# HEALTH AND MEDICAL CARE SERVICES: CLAIMS ON NATIONAL RESOURCES

**Editor** 

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# **Editor's Note**

This volume contains several of the articles presented and discussed in the UGC Sponsored National Seminar on HEALTH AND MEDICAL CARE SERVICES: CLAIMS ON NATIONAL RESOURCES conducted by the Department of Economics, Annamalai University on 20th & 21st December 2012 in Annamalainagar, Tamilnadu, India.

A wide variety of issues relating to healthcare in India is dealt with in the articles presented here:

Health, Poverty and Economic Development, Inclusive Policy and Programme, Inclusive Healthcare, Health Insurance in India, Poverty and Malnutrition, Stress Management, the Challenges of Food Habits, Awareness Level of Health Habits among Working Women, Determinants of Maternal Mortality Rate, Health issues and insurance in some selected states of India, diabetic and geriatric patient care, and Health Insurance Companies in India, etc.

Even as the Economics of Health and Health Care Issues in India dominated our discussions and presentation of academic research, scholars always focused on how adequate and effective healthcare can be provided to all those who do not have access to such care.

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

# Anjali Dash

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# 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, and 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) 1 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

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**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) 2 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

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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 attecting 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 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- o5, 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 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) 4

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.

Years	Odisha	India
1977-78	72.38	53.07
1983-84	67.53	45.65
1987-88	57.64	39.09
1993-94	49.72	37.27
1999-2000	48.01	27.09
2004-05	39.8	21.8

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

Source: Economic Survey of Odisha 2010-11

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



Fig:-1

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

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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).

States	1977-78	1983	1987-88	1993-94	1999-2000	2004-05
Andhra	39.31	28.91	25.86	22.19	15.77	11.10
Pradesh						
Bihar	61.55	62.21	52.13	54.96	42.60	32.50
Gujrat	41.23	32.79	31.54	25.21	14.07	12.50
Haryana	29.55	21.37	16.54	25.05	8.74	9.90
Karnatak	48.78	38.24	37.53	33.16	20.04	17.40
Keral	52.22	40.42	31.79	25.43	12.72	11.40
Madhya	61.78	49.78	43.07	42.52	37.43	32.40
Pradesh						
Maharastra	55.88	43.44	40.41	36.86	25.02	25.20
ODISHA	70.07	65.29	55.58	48.56	47.15	39.90
Punjab	19.27	16.18	13.20	11.77	6.16	5.20
Rajas tan	37.42	34.46	35.15	27.41	15.28	17.50
Tamilnadu	54.79	51.66	43.39	35.03	21.12	17.80
Uttar Pradesh	49.79	47.07	41.45	40.85	31.15	25.50
West Bengal	60.52	54.85	44.72	35.66	27.02	20.60
ALL INDIA	51.32	44.48	38.36	35.97	26.10	21.80

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

Source: Economic survey

# **Health Care Situation**

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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 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) 7

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 52<sup>nd</sup> and 60<sup>th</sup> rounds. According to 60<sup>th</sup> round of NSS the overall prevalent rate of morbidity was 77 in comparison with 88% at all India level. But according to 52<sup>th</sup> NSSO round (with 15days as reference period) it was 62 for Odisha and 55 for India.

category	Male	Female	Total
Rich	38	38	77
Middle	25	33	57
Poor	37	49	85
Very poor	34	48	82

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

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Overall	33	44	76		

Source: Field Survey

The prevalent rate of diseases among the female in Odisha is relatively more as par 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

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).

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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  $\mathbf{\xi}6702$  during the study period for overall households with large variance across different groups. Similarly the average cost per patient for the overall groups was  $\mathbf{\xi}$  3786 with wide variation across the different size classes, with  $\mathbf{\xi}1520$  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.

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

#### 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

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#### **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 note 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.

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# The Challenges of Food Habits of Adolescent Children in Chennai City

# Dr. R. Balasubramaniyan & Ms. D. Bhuvaneswari

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#### Abstract

Adolescence is the period of human life which occurs between 13 - 20 years of age. It is the period of psychological and emotional transition between childhood and adulthood. At a transitional stage of human development it represents the person of adolescence. Healthy eating during adolescent period is important because body changes require nutritional and dietary needs.

Adolescent children tend to eat more meals away from home because of increase in appetite and desire to have junk foods. Sometimes they eat wrong kind of foods and also at their wrong time. During the adolescent period eating habits plays a central role in shaping food choices, diet quality and weight status. Parents play a powerful role in children's eating behaviour by making food available to them.

The objectives of the study include: 1.To examine whether fast food consumption and breakfast skipping are associated with weight gain during the transition period from childhood to adulthood. 2. To identify general dietary patterns among the school children in the study area. 3. To assess home dietary habits and nutritional knowledge levels of adolescence school children in study area. 4. To estimate the Stunted, Wasted and Underweight category among school going children in the study area. 5. To suggest measures to overcome problems such as stunted, wasted and underweight of respondents in the study area.

Methodology: The study is based on primary data. The information relating to adolescent period of school-going children was collected from leading schools in Chennai city. The first school is located at Thiruneermalai and the second one is located at Thiruverkkadu in Chennai City. A total of 50 respondents consisting of school going children (boys and girls) of the adolescence age (13 - 18) years represents the sample size of the study. Each school represents 25 respondents of school going children.

Major findings of the study suggest that about 42 percent of school going children are having underweight problem in Chennai city. About 2 percent of school going children is affected with overweight problem in the study area. Further, the study reveals the fact that about 20 percent of respondents have opined lack of time as one of the main reason for skipping meal.

Key words: Stunted, Wasted, Underweight, Obese and Food habits.

# Introduction

Health is basically defined as "a state of complete physical, mental and social well-being and not merely the absence of disease of infirmity". One also considers health as a basic and dynamic force in everyone's daily lives, influenced by circumstances, beliefs, culture and social and physical environments. Health is a unity within the mind, body, and spirit, which is unique to each person. The level of wellness or health is, in part determined by the ability to deal with and defend against stress. Health is on a continuous with movements between a state of optimum well being and illness premature death, which is defined as degrees of disharmony. It is determined by physiological, socio-cultural, and developmental stage aspects. During the last two decades there has been a major alternation in life style and activity pattern among all segments of population, with the ready availability of cooking gas, piped water supply and labour saving gadgets and ready transport which led to a substantial reduction in the physical activity pattern and energy expenditure especially in middle and upper income group. However, the dietary intake has not undergone any reduction; in fact ready availability of fast foods and junk foods, ice creams and other energy rich food items at affordable costs have resulted in increased energy consumption of these by all members of the family. All these have led to increasing energy intake over and above the requirement especially among urban and rural affluent population and consequent obesity in these segments of population. Nutrition and health education to convince the population about the need for restricting energy dense food intake and increasing exercise so that energy balance is maintained are being taken up.

#### Adolescence

Adolescence is the period of human life which occurs between 13 - 20 years of age. It is the period of psychological and emotional transition between childhood and adulthood. At a transitional stage of human development it represents the person of adolescence. Health eating during adolescent period is important because body changes require nutritional and dietary needs. Adolescent children tend to eat more meals away from home because of increase in appetite and desire to have junk food. Sometimes they eat wrong kinds of food and also at the 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** Dr. R. Balasubramaniyan & Ms. D. Bhuvaneswari The Challenges of Food Habits of Adolescent Children in Chennai City 16

wrong time. During the adolescent period eating habits play a central role in shaping food choices, diet quality and weight status. Parents play a powerful role in children's eating behaviour by making food available to them.

