Synergy of Health, Poverty and Economic Development  
(With Reference To Rural Odisha)

Anjali Dash

Abstract

Improvements in health result in improvements in national income, poverty could decline on account of both the standard ‘trickle-down’ effects and an increased financial capacity of nations to set up safety nets. Poverty can have an adverse impact on health because of malnutrition and also due to poor sanitation; unsafe drinking water supply etc. Odisha is an eastern state of India. Health infrastructures of Odisha are far from requirements and the outcomes of health are far from satisfactory. This is because of, both, inadequate and unequal health care facilities to the population as well as due to insufficient affordable capacity of majority of the people. There is a heavy burden of diseases prevalent in Odisha. This is a micro level study base on rural Odisha.

Main objective of this paper is to analyse the relationship between health, poverty and economic development on rural masses and to understand the cause of unequal health outcomes. The study also strives to analyse allocation of resources for health care system as well as people’s financing pattern on health care which affect to their livelihood situation. Health related expenditure increases debt position of the poor household and they are again in poverty trap.

Key Words: Health, Poverty, Development, Indebtness.

Introduction

The role of health in influencing economic outcomes has been well understood at the micro level. Healthier workers are likely to be able to work longer, be generally more productive than their relatively less healthy counterparts, and consequently able to secure higher earnings than the latter, all else being the same; illness and disease shorten the working lives of people, thereby reducing their lifetime earnings. Better health also has a positive effect on the learning abilities of children,
leads to better educational outcomes (school completion rates, higher mean years of schooling, achievements) and increases the efficiency of human capital formation by individuals and households (Strauss and Thomas 1998; Schultz 1999). Health has a positive and statistically significant effect on the rate of growth of GDP per capita. Higher incomes potentially permit individuals (and societies) to afford better nutrition, better health care and, presumably, achieve better health.

Improvements in health result in improvements in national income, poverty could decline on account of both the standard ‘trickle-down’ effects and an increased financial capacity of nations to set up safety nets. There is a good deal of evidence suggesting that countries that experience a steep rise in growth rates of real GDP per capita also experience impressive declines in poverty (Barro and Sala-i-Martin 2004). Improvements in health, when directed at the poor, can contribute more directly to poverty reduction and serve as an element of a ‘pro-poor’ growth strategy. The poor bear a disproportionately higher burden of illness, injury and disease than the rich. The poor suffer ill health due to a variety of causes, poor nutrition for instance, which reduces the ability to work and weakens their resistance to disease. With their body often being their main income-earning asset, sickness and disability have significant adverse implications in terms of loss of work and incomes, compounded by their inability to obtain adequate health care. Frequently, treatment expenditure and loss of earnings force poor families to exhaust their savings and assets, and take recourse to borrowing, leading to more poverty and poor health status. If health turns out to have significantly influenced India’s economic performance; this may call for investing more public funds in health, given that health budgets have been severely resource-constrained in recent years.

Poverty is a measure of income that indicates inadequate command over material resources. The level of poverty in a country or region depends upon the level of income as well as its distribution. Any policies or programmes which alter the distribution of income would affect poverty. In a country or State with a large income inequality there would be a relatively large number of poor people or people with a low income (below a fixed poverty line), even if the country/State has a high per capita income. A higher rate of economic growth would reduce poverty if growth affects the distribution of income in ways that pulls up the bottom tail of the distribution. Countries that pursue a
growth-oriented strategy firmly believe that growth will have its trickle-down effects that will help reduce poverty.

On the poverty-health link, some argue that poverty can cause poor health while others maintain that low income and poor health are caused by some common factor such as genetic endowments or education. Poverty can have an adverse impact on health because of malnutrition and also due to poor sanitation, unsafe drinking water supply, etc. Much of the disease burden in developing countries is due to the intake

Population with inadequate food intakes is to consider several related aspect of food: share of food in consumption expenditure and marginal propensity to spend more on food due to increase total expenditure and composition of food consumption. At very low level of per capita income, a household spend a very high proportion of its income and per haves, and even greater proportion of any increase in income on food. At such low level of per capita income, the average propensity to spend of food will be closed to unity. The marginal propensity will exceed the average and most of the food consumption will consists of the starchy staples. As income increases the average propensity to spend on food reaches a maximum equal to the marginal propensity at that level of income and then declines.

