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# STATUS OF HEALTH INFRASTRUCTURE: A STORY OF TWO BLOCKS OF TRIPURA (INDIA)

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Abstract

*Based on the secondary sources of information and primary field survey this study analyses the major diseases occurring and major health care needed in the state specifically in the North Tripura District of the State. It is observed from the study that the majority of the population are affected by heart related and stomach related problem in the first region of the study area and in the second region of the study area most of the people are affected by orthopedics issues and ENT problem. It is also observed that most of the people prefer the Public Health Care service comparing to the private health care Service and they are partially recovered after getting the treatment. This study recommended that more infrastructure related improvement and manpower are needed for the betterment of the people who are totally depended on the Public Health Care system in the state of Tripura.*

*Keywords: Disease, Healthcare. Infrastructure, Block, Manpower, Households*

## 1. Introduction

Health is an important dimension in country's development. When the economic development is put in the context of human development, the success of a Nation is securing the good health for their citizens assume great significance. Healthcare services in the North Eastern Region (NER) are inadequate, in terms of the number of health facilities available, as well as the quality of facilities provided.

Tripura is basically a poor state with very high rate of unemployment; people have low purchasing power which compels to depend on the crowded public health care facilities. According to NSSO 71st Round data, more than 90 percent people of Tripura still depend on public sector for hospitalization care.

Based on the secondary sources of information and primary field survey this study analyses the status of health infrastructure of the state Tripura. This study also analyses the major diseases occurring and major health care needed in the state specifically in the North Tripura District.

## 2. Review of the Study:

There are so many literatures on the different aspects of health study. Some of these literatures are especially on the health care need i.e major disease patterns on human health.

The study of Chanana and Talwar (1987) deals with the growth rate of the aged population in India on the basis of the National Sample Survey data. The study observed that the prevalence of temporary illness and chronic diseases are more among the aged but death rate is low. The Study suggests that the implementation of welfare programme in different stages can improve the health condition of the aged women.

Bang (1989) highlights the high prevalence of gynecological or sexual disease among rural women in Maharastra. The study shows that there is an association between presence of gynecological diseases and use of female methods of contraception, but this could explain only a small fraction of the morbidity. He also opined, in the rural areas of developing countries, gynecological and sexual care should be part of primary health care.

Murthi et al.(1995) show a close relationship exist among gender bias, fertility and mortality with economic development in India and the result reveals that the decline of fertility Level, mortality level and gender bias compared to the earlier period help in economic development. The Study is based on some factors such as female literacy, female labour force participation and urbanization. The study suggests that women empowerment reduce gender inequality, fertility and mortality.

The study of Banerjee, Deaton and Dufloin (2004) explores the fact that the quality of public health service is extremely low and it has an adverse influence on the health of the people. The study of Chaudhury et al ( 2003) also explores the fact that there are very high level of absence healthcare providers in public primary healthcare centres of several Indian states. Das (2001) also reveals the fact that in India 41 percent of health service providers were unqualified.

Therefore, from the above mentioned studies which are done across the World and India, it is clear that these studies served as the background of the present study attempts to find out the major health need i.e. the major health disease occurring in the State and tries find out whether the existing health resources available are sufficient

to meet the health needs or not with respect to North Tripura District which is one of the developing Districts in the State.

## 3. Methods:

The study uses the data from the primary sources to investigate the objective. We used a structured questionnaire to collect the data. We have purposively select two blocks (Kadamtala and Panisagar) of North Tripura district and we have collected information from 60 households from two blocks taking 30 households from each block. We have classified the households into five different income groups and also into three social groups Schedule Caste (SC), Other Backward Caste (OBC) and General (GEN).

## 4. Results:

Tripura has a population of 36.71 lakes (Census-2011) of which 31 percent of them are Tribal. The average Literacy rate is 87.75 percent. There are eight districts in the state of Tripura. Based on the primary field survey this section attempts to find out the major health disease occurring in the state, the pattern of expenditure on health, the educational and working status of the disease affected people and the status of recovery of them. In Tripura, there are 2 medical Colleges, 2 State Hospitals, 3 District Hospitals, 17 Sub-divisional Hospitals, 30 Community Health Centres, and 125 Primary Health Centres and 1038 Sub Centres.