#### Conceptualization of Obese, Underweight, and Stunted and Wasted

#### Obesity

Obesity is defined as a generalized accumulation of excess adipose tissue in the body leading to more than 20 percentage of the desirable weight. Obesity is determined by measuring both the height and weight of the child. A child or adolescent person is considered obese if he/she is significantly over the ideal weight for his/her height. Usually obesity is due to positive energy balance. The intake calories are more than the expenditure of calories.

#### Underweight

Underweight is defined as any weight in less of the ideal range. It is a very common nutritional disordering which there is less accumulation of body fat, which results individual having less than the 20 percent of their ideal body weight. Underweight also occurs due to inadequate diet in proteins and the person who never take rest.

#### **Stunted and Wasted**

Stunting growth is a reduced growth rate in human development. It is a primary manifestation of malnutrition in early childhood, including malnutrition during fetal development brought on by the malnourished mother. The wasted children are too thin for their height, which may result from inadequate recent food intake or a recent illness.

# **Results and Discussion**

#### 1. Age Structure of the Respondents

Table 1 presents the Age structure of the student's studying in two leading schools in Chennai city. It shows that only one respondent placed under the age group of 13 and 14 has no health problems. But on the other hand, the majority of the 20 respondents in the age group of 15 where 16 percent of the students were found to be underweight, 2 percent of the students were 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* Dr. R. Balasubramaniyan & Ms. D. Bhuvaneswari The Challenges of Food Habits of Adolescent Children in Chennai City 17

obese. Likewise 18 respondents in the age group of 16 years (20 percent) were found to be underweight. Similarly in the age group of 17, out of 10 respondents 6 percent of the students were underweight. The same values are given in figure 1.

# Table: 1

# Age Structure of the Respondents

Age	No of Respondents	Body Mass Index (Percentage)				
		Stunted	Wasted	Underweight	Obese	
13	1	-	-	0	0	
14	1	-	-	0	0	
15	20	-	-	16	2	
16	18	-	-	20	0	
17	10	-	-	6	0	
Total	50					

Source: Primary survey, 2012

Figure:	1
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# Source: Primary survey, 2012

# 2. Education Level and BMI of Respondents

Table 2 pinpoints the education levels and BMI of the respondents which indicate that out of 25 respondents belongs to the category of education 8<sup>th</sup> to 10<sup>th</sup> standard, 16 percent of the students were found to be underweight, 2 percent of the students were obese. Similarly out of the 25 respondents in the category of the educational level of 11<sup>th</sup> to 12<sup>th</sup> standard, majority of the students that is 26 percent of the students were underweight and nobody found in the obese category.

# Table: 2

# **Education Level and BMI of Respondents**

Particulars	No of Respondents	Body Mass Index (Percentage)				
		Stunted	Wasted	Underweight	Obese	
$8^{\text{th}}$ - $10^{\text{th}}$ std	25	-	-	16	2	
$11^{\text{th}} - 12^{\text{th}} \text{ std}$	25	-	-	26	0	
Graduation	0	-	_	0	0	
Total	50					

**Source:** Primary survey, 2012





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#### 3. Types of Family of the Respondents

Table 3 captures the types of family of the respondents. It shows that 41 respondents belong to nuclear family and 9 respondents come under the category of joint family. Among the nuclear family 32 percent of the respondents are underweight and only 8 percent of the respondents are having underweight problem under joint family. Therefore the study reveals the fact that students belonging to nuclear family are significantly having underweight problem than the joint family.

# Table: 3

Particulars	No of Respondents	Body Mass Index (Percentage)				
		Stunted	Wasted	Underweight	Obese	
Nuclear Family	41	-	-	32	2	
Joint Family	9	-	-	8	0	
Total	50					

# **Types of Family of the Respondents**

Source: Primary survey, 2012

Figure: 3



4.

#### Parents' Occupation of the Respondents

Table 4 underscores with regard to parents occupation, a majority of 25 respondent parents were doing business, 24 respondent parents were working as an employee and 1 respondent parent is a professional. Among the employees 20 percent of the respondents were underweight, and 20 percent were fall in underweight in business category and 2 percent of the respondents were in obese category.

#### Table: 4

Particulars	No of	Body Mass Index (Percentage)			
	Respondents	Stunted	Wasted	Underweight	Obese
Employee	24	-	-	20	2
Business	25	-	-	20	0
Proffessional	1	-	-	2	0
Others	0	-	-	0	0
Total	50				

#### **Parents' Occupation of the Respondents**

Source: Primary survey, 2012

# Figure: 4



5.

Annual Income of the Family

Table 5 shows that the annual income of the family. It was observed that the majority of the (37) respondents were underweight and 2 percent are obese belong to the category of low income groups. In the middle income groups 13 respondents were found to be underweight and nobody in the obese category. Out of 50 respondents nobody in the high income groups.

# Table: 5

# **Annual Income of the Family**

Particulars	No of	Body Mass Ind		lex (Percentage)	
	Respondents	Stunted	Wasted	Underweight	Obese
Below Rs.50,000	37	-	-	28	2
Rs. 50,001-Rs. 3,00,000	13	-	-	14	0
Above Rs. 3,00,000	0	-	-	0	0
Total	50				

Source: Primary survey, 2012





# 6.

# **Eating Pattern of the**

# Respondents

Table 6 shows that the eating pattern of the students it was found that among the total respondents 12 respondents was vegetarian and 38 respondents were non-vegetarian. Out of the 50 respondents 8 percent were underweight in the vegetarian eaters. The majority of the 34 percent of the students were under underweight category and 2 percent were belong to obese in the non-vegetarian eaters.

# Table: 6

# **Eating Pattern of the Respondents**

Particulars	No of	Body Mass Index (Percentage)			
	Respondents	Stunted	Wasted	Underweight	Obese

Vegetarian	12	-	-	8	0
Non-Vegetarian	38	-	-	34	2
Total	50				





Source: Primary Survey, 2012.

# 1. Reasons of the Respondents for Skipping Meals

Table 7 shows that the reasons for skipping meal of the students indicate that out of 50 respondents 5 respondents were dieting, 1 respondent opined on fasting and feeling bored and others, 9 respondents were dislike for food and 10 respondents were opined lack of time. Therefore, the table 7 clearly shows that 10 percent of the students who belongs to underweight category because of lack of time, 8 percent belongs to dislike for food and 2 percentage of the students were obese, 2 percent of the students were under dieting and feeling bored and 20 percent of the respondents who were in underweight showed no reasons for skipping meal.

Reasons for Skipping meals of the Respondents						
Particulars	No of	Body Mass Index (Percentage)				
	Respondents	Stunted	Wasted	Underweight	Obese	
Dieting	5	-	-	2	0	
Fasting	1	-	-	0	0	
Dislike for food	9	-	-	8	2	

Table: 7 Reasons for Skipping meals of the Respondent

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Feeling bored	1	-	-	2	0
Lack of time	10	-	-	20	0
Others	1	-	-	0	0
Not at all	23	-	-	20	0
Total	50				





Source: Primary survey, 2012

# 2.

# **Type of Food Habits**

Table 8 underscores the kind of food habits among the respondents. It was found that among the total respondents of 50, it inferred about 2 percent of students have taken fast food, 1 percent of the students were consuming Take-away food that is restaurant or mess, and the majority of them 47 percent were consumed homemade foods. The majority of respondents about 38 percent were under underweight category took homemade food and 2 percent of students come under obese because of the same reason. Only about 4 percent of the students were placed under underweight category because of consuming fast food.