India is an agro-based country where more than 60 per cent of the agricultural labour households are poor and account for the over 44 per cent of all poor households in rural India. The poor households self employed in agricultural occupation consists largely of small and marginal farmers, tenants and share croppers. Thus the phenomenon on rural poverty in India is primarily one of insufficient access to sustained and productive employment or insufficient access to land.

**Trend in India**

Poverty is growing every day around the world. In spite of spending billions of rupees aimed at alleviation or reduction of global poverty, the problem has eluded solution. The socio-economic development programmes have, by and large accrued to the rich. In 1981 nearly 100million people in the world were suffering for poverty, malnutrition, disease, despite that sapped their energy, reduce their work capacity and created despondency. In India, rural poverty level was 57.33 per cent in
1971, 35.55 per cent in 1991 and in urban areas it was 45.89 per cent and 32.43 percent respectively. After the economic reforms in 1991 the rural poverty rose. Poor are increasing year to year at greater pace during the economic reforms period. The poor are unable to pay for medicine when they are sick and are unable to afford even 2 meals a day. According to Prof. U.R. Rao, if the poor in India start eating one more food a day, the go down would be empty and India will have to import large quantity of food grains. He states emphatically that over 100 million people in the country go to bed each day with hungry stomachs. Several states, national and international projects aimed at directly affecting the poverty, of creating employment opportunity through industrialization and government sponsored welfare programmes have failed to realise the policy intents. Unless poverty is eliminated, no other socio-economic development could succeed. The poor counties spend less on health, education and other social infrastructures, Therefore illiteracy is more in the poor countries, malnutrition is excruciating hygiene is not up to the desire level; population is more, under/unemployed are swelling in number. A country with mass poverty can never succeed in its economic development too.

Rural India, for ages, did not have sanitation facilities as we conceptualize sanitation now. Over 95 percent of rural societies leave their night soil in open areas since they do not have toilet facilities. Open air toilet cause environmental pollution create unhygienic atmosphere which cumulatively spread various kind of diseases. For overcome this problem community toilet should be built and properly maintained in all the villages are lacking proper roads and water drains due to which rain water gets legged in and around the locality, breading mosquitoes and other hazardous bacteria.

**Odisha Context**

Odisha is richly endowed with a verity of mineral deposits, and valuable forests and a long coastline, still it continue to be one of the poorest states in the country. As per the estimates made by planning commission in 2004-05, 39.9% people come under below poverty line categories which were 47.15 per cent in 1999-2000. [In orders to tackle this problem, a number of poverty alleviation programmes are being implemented.] Table-1 depicted the trend in population living below poverty line in rural areas from 1971 to 2005: India vs. Odisha. Poverty tend in rural areas reduced 72.38 per Language in India [www.languageinindia.com](http://www.languageinindia.com) ISSN 1930-2940 13:4 April 2013

C. Subburaman, Ph.D. (Ed.) *Health and Medical Care Services: Claims on National Resources* Anjali Dash
Synergy of Health, Poverty and Economic Development (With Reference To Rural Odisha)
cent in 1977-78 to 39.8 per cent in 2004-05 in comparison to all India level 53.07 per cent to 21.8 per cent. But in urban poverty it reduced 50.92 per cent to 40.3 per cent which rate in India was 45.24 per cent to 21.7 per cent.

Table-1 Percentage of Population Below Poverty Line in India an Odisha (Rural)

<table>
<thead>
<tr>
<th>Years</th>
<th>Odisha</th>
<th>India</th>
</tr>
</thead>
<tbody>
<tr>
<td>1977-78</td>
<td>72.38</td>
<td>53.07</td>
</tr>
<tr>
<td>1983-84</td>
<td>67.53</td>
<td>45.65</td>
</tr>
<tr>
<td>1987-88</td>
<td>57.64</td>
<td>39.09</td>
</tr>
<tr>
<td>1993-94</td>
<td>49.72</td>
<td>37.27</td>
</tr>
<tr>
<td>1999-2000</td>
<td>48.01</td>
<td>27.09</td>
</tr>
<tr>
<td>2004-05</td>
<td>39.8</td>
<td>21.8</td>
</tr>
</tbody>
</table>

Source: Economic Survey of Odisha 2010-11

Table-1 converted now in graphically in fig-1.

