health care facilities were positively associated with the preventive and curative health care. These services had to be approachable to all in consideration with the present distance from the remote settlements so that the greater utilisation could be made possible and health conditions of the tribes could be improved. The infrastructure like approachable roads from all habitations and facilities in the health centre could enhance the greater utilisation. Education was also positively associated with the health and health care. Therefore, it had to be improved in the tribal areas. Occupation, especially the services had also positive effect on the health and health care behaviour. But there was no definite pattern of relation of occupation. The other activities like non-working mothers and mothers engaged in agricultural work had better health of their children, which might be due to greater freedom and flexibility for sparing time to take care of their children. Higher income had also shown positive relation with health and health care, which indicated the
need for enhancement of income to achieve and maintain their health standard. Land holding had no definite pattern. Women's empowerment in terms of their education and employment had also positive relation.

**VII.6 Factors for Existing Health Status and Policy Prescriptions**

1. The existing health condition of the tribes of Chotanagpur was a result of several factors. The first factor was the area and extent of the village, which emerged as a major factor where physical barriers like hills and rugged terrain were the main obstacles in the approachability to the modern health care centres.

2. Socio-cultural factors affected health and health care tremendously. For example frequent changes of partners in Dumka district might lead to the negligence of women and children in terms of their health and health care. The early marriage had also been one of the factors of bad health of mothers and children.

3. Economic backwardness had been a major factor affecting health status, which was a hindrance to afford proper treatment of diseases, sufficient and proper food and preventive care. Financial constraint was found to be one of the major constraints in treatment of morbidity by the qualified sources.

4. Poor infrastructure, like no building in Masalia, absence of lady doctors in the PHC, lack of vehicle and inadequate equipments, lack of facility for pathological tests, residential facilities for health personnel were some of the factors. Conveyance problem was reported in the remote villages.

5. The poor preventive services paved the way to high disease occurrence in the tribal areas. Private practice of the government doctor and the poor success of the government health facilities had also been some of the factors.

6. New forest laws had changed many things. The medicinal plants reported to be vanished; their rights for gathering and collection had made them to be confined to their poor agriculture and wage labour only.

7. Health had not been integrated with other aspects of development. They reported ignorance and negligence in significant manner, which could be eliminated by better education and awareness.
On the basis of the above findings, there are some policy prescriptions for the improvement of the health condition of the tribes of Chotanagpur. These are:

1. **Rethinking at Planning Level**
   i) Revamping of health care services at various levels, especially the geographical considerations should be involved in the set-up of Sub-Centres. There has been recommendations since the Bhore Committee Report, but still many villages are left out. Similarly, alongwith geographical aspects of the area, the population norms should also be considered again in the set-up of the health care facilities at various levels.
   ii) Consideration of regional socio-cultural and economic differences or different levels of socio-economic development also need to have some special attention to some particular communities residing in the far-flung areas.
   iii) Strict regulatory mechanism for health personnel is needed to ensure their stay and regular services in the assigned health institutions in the tribal areas. There is also a need to check the private practice by the government doctors.
   iv) Check on quacks is a dire need, which has flourished unexpectedly in the tribal area, which proves to be more fatal in many cases. There should be stringent rules to check the quackery.
   v) Traditional birth attendants and village health guide should be trained as complementary to the government ANM, which would make easy to communicate between the person with health-needs and the services providers.
   vi) There is a need for humane approach is also a need. The tribal villages need guidance from the point of public health rather than the pathological assistance only.
   vii) Orientation and updation of health personnel should exist to make them aware with the newly emerging health issues.
   viii) Compulsory ANC and child immunisation, health related records in the health centres would enhance the proper management of health care services.
   ix) Role of private health provisions, like that of the Christian missionaries hospitals and dispensaries should be properly evaluated and make them the
complementary to the state provided health care services. Because they have very long experience in the health services in the tribal areas.

x) Women Empowerment through education and employment would also enhance the health condition of the tribes especially related to the females and children.

2. Integrating other Developmental Activities:
   i) Poverty eradication through rural and agricultural development would enable them to attain and maintain good health status.
   ii) Improvement in education system, which is also closely associated with the overall development and health condition.

3. Mobilisation through political responsibility and pressure group will also make the system work properly and more efficiently.

4. Greater role of the villagers in planning, policy and decision making, implementation, maintenance and evaluation will lead to focus the local health problems to focus and tackle. The devolution of governance should be in real sense.

5. Mass media as awareness building measure will have a greater role in directly or indirectly with health development.

6. Use of GIS and Remote Sensing will enable in quick detection and decision-making in health related problems.

Therefore, the need is to address the above problems and focus on the policy implications for the greater attainment of health standard of the tribes of Chotanagpur. A rethinking at planning level is must because the situations have changed. Many ignored dimensions have to be reexamined and incorporated in the planning for development, especially the health development in the tribal areas of Chotanagpur. It is said that synthetic nutrients cannot replace the nutrients from the food. Hence the food should be ensured at household level. They should be compulsorily educated and made aware so that they could make the difference between right and wrong while choosing the sources of health care. The opportunity of income should be generated so that they become self-dependant to lead their descent lives. The modern health care system has percolated in the tribal areas significantly by various means including quacks (about 70 per cent of total sources of curative health care). Therefore, it will not take extra effort to disseminate the modern
medicine through the qualified personnel. The only effort is to make the services effective, approachable and accessible to the tribal people.

The health behaviour has significantly changed as the literature reveal that their primary sources of health care was traditional healer. But this study finds that the major sources of health care are related to the modern medicine. Similarly, some of the health indicator shows that the health and health behaviour is changing in the new generation.

Therefore, the multi-dimensional characteristics of health should be taken care of. Finally, the overall development is required to support their basic needs of food, clothes, shelter, education and health. The overall socio-economic development will automatically lead to the improvement in the health condition of the Scheduled Tribes of Chotanagpur.