# Table: 8

# **Type of Food Habits**

Particulars	No of	Body Mass Index (Percentage)			
	Respondents	Stunted	Wasted	Underweight	Obese
Homemade	47	-	-	38	2
Ready to cook	0	-	-	0	0
Fast food	2	-	-	4	0
Take-away	1	-	-	0	0
Total	50				



Figure: 8

Null Hypothesis Ho: Fast food consumption and Breakfast skipping are independent of each other.

Alternate Hypothesis H1: Fast food consumption and Breakfast skipping is dependent.

# Table: 9

# Summary results of Chi-Square Test

Statistic	Value	df	Sig
Test of Independence	0.553	1	0.05
Test of Independence	1.024	1	0.05
Total	1.577	2	

Table 9 presents the summary results of the Chi-Square test. The calculated value of chi-square (0.553 & 1.024) is less than the given tabulated value (which is 3.84), so we accept the null hypothesis Ho. Thus the fast food consumption and breakfast skipping is independent.

# Conclusion

The discussion carried out in this paper on "The Challenges of Food Habits of Adolescence children in Chennai City" is based on the primary data. The study considered certain variables such as stunted, wasted, underweight and obese of children in the age group of 13 - 20 years. The study suggests that about 42 percent of school going children are having underweight problem in Chennai city. About 2 percent of school going children is affected with overweight problem in the study area. Further, the study reveals the fact that about 20 percent of respondents have opined lack of time as one of the main reason for skipping meal. The analysis the nutritional status of the student's proved the good and poor aspects in the study area. The significant proportion of the health problems faced by the respondents based on their consumption of non-vegetarian food. We conclude that most of the students affected by underweight because of high or low Body Mass Index (BMI) (overweight and underweight).

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# **Inclusive Policy and Programme: Inclusive Healthcare**

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Inclusive growth is the policy adopted by the Indian government during 11<sup>th plan</sup> and India will continue this policy in the 12<sup>th</sup> plan. Towards faster, sustainable and Inclusive growth is the objective of Twelfth five year plan. Inclusive growth means development of all sections of the population including children, women and other vulnerable groups. It also gives importance to equitable distribution of fruits of development among all these sections. India is aiming for Inclusive growth in several fields like education, health, energy and resources, telecom and technology, finance and infrastructure.

Development is not complete without human development. A sound economy requires healthy workforce which may reduce the problem of absenteeism and would naturally increase the growth rate of the economy. Developing nations like India gives more importance to enhance the social welfare and wellbeing of the people. So we have adopted Inclusive health programme which is a part of social Inclusive programme adopted by the government. Inclusive health means bringing poor, women, children, mentally and physically challenged people and other social vulnerable groups under the umbrella of health care or \*<sup>1</sup>equitable allocation of health care resources with benefits accruing to every section of the society. As a result of this inclusive health programme, the HDI of India has improved from 134 rank in 2007 to 119 rank in 2010 with 0.519 points.(But this has again come down to 134 rank in 2011 which is bit worrying).The

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<sup>&</sup>lt;sup>1</sup> AIMA report August 2011 :Inclusive health care Management for sustainable development definition on Inclusive health

average <sup>2</sup>*HDI* growth of India is 1.56 percentage which is better when compared to other developing nations. The census report shows that there has been a decadal fall in the growth rate of Indian population from 21.5% in 2001 to 17.64% in 2011.So we have about 35.4% of people in the age group of 15-34 in 2011and the proportion of working age population between 15-59 years has increased by more than 58 %.So India would be one of the youngest nations in the world by 2020 and the average age would be 29 years old .Whereas developed nations like Germany,Japan,USA and Western Europe are facing the problem of <sup>3</sup>*greying of population*. India should utilize its <sup>4</sup>*demographic dividend* which is an opportunity for us. So India should give special focus to social sector.

India has increased its spending in social sector for various programmes like education, poverty alleviation, employment generation, health and social welfare. India has also given special focus for the development of North eastern state and for the improvement of the health of vulnerable groups like SC/ST, women, children etc.Our spending on social sector has increased from 9.47 % in 2006-2007 to 12.52 % (2008-2009) and it has increased to 13.20 % in 2011-12 (*BE*) out of total expenditure.

Under social service, out of total expenditure it was 1.86 % for health and family welfare which has increased to 2.15 % in 2011-12 (BE). Education, sports and youth affairs was given the top importance which was 4.28 % in 2006-07 and it has increased to 4.63 % in 2011- 12(BE).

India has given focus to North Eastern states from 2009-10 onwards .0.02 % of total expenditure was allocated for their development which has increased to 1.56 % in

<sup>&</sup>lt;sup>2</sup> Human development index is a composite statistic of life expectancy, education, and income indices to rank countries into four tiers of human development.

<sup>&</sup>lt;sup>3</sup> Growing number of older people in population

<sup>&</sup>lt;sup>4</sup> Rising share of working age people in population

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2011 -12 (BE).For the welfare of SC/ST's and OBC we have allocated 0.34 % in 2006-07, which has increased to 0.67 % in 2011 -12.As percentage of GDP total expenditure on social service is 26.97 % in 2011-12 and in the sector of education we are spending only 3.25 % .In the health sector we are spending less than 1 % of total GDP.But western nations are spending more than 5 % of GDP on health.

#### Major Problems of the Health Sector

Indicators	1991	Current level
Crude Birth Rate (per	29.5	22.1(2010)
1000 population)		
Crude Death Rate(per	9.8	7.2(2010)
1000 population)		
Total Fertility Rate per	3.6	2.6(2009)
woman		
Maternal Mortality Rate	NA	212(2007-09)
per 100000 live birth		
Infant Mortality Rate	80	47(2010)
Rural	-	51
Urban	-	31
Child Mortality Rate	26.5	14.1(2009)
0-4 years (per 1000		

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children)		
Life expectancy at birth	9.4 (1989-93) 63.5 (2011)	
Male	59	62.6
Female	59.7	64.2

India is spending only 0.9 % of its GDP on health but still India houses 21 % of global diseases including communicable diseases. For every 1000 Indians there are 0.9 beds and 0.6 physicians per 10000 population. China has 4.1 beds for 1000 population. In India only 13 % of rural population has access to primary health care center (PHC) and only 9.66 % to a hospital.

The share of public health spending is very low and the quality of health care facilities in the public sector is not very impressive. Infrastructural facilities of government hospitals are very low. These hospitals also face the problem of shortage of staffs including doctors, nurses and other health care professionals. On the other side private hospitals are equipped with better facilities and are providing quality services.