![Incident Poverty in India and Odisha](chart.png)

Table 2 reports the percentage of population below poverty line in Odisha as compare to other major states. It is observed from the above table that though the incidence of poverty in Odisha is decline over time, it is still highest among major states. As per the estimation made by planning
commission, the percentage of population in Odisha below poverty line in 2004-05 stood at 32.4 percent. A number of poverty alleviation programmes have been initiated to arrest the chronic and extreme poverty through employment generation and creation of durable and productivity assets with the support of institutional credit and provision of subsidies with a view to providing livelihood. It does not matter how many programmes government implemented to reduce poverty but it is a matter that how much that programmes are working. Many of the state failed all these programmes (Datar, C., 2007).

**Table-2 Incident of poverty in Odisha Vis. Other major states, 1977-78 to 2004-05**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Andhra Pradesh</td>
<td>39.31</td>
<td>28.91</td>
<td>25.86</td>
<td>22.19</td>
<td>15.77</td>
<td>11.10</td>
</tr>
<tr>
<td>Bihar</td>
<td>61.55</td>
<td>62.21</td>
<td>52.13</td>
<td>54.96</td>
<td>42.60</td>
<td>32.50</td>
</tr>
<tr>
<td>Gujrat</td>
<td>41.23</td>
<td>32.79</td>
<td>31.54</td>
<td>25.21</td>
<td>14.07</td>
<td>12.50</td>
</tr>
<tr>
<td>Haryana</td>
<td>29.55</td>
<td>21.37</td>
<td>16.54</td>
<td>25.05</td>
<td>8.74</td>
<td>9.90</td>
</tr>
<tr>
<td>Karnatak</td>
<td>48.78</td>
<td>38.24</td>
<td>37.53</td>
<td>33.16</td>
<td>20.04</td>
<td>17.40</td>
</tr>
<tr>
<td>Keral</td>
<td>52.22</td>
<td>40.42</td>
<td>31.79</td>
<td>25.43</td>
<td>12.72</td>
<td>11.40</td>
</tr>
<tr>
<td>Madhya Pradesh</td>
<td>61.78</td>
<td>49.78</td>
<td>43.07</td>
<td>42.52</td>
<td>37.43</td>
<td>32.40</td>
</tr>
<tr>
<td>Maharastra</td>
<td>55.88</td>
<td>43.44</td>
<td>40.41</td>
<td>36.86</td>
<td>25.02</td>
<td>25.20</td>
</tr>
<tr>
<td>ODISHA</td>
<td>70.07</td>
<td>65.29</td>
<td>55.58</td>
<td>48.56</td>
<td>47.15</td>
<td>39.90</td>
</tr>
<tr>
<td>Punjab</td>
<td>19.27</td>
<td>16.18</td>
<td>13.20</td>
<td>11.77</td>
<td>6.16</td>
<td>5.20</td>
</tr>
<tr>
<td>Rajas tan</td>
<td>37.42</td>
<td>34.46</td>
<td>35.15</td>
<td>27.41</td>
<td>15.28</td>
<td>17.50</td>
</tr>
<tr>
<td>Tamilnadu</td>
<td>54.79</td>
<td>51.66</td>
<td>43.39</td>
<td>35.03</td>
<td>21.12</td>
<td>17.80</td>
</tr>
<tr>
<td>Uttar Pradesh</td>
<td>49.79</td>
<td>47.07</td>
<td>41.45</td>
<td>40.85</td>
<td>31.15</td>
<td>25.50</td>
</tr>
<tr>
<td>West Bengal</td>
<td>60.52</td>
<td>54.85</td>
<td>44.72</td>
<td>35.66</td>
<td>27.02</td>
<td>20.60</td>
</tr>
<tr>
<td>ALL INDIA</td>
<td>51.32</td>
<td>44.48</td>
<td>38.36</td>
<td>35.97</td>
<td>26.10</td>
<td>21.80</td>
</tr>
</tbody>
</table>