Tripura is a poor state with very high rate of unemployment; people have low purchasing power which compels to depend on the crowded public facilities. According to NSSO 71$^{st}$ Round data, more than 90 percent people of Tripura still depend on public sector for hospitalization care.

But at the same time it is found that health transition taken place and more than 60 percent people in the state are affected by non-communicable diseases. This is common in public as well as rural areas and treatment of which requires proper infrastructure and manpower which is still not available in the state.

Thus, compared to the other north eastern states the Health status of Tripura is not satisfactory especially in rural Tripura. So, the present study attempts to find out the major health need i.e. the major health disease occurring in the state and tries find out whether the existing health resources available are sufficient to meet the health needs or not with respect to North Tripura District.

Table- 1 shows the income group wise distribution of households and disease affected members of the households. Out of 60 households most of the households (40 percent) are from the second income group in the combined region. The block wise data also shows the same trend. In the combined region out of 252 members 79 or 31.35 percent members are disease affected, the same from the Kadamtala block is 35.38 percent, for the Panisagar block

is 27.05 percent. In the combined region the disease affected members from the lowest income group is highest (41.03 percent) comparing to the other income groups. We see the same trend in the Kadamtala block. Table-1 also shows that per household disease affected people (1.53) is also high in the Kadamtala block.

**Table-1: Income Group wise Distribution of Households and Disease Affected members**

| Income Group | No. of Households | Percentage of Households | No. of Members | No. of Disease Affected members | Per Household Disease affected members | Percentage of Disease affected to total members |
|---|---|---|---|---|---|---|
| All Blocks | | | | | | |
| Up to 5000 | 11 | 18.33 | 39 | 16 | 1.45 | 41.03 |
| 5000-10000 | 24 | 40.00 | 106 | 30 | 1.25 | 28.30 |
| 10000-15000 | 13 | 21.67 | 46 | 15 | 1.15 | 32.61 |
| 15000-20000 | 5 | 8.33 | 23 | 8 | 1.60 | 34.78 |
| 20000 & Above | 7 | 11.67 | 38 | 10 | 1.43 | 26.32 |
| Total | 60 | 100 | 252 | 79 | 1.32 | 31.35 |
| Kadamtala Block | | | | | | |
| Up to 5000 | 6 | 20.00 | 18 | 10 | 1.67 | 55.56 |
| 5000-10000 | 13 | 43.33 | 56 | 18 | 1.38 | 32.14 |
| 10000-15000 | 6 | 20.00 | 26 | 8 | 1.33 | 30.77 |
| 15000-20000 | 2 | 6.67 | 11 | 5 | 2.50 | 45.45 |
| 20000 & Above | 3 | 10.00 | 19 | 5 | 1.67 | 26.32 |
| Total | 30 | 100 | 130 | 46 | 1.53 | 35.38 |
| Panisagar Block | | | | | | |
| Up to 5000 | 5 | 16.67 | 21 | 6 | 1.20 | 28.57 |
| 5000-10000 | 11 | 36.67 | 50 | 12 | 1.09 | 24.00 |
| 10000-15000 | 7 | 23.33 | 20 | 7 | 1.00 | 35.00 |
| 15000-20000 | 3 | 10.00 | 12 | 3 | 1.00 | 25.00 |
| 20000 & Above | 4 | 13.33 | 19 | 5 | 1.25 | 26.32 |
| Total | 30 | 100 | 122 | 33 | 1.10 | 27.05 |

Source: Field Survey Data

Social Group wise distribution of households and disease affected members is furnished in table-2. We have classified the households according to three social groups (SC, OBC and Gen). In the combined region the

percentage distribution of OBC households are highest and it is same in the Panisagar block. The representation from the SC households is highest in the Kadamtala block. The percentage of disease affected people is highest for the SC group and lowest for the OBC.