#### **Major Health Indicators of India**

Source: Ministry of health and family welfare

Due to the stress given to Inclusive health we can find that major health Indicators have improved slowly

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#### Health care Infrastructure in India

Facilities	Number
SC/PHC/CHC	1,75,277
Government hospitals(rural and urban	12,760
areas)	
AYUSH hospitals and dispensaries	24,943
Nursing personnel's as on 31.12-2012	1,702,555
Doctors Modern System	8,16,629

Source: Rural Health statistics in India 210

National Health Profile 2010

# AIMA report August 2011 Inclusive health care Management for sustainable development

#### **Budget Highlights 2012-13 for Health Sector**

Health care spending has increased to Rs 30,702 crores.All health care services are exempted from tax. About Rs 300 crores has been allocated to promote higher production of nutri-cereals like bajra, jowar, ragi, millet etc. Rashtriya Swasthya Bima Yojana –health insurance for the poor has been extended to cover <sup>5</sup>MNREG workers, mine workers and beedi workers.<sup>6</sup>ICDS has been allocated RS 15,850 crores.Multi sector plan to fight malnutrition in 200 high burden districts and a hike of about 58 percent of budget allocation was made for this scheme. National Mid Day Meal scheme in school has increased allocation from Rs 10,380 crores in 2011-12 to Rs 11,937 crores in 2012-

<sup>6</sup> Integrated child development scheme

<sup>&</sup>lt;sup>5</sup> Mahatma Gandhi national rural employment guarantee scheme

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13.Rajiv Gandhi Scheme for Empowerment of Adolescent Girls has allocated Rs 750 crores.

#### New Integrated vaccine unit

The buget has proposed a new integrated vaccine unit near Chennai and it could achieve vaccine security and keep the pressure on disease eradication and prevention.

#### <sup>7</sup>NRHM

The budget has increased allocation for NRHM from Rs 18,115 crores in 2011-12 to Rs 20,822 crores in 2012-13

**National Urban health mission** is being launched to encompass the primary health care needs of people in the urban areas.

**Pradhan Mantri Swasthya Suraksha Yojana** aims at setting up of better medical institutions. Under this programme it has planned to upgrade 7 government medical colleges. This programme will enhance the availability of affordable territiary health care.

#### **Inclusive Healthcare Programmes**

#### NRHM

NRHM is implemented through Accelerated Social Health Activist (ASHA). The scope of ASHA activists included prevention of iodine deficiency disorders; ensure 100 percent

<sup>&</sup>lt;sup>7</sup> National rural health management is an Indian health programme for improving health care across India. **Language in India** www.languageinindia.com **ISSN 1930-2940** 13:4 April 2013

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immunization and better spacing of children. At the community level more active role is given to ASHA workers as they are the conveners of health and sanitation committee. As their remuneration is based on performance based payments they will work efficiently.

#### AYUSH

Ayush has sanctioned Rs 42.19 crores up to December 31 2011.Special focus has been given to North east states to set up new hospitals by 31 December 2011.

**Rashtriya Swastya Bima Yojana** was launched in 2007 to provide smart card based cashless health insurance cover of Rs 30,000 per family per annum especially for BPL families in the unorganized sector.

#### Women and Child Healthcare Programmes

**ICDS** programme has allocated up to Rs 14,048 crores up to 2011 December.

<sup>8</sup>RSEAG was launched on 19 November 2010 to empower adolescent girls of 11-18 years of age to improve their nutrition, health status, life skills, and vocational skills. About Rs 750 crores has been allocated under the scheme.

**Rajiv Gandhi Creche Scheme for Children of Working Mothers (0-6 years old)** About 85 crores was allocated for this scheme in 2011-12.

Janani Suraksha Yojana was launched to improve the health status of mothers and to lower maternal mortality rate and to increase institutional deliveries.

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<sup>&</sup>lt;sup>8</sup> Rajiv Gandhi scheme of empowerment of adolescent girls

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Janani Suraksha Karyakram aims at giving free entitlements to pregnant women and sick new borns. A sum of RS1437 crores has allocated to states during 2011-12.

**Integrated Child Protection Scheme** was launched in 2009-10 to provide a safe and secure environment for the comprehensive development of children. About Rs 213.40 crore was allocated in 2011-12.

**Support for Training and Employment of Women (STEP)** was launched to improve the skills of poor women in various sectors like agriculture, fisheries, animal husbandry, handlooms etc...About 11.5 crore was allocated in 2011-12.

Rashtriya Mahila Kosh- About Rs 315.32 crore was allocated for this scheme in 2011-12.

#### **Programmes for Persons with Disabilities**

**Deen Dayal Scheme** aims at running special schools for persons with disabilities and for their development. Rupees 120 crore was allocated for the scheme in 2011-12.

These are some of the major Inclusive health programmes in India to improve the health status of Indians.

#### Recommendations

Government should increase allocation on education. It has to be made more than 5 % of GDP.Now it is about 3.5% of GDP.Government should give more importance to female education. Studies made by experts finds that maternal mortality rate; child

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mortality rate and Infant mortality rate are very low in countries where females are educated eg-Kerala.

Special focus should be given to start health education in schools and colleges to prevent communicable diseases. Public sector must lead the health sector rather than the private sector. This is because Inclusive health care can only be ensured if poor and downtrodden class gets better care. This can be ensured only by government health care institutions. Public and private sector must joint hands in ensuring Inclusive health services for the population. Government must also force private hospitals to treat poor patients at subsidized rates if proper treatments for diseases are not available in government sector. Government has to spend more on Infrastructure development of the health sector. Government should train the existing and new health care professionals to use modern equipments and facilities. Government should ensure quality services in government hospitals at low rates. Government has to invest for human development if they want to make India a healthy, wealthy and developed nation.

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<sup>1</sup> AIMA report August 2011 Inclusive health care Management for sustainable development Ministry of health and welfare

<sup>2</sup> AIMA report September 2011 Inclusive growth a challenging opportunity

<sup>3</sup> India Budget 2011

<sup>4</sup> India Budget 2012

<sup>5</sup> Indian Economy, R Singh 2010, Tata MC Grow hill Publication

<sup>6</sup> Indian economic survey 2010-11

<sup>7</sup> Indian economic survey 2011-12

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# A Study on Determinants of Maternal Mortality Rate in Tamil Nadu Dr. S. Chandraleka, M.A., M.Phil., Ph.D. & Dr. M. Rajeswari, M.A., M.Phil., Ph.D.

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#### Abstract

The determinant of maternal health services is a complex phenomenon and it is influenced by several factors. Therefore, the factors at different levels affecting the use of these services need to be clearly understood. The main objective of the study was to explore the determinants of maternal mortality rate in Tamilnadu districts. The data was collected from Directorate of Family Welfare, Tamil Nadu during 2010. The present study highlights that only 0.9% of the women did not receive antenatal check-up during pregnancy period in Tamilnadu, With regard to TT vaccination and IFA tablets, 1.3% and 7.5% of the women did not receive TT injection and IFA tablets in Tamilnadu. It can be concluded that the pregnant women more utilize the antenatal care than the women lived in Tamil Nadu.

Key Words: Maternal Mortality Rate and Ante-natal Care.

#### Introduction

**Definition:** Maternal death is the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes. To facilitate the identification of maternal deaths in circumstances in which cause of death attribution is inadequate, a new category has been introduced: Pregnancy-related death is defined as the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the cause of death.

Millions of women in developing countries experience life threatening and other serious health problems related to pregnancy or childbirth. Complications of pregnancy and childbirth cause more deaths and disability than any other reproductive health problems (EC/UNFPA, 2000). The situation is worse in developing countries like India due to

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A Study on Determinants of Maternal Mortality Rate in Tamil Nadu

inadequate access to modern health services and poor utilization. Despite the government's serious commitment to deliver health facilities to the doorsteps of common people through innovative approaches, such as Essential Service Package (ESP), the utilization of health services is still far below any acceptable standard. One of the public health challenges in developing countries such as India is, therefore, to identify vulnerable groups and to provide them with needed preventive and curative health services.