*Source: Economic survey*

Health Care Situation

Language in India www.languageinindia.com ISSN 1930-2940 13:4 April 2013
C. Subburaman, Ph.D. (Ed.) Health and Medical Care Services: Claims on National Resources
Anjali Dash
Synergy of Health, Poverty and Economic Development (With Reference To Rural Odisha)
In the case of health care services, access is a basic requirement and an important aspect. One can distinguish between two kinds of access: physical and economic. Physical access can be either population coverage-based or area coverage-based. Economic access refers to direct cost of accessing the services. In Odisha, the population covered per public health facility is good and the coverage is better than in nine other major states. However, the area coverage is very poor. The problem of physical access is compounded by two other factors: poor roads as well as transport connectivity. The economic access refers to a situation in which a majority of population will have adequate treatment at affordable prices given their income. It is thus not surprising to find that poor physical and economic access affect the utilisation of public health care facilities. Equitable access to health care requires that all citizens be able to secure an adequate level of care without excessive burdens. However, it is influenced by various factors like the degree of awareness about illness, the educational level and the accessibility, availability and affordability of health care services, drinking water facility and other factors like caste, sex and religions, choice and preference pattern.

Demand is determined not completely by price and income but by occurrence and extent of illness. Some time moral hazard types of situation occur in the demand side. In rural areas who are underdeveloped majority of the people are too poor to afford payment. Poor quality of health services might be another major factor for low level of utilization of health services. Odisha is well known for her backwardness not only in terms of per capita income but also in human development indicate as well. Especially the health sector despite the intervention of government and NGOs, the Infant Mortality Rate in the state remain at 69 percent in 2008, which is much higher than national level (53 per 1000). To reduce this IMR rate, mother and child health care National Rural Health Mission implemented where ASHA play an important role there no co-ordination between ASHA and AWW in many villages.

Results and Discussion
Location, Sample Design and Methodology

The study is mainly based on primary information collected from a village Brahmanipali situated in the district of Sonepur, Odisha. It has collected the responses of patients and other
members of households belonging to different classes of households. The household were selected using a stratified random sampling procedure.

**Socio-Economic Conditions of the Respondents**

Out of the 139 households of the Brahmanipali village, 98 households were selected from the study village of the population (662), during 2001 census 37 percent are Schedule Caste, 26 percent are Schedule Tribe, and 21 percent are Other Back Ward Caste. The village has two parts and the SCs reside outside the village and rest others reside in the main areas of the village. I have classified the households into four categories namely rich, middle group, poor and very poor categories on the basis of annual income earned per household and assets. Of the total sample households 5(5.3%) belong to rich category, 24(24.4%) are middle category, 30(30.6%) poor categories, and the rest 39(39.7%) very poor categories. Tube well is the main source of drinking water. The village has two tube wells, one is located inside and other one is situated at SC locality. The SC uses the other tube well because of social barriers.

**Morbidity Rate and Patterns of Morbidity**

Table 3 mentions prevalent rate of diseases among both male and female and total during the last 30 days of our reference period. This is compare with the NSSO finding for Odisha in rural areas contest relating to 52nd and 60th rounds. According to 60th round of NSS the overall prevalent rate of morbidity was 77 in comparison with 88% at all India level. But according to 52th NSSO round (with 15days as reference period) it was 62 for Odisha and 55 for India.