**Table-2: Social Group wise Distribution of Households and Disease Affected members**

| Income Group | No. of Households | Percentage of Households | No. of Members | No. of Disease Affected members | Per Household Disease affected members | Percentage of Disease affected to total members |
|---|---|---|---|---|---|---|
| All Blocks | | | | | | |
| SC | 19 | 31.67 | 82 | 29 | 1.53 | 35.37 |
| OBC | 23 | 38.33 | 99 | 28 | 1.22 | 28.28 |
| GEN | 18 | 30.00 | 71 | 22 | 1.22 | 30.99 |
| Total | 60 | 100.00 | 252 | 79 | 1.32 | 31.35 |
| Kadamtala Block | | | | | | |
| SC | 18 | 60.00 | 76 | 28 | 1.56 | 36.84 |
| OBC | 6 | 20.00 | 25 | 9 | 1.50 | 36.00 |
| GEN | 6 | 20.00 | 29 | 9 | 1.50 | 31.03 |
| Total | 30 | 100.00 | 130 | 46 | 1.53 | 35.38 |
| Panisagar Block | | | | | | |
| SC | 1 | 3.33 | 6 | 1 | 1.00 | 16.67 |
| OBC | 17 | 56.67 | 74 | 19 | 1.12 | 25.68 |
| GEN | 12 | 40.00 | 42 | 13 | 1.08 | 30.95 |
| Total | 30 | 100.00 | 122 | 33 | 1.10 | 27.05 |

Source: Field Survey Data

Table-3 explores income group wise per month expenditure on health of the households. We see that the lowest income group households contribute more on health expenditure comparing to the other income groups. The Panisagar block shows the same trend in this regard. On the other hand the expenditure on health per disease affected members is highest for the highest income group. In the Panisagar block we observe the clear increasing trend of the expenditure on health per disease affected members if we move from lower to higher income groups. Kadamtala block also shows more and less the same trend.

**Table-3: Income Group wise Distribution of Households and Per Month Expenditure on Health**

| Income Group | No. of Households | No. of Members | No. of Disease Affected members | Per Month Total Income | Per Month Expenditure on Health | Percentage of Expenditure on Health to Total Income | Expenditure on Health Per Disease Affected Members |
|---|---|---|---|---|---|---|---|
| All Blocks | | | | | | | |
| Up to 5000 | 11 | 39 | 16 | 42500 | 16500 | 38.82 | 1031.25 |
| 5000-10000 | 24 | 106 | 30 | 175100 | 61000 | 34.84 | 2033.33 |
| 10000-15000 | 13 | 46 | 15 | 168550 | 38000 | 22.55 | 2533.33 |
| 15000-20000 | 5 | 23 | 8 | 88550 | 27000 | 30.49 | 3375.00 |
| 20000 & Above | 7 | 38 | 10 | 285000 | 37500 | 13.16 | 3750.00 |
| Total | 60 | 252 | 79 | 759700 | 180000 | 23.69 | 2278.48 |
| Kadamtala Block | | | | | | | |
| Up to 5000 | 6 | 18 | 10 | 20000 | 7000.00 | 35.00 | 700.00 |
| 5000-10000 | 13 | 56 | 18 | 95350 | 35000.00 | 36.71 | 1944.44 |
| 10000-15000 | 6 | 26 | 8 | 78750 | 22000.00 | 27.94 | 2750.00 |
| 15000-20000 | 2 | 11 | 5 | 38550 | 16000.00 | 41.50 | 3200.00 |
| 20000 & Above | 3 | 19 | 5 | 133000 | 10500.00 | 7.89 | 2100.00 |
| Total | 30 | 130 | 46 | 365650 | 90500.00 | 24.75 | 1967.39 |
| Panisagar Block | | | | | | | |
| Up to 5000 | 5 | 21 | 6 | 22500 | 9500.00 | 42.22 | 1583.33 |
| 5000-10000 | 11 | 50 | 12 | 79750 | 26000.00 | 32.60 | 2166.67 |
| 10000-15000 | 7 | 20 | 7 | 89800 | 16000.00 | 17.82 | 2285.71 |
| 15000-20000 | 3 | 12 | 3 | 50000 | 11000.00 | 22.00 | 3666.67 |
| 20000 & Above | 4 | 19 | 5 | 152000 | 27000.00 | 17.76 | 5400.00 |
| Total | 30 | 122 | 33 | 394050 | 89500.00 | 22.71 | 2712.12 |

Source: Field Survey Data

Social group wise distribution of households and per month expenditure on health is shown in the table-4. We see that the OBC category households contribute more on health expenditure comparing to the other income groups. The Panisagar block shows the same trend. On the other hand the expenditure on health per disease affected

members is highest for the SC group. In the Panisagar block we observe the trend and in the Kadamtala block it is highest for the OBC group.