Utilization of health services is a complex behavioral phenomenon. Empirical studies of preventive and curative services have often found that the use of health services is related to the availability, quality and cost of services, as well as social structure, health beliefs and personal characteristics of the users (Andersen and Newman, 1973;Kroeger, 1983; Becker *et al.*, 1993; Sarin, 1997). It is well recognized that women's current age plays an important role in the utilization of medical services (Fiedler, 1981; Elo, 1992; Fosu, 1994). Mother's age may sometimes serve as a proxy for the women's accumulated knowledge of health care services, which may have a positive influence on the use of health services. On the other hand, because of development of modern medicine and improvement in educational opportunities for women in recent years, younger women might have an enhanced knowledge of modern health care services and place more value upon modern medicine

Generally there is a distinction between a direct maternal death that is the result of a complication of the pregnancy, delivery, or their management, and an indirect maternal death that is a pregnancy-related death in a patient with a preexisting or newly developed health problem. Other fatalities during but unrelated to a pregnancy are termed accidental, incidental, or non obstetrical maternal deaths. Maternal mortality is a sentinel event to assess the quality of a health care system. The most common causes of maternal mortality and morbidity are widely known and include a range of medical, social and health system-related factors. The vulnerability of certain subgroups of women to pregnancy-related mortality and morbidity based on other health conditions, income, caste and age has been documented, making it possible to assess the risk of mortality in specific populations. Policies aimed at reducing maternal mortality have been in place for decades, but as the current situation shows, they have not had substantial impact.

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The UN estimates that for every woman who dies as a result of pregnancy, approximately 30 women suffer injury, infection and disabilities. Complications arising from pregnancy include anemia, infertility, pelvic pain, incontinence and obstetric fistula. While there are no national data on the incidence of maternal morbidity in India, based on this global estimate it may be inferred that the incidence of maternal morbidity is very high, making it an equally pressing concern (*Maternal Morbidity: Fistula a Neglected Concern*).

This study is based on secondary data. Data collected from the 2010 Directorate of Family Welfare, Tamil Nadu. The use and factor determinants of maternal healthcare services were Neo-natal Mortality Rate, Post-neonatal Mortality Rate, Infant Mortality Rate, Under Five Mortality Rate, Maternal Mortality Rate and Still Birth Rate in Tamil Nadu.

S. No	Districts	Birth Rate	Death Rate	Total Fertility Rate	% of Birth Order 3+
1	Thiruvallur	17.9	6.2	1.8	17.0
2	Chennai	15.3	3.6	1.8	8.6
3	Kanchipuram	17.7	5.4	1.6	9.4
4	Vellore	17.9	7.3	2.2	27.6
5	Dharmapuri	19.6	6.8	2.4	26.9
6	Thiruvannamalai	18.6	7.3	1.8	31.4
7	Villupuram	19.5	7.4	2.2	25.8
8	Salam	17.3	7.2	2.1	24.8
9	Namakkal	15.4	7.1	2.1	14.7
10	Erode	15.3	7.0	1.6	13.6
11	The Nilgiris	15.2	5.2	1.5	14.5
12	Coimbatore	17.1	5.8	1.8	9.7
13	Dindigul	17.3	7.7	2.1	17.9
14	Karur	16.0	8.2	1.8	12.9

Table – 1: Birth Rate, Death Rate, Total Fertility Rate, and Per cent Birth Order or More in Tamil Nadu

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15	Thrichrapalli	17.2	7.5	1.95	24.5
16	Perambalur	19.5	8.5	2.3	21.5
17	Ariyalur	N.A	N.A	2.3	28.2
18	Cuddalore	18.4	6.7	2.1	24.7
19	Nagapattinam	17.3	6.9	2.2	29.4
20	Tiruvarur	17.3	6.5	2.0	28.0
21	Thanjavur	17.9	7.4	2.1	22.3
22	Pudukottai	19.1	6.3	1.7	24.2
23	Sivagangai	18.1	6.7	2.0	26.7
24	Mudurai	18.4	7.1	1.9	21.2
25	Theni	17.4	7.4	2.0	20.0
26	Virudunagar	18.2	7.2	2.2	18.5
27	Ramanathapuram	18.7	6.1	1.9	29.3
28	Tuticorin	17.4	6.5	2.6	29.9
29	Tirunelveli	17.6	7.3	1.9	27.4
30	Kanniyakumari	15.8	5.6	2.1	14.2
	Tamil Nadu	17.8	6.9	2.1	22.2

Source: Directorate of Family Welfare, Tamil Nadu, 2010.

Note: N.A. (Not Available).

# Table – 2: Neo-natal Mortality Rate, Post-neonatal Mortality Rate, Infant Mortality Rate, Under Five Mortality Rate, Maternal Mortality Rate and Still Birth Rate in Tamil Nadu

S. No	Districts	NMR	PNMR	IMR	Under 5 Mortality Rate	MMR	Still Birth Rate
1	Thiruvallur	N.A	N.A	30.8	38.0	1.1	11.8
2	Chennai	7.2	16.7	23.9	26.5	0.4	3.0
3	Kanchipuram	N.A	N.A	26.8	32.2	1.4	9.7
4	Vellore	21.7	6.6	28.3	34.2	1.6	17.4
5	Dharmapuri	35.5	12.0	47.5	54.6	1.8	17.7

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6	Thiruvannamalai	39.6	14.1	53.7	65.4	1.5	14.6
7	Villupuram	N.A	N.A	40.5	47.5	1.5	15.7
8	Salam	N.A	N.A	39.3	45.5	1.4	17.5
9	Namakkal	N.A	N.A	40.9	43.3	0.9	11.9
10	Erode	33.3	12.1	45.4	48.4	1.3	12.1
11	The Nilgiris	19.1	2.5	21.6	26.9	0.5	13.4
12	Coimbatore	19.3	4.3	23.6	26.5	1.0	13.8
13	Dindigul	16.1	3.1	19.2	27.5	0.7	17.8
14	Karur	N.A	N.A	38.5	44.3	1.6	18.2
15	Thrichrapalli	N.A	N.A	29.9	33.0	2.3	19.4
16	Perambalur	N.A	N.A	46.9	63.3	2.9	21.1
17	Ariyalur	N.A	N.A	28.2	55.8	N.A	N.A
18	Cuddalore	N.A	N.A	29.4	37.3	1.4	17.1
19	Nagapattinam	N.A	N.A	33.8	40.3	2.1	16.7
20	Tiruvarur	N.A	N.A	10.5	17.2	2.0	15.0
21	Thanjavur	N.A	N.A	48.8	58.0	0.8	16.1
22	Pudukottai	21.0	9.3	30.4	34.9	1.2	20.8
23	Sivagangai	16.0	7.8	23.8	32.3	1.3	12.0
24	Mudurai	N.A	N.A	34.2	46.1	1.6	18.8
25	Theni	N.A	N.A	67.0	67.0	2.2	19.9
26	Virudunagar	14.0	8.0	21.9	16.8	1.2	14.3
27	Ramanathapuram	26.4	2.6	29.0	29.0	1.9	15.5
28	Tuticorin	31.6	4.5	36.1	49.9	1.2	16.0
29	Tirunelveli	N.A	N.A	42.1	42.9	1.9	17.8
30	Kanniyakumari	12.8	1.8	14.6	18.9	0.2	6.6
T	'amil Nadu	N.A	N.A	N.A	N.A	0.9	15.5

Source: Directorate of Family Welfare, Tamil Nadu, 2010.