<table>
<thead>
<tr>
<th>category</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rich</td>
<td>38</td>
<td>38</td>
<td>77</td>
</tr>
<tr>
<td>Middle</td>
<td>25</td>
<td>33</td>
<td>57</td>
</tr>
<tr>
<td>Poor</td>
<td>37</td>
<td>49</td>
<td>85</td>
</tr>
<tr>
<td>Very poor</td>
<td>34</td>
<td>48</td>
<td>82</td>
</tr>
</tbody>
</table>

Table: 3 Morbidity (prevalent) rates of diseases during last 30 days in the study village

Language in India www.languageinindia.com ISSN 1930-2940 13:4 April 2013
C. Subburaman, Ph.D. (Ed.) Health and Medical Care Services: Claims on National Resources
Anjali Dash
Synergy of Health, Poverty and Economic Development (With Reference To Rural Odisha)
The prevalent rate of diseases among the female in Odisha is relatively more as per the NSSO survey 2004. This is also clear in our survey, 33 per thousand populations in comparison with 44 per thousand populations in case of female.

**Fig: 2 Morbidity Prevalent Rate during last 30 days in the study village**

![Graph showing morbidity rate by category and gender](image)

Clearly the overall morbidity rate is high among the poor and very poor categories and this ratio is relatively higher among females compare to male. Surprisingly, the reported morbidity prevalence rate among the ST is considerably higher than that among the other social groups. Given their low level of socio-economic condition, illiteracy and hygiene situation it is not unexpected. It is observed that prevalence of illness increases with age.

**Cost of Treatment**

The high cost of health care has serious implication for the livelihood of the households in general and for poor households in particular. Households responding to medical need and spending a large share of annual income on health care may affect their other essential expenditure. The expenditure incurred for treatment of diseases has been estimated by us from the primary information collected from the study village. Because of the hospitalization of a patient a household has to spend a large sum of money which is beyond his capacity. In such a case he has to borrow from different sources because he can’t postpone such expenditure. In that situation the family has to go forgo a substantial part of its income for repaying the debt and it may end up in indebted situation. (Salveraj, Karan, 2009; Shing, 2010).

### Table: Prevalent Rate of Diseases during last 30 days in the study village

<table>
<thead>
<tr>
<th>Category</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rich</td>
<td>38</td>
<td>77</td>
<td>3838</td>
</tr>
<tr>
<td>Middle</td>
<td>29</td>
<td>57</td>
<td>3334</td>
</tr>
<tr>
<td>Poor</td>
<td>37</td>
<td>85</td>
<td>7648</td>
</tr>
<tr>
<td>Very poor</td>
<td>34</td>
<td>82</td>
<td>4832</td>
</tr>
<tr>
<td>Total</td>
<td>85</td>
<td>100</td>
<td>10000</td>
</tr>
</tbody>
</table>

*Source: Field Survey*
The medicine cost of overall patients constituted 23 percent of the total health expenditure with high variation across classes of patients. It is interesting to know that in case of poor and very poor. This cost varied from 43 to 48 percent in contrast to only 19 percent in case of middle class and 8% in case of rich groups. Every group of patient has to buy medicine from outside, the hospital, whether they seek treatment at private or government hospital.

The average health expenditure per household where patients are found is given in table 4 column 2. It was ₹6702 during the study period for overall households with large variance across different groups. Similarly the average cost per patient for the overall groups was ₹ 3786 with wide variation across the different size classes, with ₹1520 for poor and very poor groups. Health expenditure as a percentage of total income of different size classes is given in the table 8. On an average 15 percent spend health expenditure of their total income. Expenditure on medical care seems to have a negative impact on economic condition of the households. Borrowing or sale of assets is widely prevalent among the patients belongs to poor and very poor in the study village. During the study year out of 98 households, 35 patient household had borrowed to meet their health expenditure.

Table: 4 Percentage of health expenditure, borrowing and without interest rate borrowing.