**Table-4: Social Group wise Distribution of Households and Per Month Expenditure on Health**

| Income Group | No. of Households | No. of Members | No. of Disease Affected members | Per Month Total Income | Per Month Expenditure on Health | Percentage of Expenditure on Health to Total Income | Expenditure on Health Per Disease Affected Members |
|---|---|---|---|---|---|---|---|
| All Blocks | | | | | | | |
| SC | 19 | 82 | 29 | 309150 | 68000 | 22.00 | 2344.83 |
| OBC | 23 | 99 | 28 | 304500 | 74500 | 24.47 | 2660.71 |
| GEN | 18 | 71 | 22 | 146050 | 37500 | 25.68 | 1704.55 |
| Total | 60 | 252 | 79 | 759700 | 180000 | 23.69 | 2278.48 |
| Kadamtala Block | | | | | | | |
| SC | 18 | 76 | 28 | 269150 | 55000.00 | 20.43 | 1964.29 |
| OBC | 6 | 25 | 9 | 67000 | 23000.00 | 34.33 | 2555.56 |
| GEN | 6 | 29 | 9 | 29500 | 12500.00 | 42.37 | 1388.89 |
| Total | 30 | 130 | 46 | 365650 | 90500.00 | 24.75 | 1967.39 |
| Panisagar Block | | | | | | | |
| SC | 1 | 6 | 1 | 40000 | 13000.00 | 32.50 | 13000.00 |
| OBC | 17 | 74 | 19 | 237500 | 51500.00 | 21.68 | 2710.53 |
| GEN | 12 | 42 | 13 | 116550 | 25000.00 | 21.45 | 1923.08 |
| Total | 30 | 122 | 33 | 394050 | 89500.00 | 22.71 | 2712.12 |
| Source: Field Survey Data | | | | | | | |

The age wise distribution of disease affected members is furnished in table-5. Out of 79 members 15 or 18.98 percent members are affected by heart disease, 12 or 15.18 percent are affected by stomach related disease, 11 or 13.92 percent members are affected by orthopedic reeled disease. The same trend has been found in the Kadamtala block. Most of the people aged above 60 years are affected by heart related disease.

The age group wise educational qualification and the working status of the disease affected members is furnished in the table-6. Table shows that out of 79 members 37 or 46.83 percent disease affected people are illiterate. In the Panisagar block 81.18 percent disease affected people are illiterate. It is obvious that most of the members from the age group above 60 years are unemployed and the same is true for the age group 5 -14 years. In the combined region 52.27 percent disease affected members are unemployed for the age group 15-59 years. We see the same trend in both the region.

Table 5: Age- Wise Distribution of Disease Affected Members

| Age Grouip | Disease | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Heart Related | Stomach Related | Viral/ Bacterial Infection | Cancer | Kidney Related | Orthopedics | Dental | ENT | Gynecological | Sugar | Thyroid | Nurbe | Blood Pleasure | Total |
| **All Block** | | | | | | | | | | | | | | |
| 0 to 4 | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |
| 5 to 14 | **0** | **0** | **2** | **0** | **0** | **0** | **0** | **1** | **1** | **0** | **0** | **0** | **0** | **4** |
| 15 to 59 | **3** | **5** | **3** | **1** | **2** | **6** | **2** | **5** | **1** | **3** | **2** | **0** | **1** | **34** |
| 60 + | **12** | **7** | **2** | **1** | **0** | **5** | **3** | **2** | **2** | **5** | **1** | **1** | **0** | **41** |
| **Total** | **15** | **12** | **7** | **2** | **2** | **11** | **5** | **8** | **4** | **8** | **3** | **1** | **1** | **79** |
| **Kadamtala Block** | | | | | | | | | | | | | | |
| 0 to 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 to 14 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 3 |
| 15 to 59 | 2 | 4 | 2 | 1 | 2 | 4 | 2 | 2 | 1 | 2 | 1 | 0 | 0 | 23 |
| 60 + | 8 | 4 | 1 | 1 | 0 | 2 | 2 | 1 | 0 | 1 | 0 | 0 | 0 | 20 |
| **Total** | **10** | **8** | **5** | **2** | **2** | **6** | **4** | **3** | **2** | **3** | **1** | **0** | **0** | **46** |
| **Panisagar Block** | | | | | | | | | | | | | | |
| 0 to 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 to 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| 15 to 59 | 1 | 1 | 1 | 0 | 0 | 2 | 0 | 3 | 0 | 1 | 1 | 0 | 1 | 11 |
| 60 + | 4 | 3 | 1 | 0 | 0 | 3 | 1 | 1 | 2 | 4 | 1 | 1 | 0 | 21 |
| **Total** | **5** | **4** | **2** | **0** | **0** | **5** | **1** | **5** | **2** | **5** | **2** | **1** | **1** | **33** |