Note: N.A. (Not Available).

The Directorate of Family Welfare, Tamil Nadu, 2010only 6.9 of total deaths occurring in the state are registered. Out of these reported deaths 3.1 of total reported deaths

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are of women. Table 1 and Table 2 show the total deaths and maternal deaths respectively for Tamil Nadu from the year 2010. The maternal deaths registered in the data duce in all districts. Compare with some districts is high; the reason is most of the people getting low level awareness in ANC Check-up. Another reason behind this may be lack of registration of the maternal deaths in Tamil Nadu. Most of these deaths might have occurred in homes which is why it is not registered with the system.

The massive differences between districts in availability and access to services, and maternal health indices the following differential strategy will be adopted for achieving incremental improvement in antenatal care during the Tenth Plan. In all districts: Awareness generation to ensure universal screening of pregnant women; identification of women with problem; manage/ refer women with complications to appropriate institution for care; 100% coverage for Tetanus Toxoid, Screening for and treatment of anaemia; Provide information on, Nearest PHC where women with problems can seek doctor's advice, Nearest FRU with obstetricians and facilities where women with, Obstetric emergency can seek admission, How to access emergency transport system.

In better performing districts focus on improvement in universal coverage and content and quality of ANC to enable very early identification of women with any antenatal problem through examination; Referral of those with problems to PHC/ FRU for care. In poorly performing districts focus will be on improving coverage for ANC screening by ANM providing ANC at least thrice during pregnancy, Building up system of RCH camps in PHC/CHC on specific days throughout the year when doctors/specialists will be available to examine women with problems and provide treatment/referral.

#### Conclusion

The maternal healthcare a service among rural adolescent women is far from acceptable. Low coverage of these services could lead to adverse health outcomes for both the mother and the child. Earlier reproductive health programs in India have paid limited attention to married adolescent girls as a separate category, typically grouping all married women together regardless of current age, age at marriage, and socioeconomic characteristics.

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There is need for building awareness on the issue of early marriage and adverse effects of early pregnancy at the family and societal levels. Recent studies have emphasized the need to work within existing community structures and attempt to bring awareness to communities about how child marriage compromises opportunities and health for women and their children. More specifically, the approach could be two-fold to ensure the healthy life for rural adolescent women, who includes – delaying the age of marriage among unmarried adolescents, by providing better information to the parents of unmarried girls in particular and community in general regarding other options/avenues in education and the economic sphere. In this connection, the role of Women Advocacy Group (WAG) and Self Help Groups (SHG) comprising adolescent women at the village level could be effective. On the other hand, support can be provided to adolescent married women through targeted interventions that include working with the husband and in-laws in order to delay childbearing, promotion of contraceptive use and aware them not to link early childbirth with the honor of the family.

The future policies and programs must not only address young people as individuals but consider them in the context of their overall development. In this regard special efforts must be made by the Department of Women and Child Development and Department of Youth to encourage effective participation of young adults in civil society and decision making processes. This study also emphasizes the importance of the recent law enforcement on the Prohibition of Child Marriage Act-2006 which restricts minimum age at marriage to 21 years for boys and 18 years for girls by integrating panchayat's (local self-government body at the village level) accountability towards effective implementation. The approach to the health needs of young married adolescents must not be from the viewpoint of problems to be solved and health problems to be addressed, rather, it must be recognized as a matter of right and a means to achieve the Millennium Development Goals.

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# **Health Insurance in India**

#### J. Kalaisigamani A. Sangameshwaran

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#### Abstract

India is gradually becoming health conscious. This is because youngsters have new ambitions, big dreams and high goals and they have the motivation and drive to make them all come true. Their lives are fast paced and because of this fact there is an absolute need for health care so that they are able to overcome all the obstacles that might come their way. For this reason, Indians have realized the importance of health insurance India. Owing to this realization, the medical insurance sector is one of the fastest growing segments in India today.

#### Key words: Insurance, health, medical, family, employee

#### Introduction

Medical expenses have increased. Common man has to stretch to uncomfortable financial limits to get proper treatment for himself and his family. Hospitalization charges are skyrocketing these days and to admit in the best hospital in your city for best of medical facilities you have to give all your savings. To save your money and provide good medical facilities in best of hospitals everyone needs health insurance. Tax benefits can also be availed with health insurance under section 80(D). Health insurance comes with dual benefits where we can save on tax as well as protection for health. Health Insurance is the best solution to make sure that we and our family members are never underprivileged of the best Medicare.

**How much cover do we need?** If we earn more than 5 lakhs per year, get a cover of at least 5 lakhs. Anything below that, take a cover equal to our annual income.

**Documents requirement** Documents usually asked are age proof and identity proof. Check on the quotes page if you need to undergo medical tests

#### Health Insurance in India and Its Importance

Indians have realized the importance of health insurance India. Owing to this realization, the medical insurance sector is one of the fastest growing segments in India today. A lot of factors have contributed to this change with the most important being the change in people's mindset about mediclaim insurance.

Here are a few reasons why companies providing insurance for medical care have been so successful:

- 1. Security for you and your family: Health insurance policies are plans that are designed to be used when you have any health related problem. A health care insurance policy can be thought of as a contingency plan made to make things easier for you when the going gets tough. A policy not only protects you, but your whole family. The best health insurance companies offer "family floater" plans. A "family floater" plan can cover two adults and two children and comes out to be more efficient than four individual policies for each family member.
- 2. **Monetary support:** Along with the support of medical care that a policy provides, it is also important to note financial benefits that it gives. The monetary advantage of having a mediclaim policy is so great that it can make a huge difference in the financial status of a family. You save in two different ways with a medical insurance policy. Firstly, you save on the cost of treatment, which can include the cost of hospitalisation, pre and post hospitalisation care, cost of expensive diagnostics etc. Secondly, the Indian government gives heavy tax benefits in the form of deductions and exemptions from the total taxable income to anyone paying premium towards a mediclaim insurance policy.
- 3. **Best care:** Medical insurance companies providing the best health insurance policies have widespread and strong networks of hospitals on their panels where you can receive specialised and timely medical care with a smile.
- 4. **Support for emergencies:** The mediclaim insurance companies have come up with plans on how to tackle emergencies and make it easier for you, and have also come up with the clause of "cashless hospitalisation". This feature allows you to get hospitalised without

the hassle of cash. This is a especially designed feature for emergencies where it is quite impractical to expect a patient to withdraw cash from a bank before heading to the hospital to get admitted.

5. **Peace of mind:** Stress is the number one enemy of health. Stress makes your immune system weak and makes you vulnerable to all kinds of health trouble. With all these benefits of a health insurance policy in your pocket, you can be sure that you can handle anything that life has to offer. You can relax and breathe easy. No more will you have to fret about medical bills or worry about your and your family's future health.

#### **Type of Health Insurance**

#### INDIVIDUALHEALTH INSURANCE

The simplest form of health insurance is the Individual health insurance policy. This cover is a hospitalization cover and reimburses the medical expenses incurred in respect of covered disease / surgery while the insured was admitted in the hospital as an inpatient. The cover also extends to pre- hospitalization and post- hospitalization for periods of 30 days and 60 days respectively.