<table>
<thead>
<tr>
<th>Category</th>
<th>AHEPH(₹)</th>
<th>ACPP(₹)</th>
<th>% HETY</th>
<th>% EOTY</th>
<th>% HEOTE</th>
<th>% BOTHE</th>
<th>% HEO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rich</td>
<td>41280</td>
<td>20640</td>
<td>14</td>
<td>57</td>
<td>25</td>
<td>24</td>
<td>76</td>
</tr>
<tr>
<td>Middle</td>
<td>11248</td>
<td>6297</td>
<td>14</td>
<td>71</td>
<td>28</td>
<td>45</td>
<td>55</td>
</tr>
<tr>
<td>Poor</td>
<td>4089</td>
<td>1961</td>
<td>20</td>
<td>85</td>
<td>24</td>
<td>95</td>
<td>5</td>
</tr>
<tr>
<td>Very Poor</td>
<td>1484</td>
<td>1033</td>
<td>15</td>
<td>87</td>
<td>17</td>
<td>95</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>6702</td>
<td>3786</td>
<td>15</td>
<td>70</td>
<td>25</td>
<td>45</td>
<td>55</td>
</tr>
</tbody>
</table>

*Source: Author’s Estimation from Field Survey*

Notes: AHEPH- Average Health Expenditure Per House Hold, ACPP- Average cost per patient (in Rs), HETY- Health expenditure out of total income, EOTY- Expenditure Out of Total Income, HEOTE- Health expenditure out of total expenditure, BOTHE- Borrowing Out of Total Health Expenditure, HEO- Health Expenditure out of their Own source

The main source of borrowing was money lender and the interest charges on such loans varied from 36% to 120 percent per annum. Clearly the most of the poor households have borrowed
loan for financing health care expenditure on harsh terms and condition. Indebtness situation more in case of small and marginal farmers [see also Shing, 2010].

**Conclusion and Policy Suggestions**

Majority of the poor have sought Medicare from government sector namely primary health care centre. The cost of health care in the government sector is relatively cheaper in comparison with that of private sector. By contrast the majority of middle and rich groups have gone to private sector for treatment. It is noted that patients, for more than poor and very poor there was delay in seeking medical treatment. The reasons for the delay include lack of finance, lack of awareness and a subtle way of discrimination of girl child in the study village. Even this is also found in rural Odisha. An average of 15 percent of the income of overall households utilised some variance across the classes in the study village. But borrowing for private sector constituted 45 percent of health expenditure for overall households. By contrast 95 percent of poor households borrow money. Given that poor households had to borrow at exorbitant rate of interest transferring collaterals to the lenders, they would suffer income and assets loss and may fall in debt trap. Given such a situation in the rural Odisha there is urgent need for provision of primary health care (doctors as well as Para medical, medicare) and drinking water to reduce the morbidity rate and burden of diseases as well as proper implementation of poverty alleviation programme. Even the gender significantly can be reduced drastically if there is effective access to public health care at affordable price.

A strong positive association is observed between initial per capita income and long-run economic growth in per capita income across the States. That is, States with a higher initial income have grown faster than the States with a lower initial income. This has the effect of widening the gap between the rich and poor States. Increasing investment in health is a required policy intervention for accelerating the economy’s growth rate. Growth-oriented policies would result in bringing about improvements in the health status of the population. Policies promoting growth would also have the desirable effect of reducing poverty. Overall, there is a compelling reason for stepping up both public and private investment in health which would pay off in the long run.
References

- Dash A.(2009); “Access To Health Care in Rural Odisha”, Mphil Dessertation, Sambalpur University, Odisha.
• Economic Survey of Odisha (2010-11).
• Gertler and van der Gaag (1990); “The Willingness to Pay for Medical Care: Evidence From Two Developing Countries”, Washington D.C.Wolrd Bank, *Johns Hopkins University Press*.
• Human Development Report (2004), Planning and Co-ordination Department of Odisha, Bhubaneswar.
• NFHS-2 (1992) and NFHS-3(2005), Ministry of Health and Family Welfares, Govt. of Odisha and India.
• NSSO, 52nd and 60th Round.
• Health and Family Welfare Department, Govt. of Odisha, 2003.

• Sharma, O.P. (2000): “Rural Health and Medical Care in India”, *Manak* Press.


=================================================================================================

Anjali Dash
ICSSR Doctoral Fellow (Economics)
M. P. Institute of Social Science Research
6-Bharatpuri, Administrative Zone
Ujjain-456010
Madhya Pradesh
India
dash86.eco@gmail.com