Source: Field Survey Data

**Table 6: Age-group Wise Educational Qualification and Working Status of the Disease Affected Members**

| | Disease | | | Working Status | | |
|---|---|---|---|---|---|---|
| Age Group | Literate | Illiterate | Total | Employed | Unemployed | Total |
| | **All Block** | | | | | |
| 0 to 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 to 14 | 3 | 1 | 4 | 0 | 4 | 4 |
| 15 to 59 | 19 | 22 | 41 | 21 | 23 | 44 |
| 60 + | 20 | 14 | 34 | 5 | 26 | 31 |
| Total | 42 | 37 | 79 | 26 | 53 | 79 |
| | **Kadamtala Block** | | | | | |
| 0 to 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 to 14 | 3 | 0 | 3 | 0 | 3 | 3 |
| 15 to 59 | 18 | 7 | 25 | 13 | 13 | 26 |
| 60 + | 15 | 3 | 18 | 2 | 15 | 17 |
| Total | 36 | 10 | 46 | 15 | 31 | 46 |
| | **Panisagar Block** | | | | | |
| 0 to 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 to 14 | 0 | 1 | 1 | 0 | 1 | 1 |
| 15 to 59 | 1 | 15 | 16 | 8 | 10 | 18 |
| 60 + | 5 | 11 | 16 | 3 | 11 | 14 |
| Total | 6 | 27 | 33 | 11 | 22 | 33 |

Source: Field Survey Data

Table-7 shows the health status of the disease affected members after getting treatment from different health service provider. The finding shows that54 out of 79 members or 68 percent of the disease affected membersare partially recovered after getting the treatment and very less number of people i.e.6 or 8 percentare recovered after getting the treatment and 24 percent people disease affected members have no improvement.

Table 7: Age Group Wise Outcome of the Disease Affected Members

| Outcome | | | | |
|---|---|---|---|---|
| Age Group | **Recovered** | **Partially Recovered** | **No Improvement** | Total |
| **All Block** | | | | |
| 0 to 4 | 0 | 0 | 0 | 0 |
| 5 to 14 | 2 | 0 | 2 | 4 |
| 15 to 59 | 4 | 29 | 11 | 44 |
| 60 + | 0 | 25 | 6 | 31 |
| Total | **6** | **54** | **19** | **79** |

## 5. Discussion:

Based on the filed survey based observation this study shows that the percentage share of thedisease affected members is highest for the lowest income group (unto Rs 5000). This is because due to lack of their low income it was not possible to take proper care for their physical and mental health. Most of their part of income they spent to their regular consumption. The percentage of disease affected people is highest for the SC group and lowest for the OBC.

In the two blocksthere are a clear increasing trend of the expenditure on health per disease affected members if we move from lower to higher income groups, this is because number of disease affected members decrease if we move from lower to higher income group and higher income group people prefer private health service provider for their treatment and obviously their per disease affected health expenditure will be greater than that of poor people.

Most of the disease affected people are suffering from the heart, stomach and blood sugar related diseases because of their food habit and life style. Most of the disease affected members are not maintain proper dietary chart though they are in the over 60 year's age group. Illiteracy is another causes of their different diseases. Due to the

lack of education most of the poor people not take proper decision in proper time, as for example if they feel that they are suffering from jaundice, they prefer first time the local occultist not prefer doctor.

Lastly it can be said from the field survey information that more that disease affected people are unemployed and there is positive correlation between poverty and health condition of the people. More unemployment means more lack of income, more poverty and poor health condition.

## 6. CONCLUSION:

It is observed that most of the people prefer the Public Health Care service comparing to the private health care Service and they are partially recovered after getting the treatment. This study recommended that more infrastructure related improvement and manpower are needed for the betterment of the people who are totally depended on the Public Health Care system in the state of Tripura. Budget allocation on health sector need to be increased by the Government. Government should take necessary steps regarding implementation of different health related schemes.

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