#### SENIOR CITIZEN HEALTH INSURANCE

These senior citizen health insurance policies have been designed for senior citizens and insurers cover people aged between 65 years and 80 years and are customized to cater to this group of people. The points of senior citizen health insurance comparison can be the max age at renewability, coverage of specific diseases and waiting periods.

#### FAMILY FLOATER

Family Floater Policy is an enhanced version of the mediclaim policy. The policy covers each family member and the entire family's expenses are covered up to the sum assured limit. The family floater plan's premium is less than the separate insurance cover for each family member.

#### MEDICLAIM

Mediclaim plans are hospitalization benefit plans that are offered by general and health insurance companies. Mediclaim plans ensure that your medical expenses are expensed, or reimbursed by the insurance company, in case you have to incur those during the coverage period. The best mediclaim policy takes care of medical expenses following hospitalization in case of sudden illness or any surgery.

#### **TRAVEL INSURANCE**

Do you have plans on going for an overseas holiday or travelling abroad on business, or perhaps are thinking about pursuing your studies in another country? Whatever your reasons may be, travel insurance is a must for such journeys. In order to receive medical treatment abroad you are required to have a valid medical insurance policy.

#### **CRITICAL ILLNESS**

The number of people suffering from critical illnesses such as cancer, heart attack, and stroke is ever increasing. The cost of treatment for such diseases are growing and has become too much to bear and people go bankrupt trying to fund such costs. It becomes all the more necessary to invest in Critical Illness plans to safeguard yourself from the unexpected financial burden.

#### PERSONAL ACCIDENT INSURANCE

#### **Personal Accident Insurance Coverage**

Below is the personal accident insurance coverage:

• Accidental Death: It indicates death of the policyholder in an accident. The Sum Assured under this plan is payable if death occurs from an accident.

• Accidental Disability: It indicates that the policyholder is disabled from work, either partially or wholly.

• Accidental Dismemberment: It indicates that a part of the policyholder's body has been severed or dismembered. It means, if the policyholder loses his hand or leg or eyes, then he would be eligible to get a claim under Accidental Dismemberment.

#### INDIVIDUAL PERSONAL ACCIDENT INSURANCE POLICY

This policy covers an individual in the event of any accident.

#### **GROUP PERSONAL ACCIDENT INSURANCE POLICY**

This policy covers a group of people in the event of any accident. Group personal insurance accident policy is the policy which covers whole group. A policy can be bought to insure a group of individuals.

#### CASHLESS MEDICLAIM

**Cashless Mediclaim** is the service in which an insured is able to get the hospitalization treatment free of cost. All the medical bills of hospitalization, up to the sum insured, are directly settled by an insurance company. The aim behind it is to reduce the direct financial burden on insured individual at the time of hospitalization. But one thing to be kept in mind is that cashless mediclaim facility can be availed only in network hospitals.

#### Types of Cashless Health Insurance in India

- Cashless Family Health Insurance: This is the cashless family health insurance policy where sponsor owns the policy and the people covered under it are called its members. One can get his whole family covered under one policy or plan.
- Cashless Health Insurance for Senior Citizen: This is the cashless health insurance for senior citizens who cover hospitalization expenses, ambulance charges, and preexisting diseases subject to terms of the policy.
- Cashless Hospitalization: It is an aspect of the medical insurance in which insured does not have to pay anything to the hospitals (subject to plans in network hospitals) during

term of treatment and it is done by third party on the behalf of insurer and insured. Expenses paid in non-network hospitals are reimbursed by the insurer after submission of sufficient documents.

#### Employee Health Insurance

• Group health insurance companies typically covers medical benefits for insured (self), spouse, children and dependent parents.

• Some health insurance providers cover preexisting illness.

- Employee health insurance can cover maternity cover as well.
- Group health insurance can cover ancillary charges such as ambulance costs too.
- Some employee health insurance policies can provide reimbursements of fees of

Specialists and other medical practitioners for follow checkups.

#### The Current Health Insurance Scenario

India spends about 6.5 to 7% of GDP on Health care (official estimates around6%) out of which 1.2% is in the Govt. sector (this accounts for 22% of overall spending) and 4.7% in private sector (78% of overall spending)

- Government or state-based systems
- Market-based systems (private and voluntary)
- Employer provided insurance schemes
- Member organization (NGO or cooperative)-based systems

# The 3 broad institutions under which the above-mentioned 4 health Insurances Schemes are offered, are under-mentioned pictorially:-



#### **Government or State-Based Systems**

Government or state-based systems include Central Government Health Scheme(CGHS) and Employees State Insurance Scheme (ESIS). It is estimated that employer managed systems cover about 20-30 million of population. The schemes run by member-based organizations cover about 5 per cent of population in various ways. But there are some special insurance schemes promoted by the Government, which provide medical benefits to specific sections of our society. The under-mentioned initiatives & schemes are those which have been promoted by the Government or with the help of the Government

#### CENTRAL GOVERNMENT HEALTH SCHEME (CGHS)

- ▶ started in 1954 with 16 allopathic dispensaries covering 2.3 lac beneficiaries
- Provides comprehensive medical care to central govt. employees
- > Mutual advantage to both employee and employer
- Now 320 dispensaries/hospitals in various systems of medicines covering 42.76 lac beneficiaries

#### EMPLOYEE AND STATE INSURANCE SCHEME (ESIS)

The enactment of the Employees State Insurance Act in 1948 led to formulation of the Employees State Insurance Scheme. This scheme provides protection to employees against loss of wages due to inability to work due to sickness, maternity, disability and death due to employment injury. It offers medical and cash benefits, preventive and promotive care and health education. Medical careis also provided to employees and their family members without fee for service. Originally, the ESIS scheme covered all power-using non-seasonal factories employing 10 or more people. Later, it was extended to cover employees working in all non-power using factories with 20 or more persons.

	Mandatory social insurance schemes					
Indicators	ESIS	CGHS				
Types of beneficiaries	Factory sector employees (and dependants) with income less than Rs 7500 per month	Employees (and dependants) of Central Government-current and retired, some autonomous and semi-government organizations, Members of Parliament judges, freedom fighters, journalists				
Coverage	About 353 lakh beneficiaries in 1998	About lakh beneficiaries in 1996				
Types of benefits	Medical and other health-related provided through ESIS facilities and partnerships	Medical care through public facilities and restricted private care				
Premiums (financing of scheme)	4.75% of employees' wages by employers; 1.75% of their wages by employees; 12.5% of the total expenses by the State Governments	Varies from Rs 15 to Rs 150 per month based on salaries of the employeesMainly financed by the Central Government funds				
Provider payments	Mainly salaries for physicians in dispensaries and referral hospitals. Hospitals have global budget financed by ESIC through State Governments.	Salaries for doctors. Treatment in private hospitals is reimbursed on case basis, subject to actual expenditure and prescribed ceilings				
Administrative costs	About 21% of the revenue expenditure. For paying wages for corporation employees, and administering cash benefits, revenue recovery and implementation in new area.	Direct administrative costs including travel expenditure, office expenses, RRT 5% of the total expenditure. Part of salaries can also be charged to administrative costs.				
Status of finances	Contributions: more than 80% of the ESIS income- double the expenditure on benefits.	Contributions about 15% of the CGHS income-half of the salary expenditures.				
Employees' State Insurance Scheme (ESIS)						

Key features of the Employees' State Insurance Scheme (ESIS) and Central Government Health Scheme (CGHS)

#### Market-based systems (private and voluntary)

In the Open Market based category, there are various Health Insurance plans being offered by both Private & Public Insurance companies. A Broad outline of the health plans, available is provided below:-

**Individual health plan**: These are the so-called 'traditional' health insurance covers, commonly known as 'Mediclaim' policies. They mainly cover hospitalization expenses provided it is for at least 24 hours. The expenses for hospital bed, nursing, surgeon's fees, consultant doctor's fees, cost of blood, oxygen and operation theatre charges are the usual inclusions.

Member organization (NGO or cooperative)-based systems - Community Health Insurance



CHI is "any not-for-profit insurance scheme that is aimed primarily at the informal sector and formed on the basis of a collective pooling of health risks, and in which the members participate in its management. Often, the schemes are initiated by a hospital, and targeted at residents of the surrounding area. As opposed to social health insurance, membership is almost always voluntary rather than mandatory. In recent years, community health insurance (CHI) has emerged as a possible means because of:

(1) Improving access to health care among the poor; and

(2) Protecting the poor from indebtedness and Impoverishment resulting from medical expenditures

#### Conclusion

Indian Health insurance or medical insurance sector has been growing, since the country's economic reforms. The reason why mediclaim insurance, or the erstwhile mediclaim, has grown is that it ensures good medical care from reliable health care institutions. However, this competitive market means that you will need to compare policies to find the best health insurance policies or the best medical insurance plans. Health insurance protects we and our dependents against any financial constraints arising on account of a medical emergency. It sometimes includes disability and long term medical needs. In Mediclaim, we pay a premium and in return the insurer commits to pay a predetermined sum of money to meet the claims. Health insurance is new in Indian context and is slowly catching up with the consumers. Consumers understand the objective of health insurance and it's offering to cover the ever rising medical expenses. When we buy the best medical insurance policy, we are secure medically and sound financially. Resultantly, we can face life's challenges with new energy and motivation. The best medical insurance policy will give us confidence to know that when crisis strikes we will not be at the mercy of chance and that we can take care of us and take care of our family.

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## **Economics of Health and Health Care Issues in India**

#### V. Kaleeswari & Dr. T. Sridhar

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#### Abstract

Health economics is devoted to the subject of how health care resources are allocated. These resources are viewed as scarce and health economics is interested in how a health care system can best function to get the most from these resources. Health is very important for human life. Wealth without health is of no use in life, life is miserable and painful for an individual with ill health. A sound mind is housed in a healthy body. Strong body, physiological safety, living without any serious disease, personal hygiene, physical condition of the body to function efficiently, happy and cheerful life are all present in healthy human life. Though modern man could enjoy all sorts of materialistic comforts in life, thanks to the advancement of science and technology yet he falls often sick due to highly polluted environment in which he lives and works. The country still has enough potential to be a super power in the world. However, a major road block in this regard is the health issue in India. The general health standard of India is extremely bad. Health economics is a branch of economics concerned with issues related to efficiency, effectiveness, value and behaviour in the production and consumption of health and health care.

This paper analyses health economics, health issues and health education, human resources made up of youths not only well educated and skilled but also well built and robust in health.

Keywords: Health Economics - Malnutrition - Health Habits - Health Education

#### Introduction

Health economics is a branch of economics concerned with issues related to efficiency, effectiveness, value and behaviour in the production and consumption of health

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and health care. Health economics is devoted to the subject of how health care resources are allocated. These resources are viewed as scarce and health economics is interested in how a health care system can best function to get the most from these resources. Health economics is not only the concern of economists but also those involved in hospital management or any of the health care professionals. In fact the allocation of health care resources affects everyone and so everyone has a motive for wanting to know more about it.

Health economics looks at things from a macro and micro level. This means that not only is it interested in how a whole health care system functions but also in how things work at the treatment level. What goes on in a small community health facility can be just as interesting to the economist as how things function on a global level.

Health economics examines those things that affect our health that are not related to the actual treatments. These other factors can in fact be just as influential in our ability to escape sickness. Such things as the distance people live from a health care facility and how they pay for treatment is just as important as treatment itself. If the nearest hospital is over a hundred miles away or you can't afford to pay for it then it does not really matter how good the medical treatment is going to be. Deciding on how much should people pay and how the health resources are spread within a society is what health economics is all about.

#### **Importance of Health Economics**

The central focus of economics is how society allocates limited resources to meet its needs and wants. Consumers may have unlimited wants, but the resources with which to meet those needs are not limitless. Most economists regard the free market as the best mechanism for allocating resources efficiently to meet people's needs. In the area of health care, people may want all the medical services they require, but means to pay for such services are limited, as are the number of physicians and other medical providers.

Health economics examines issues of scarcity and resource allocation in the areas of health care. This speciality has its roots in a 1963 article by economist Kenneth Arrow. It is sometimes claimed that health is primarily a medical issue, free of economic considerations, and thus beyond the scope of economics. However, such issues as universal health coverage and the rising costs of medical services are ideal for economic analysis. Health economics seeks to identify problem areas in a health care system and propose solutions for pressing issues by evaluating all possible causes and solutions.

#### **Health Care Markets**

The types of health markets that economists analyze include the market for health care coverage and the market for physician and other medical services. Under the basic model of a market system, health insurers compete for business by offering different types of coverage at different prices. Companies and individual consumers can select the level of coverage best suited to their employees or themselves, given their means to buy insurance. The basic model of medical services works the same way, with patients choosing the physician, clinic, or hospital they prefer from a range of options.

Economic models of competition assume that consumers act with full information about the range of alternatives available and that this information helps drive their purchasing decisions. Health care markets differ, however, in that consumers do not always have adequate information about the type of insurance coverage or medical services they need. This gives insurers and medical providers an advantage. In addition, patients with insurance coverage are less concerned about the actual costs of services than they would be if they had to pay for treatment themselves. The cost of health care services may even lead some people-especially those without insurance coverage to forgo routine physicals and other preventive services on the chance that they will not become seriously ill.

#### Health Care Supply

The supply of medical services is depend on appropriate incentives and motivations for physicians and hospitals (and for drug research and production). Manpower planning concerns include attracting enough doctors to rural areas. The National Health Policy was endorsed by the Parliament of India in 1983. The Constitution charges every state with "raising the level of nutrition and the standard of living of its people and the improvement of public health as among its primary duties".

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#### **Health Care Demand**

The demand for health care is a derived demand from the demand for health. Health care is demanded as a means for consumers to achieve a larger stock of "health capital." The demand for health is unlike most other goods because individuals allocate resources in order to both consume and produce health. The description gives three roles of persons in health economics. The World Health Report states that people take four roles in the health care:

- i) Contributors
- ii) Citizens (stewardship)
- iii) Providers and
- iv) Consumers

Michael Grossman's 1972 model of health production has been extremely influential in this field of study and has several unique elements that make it notable. Grossman's model views each individual as both a producer and a consumer of health. Health is treated as a stock which degrades over time in the absence of "investments" in health, so that health is viewed as a sort of capital. The model acknowledges that health is both a consumption good that yields direct satisfaction and utility, and an investment good, which yields satisfaction to consumers indirectly through increased productivity, fewer sick days, and higher wages. Investment in health is costly as consumers must trade off time and resources devoted to health, such as exercising at a local gym, against other goals. These factors are used to determine the optimal level of health that an individual will demand. The model makes predictions over the effects of changes in prices of health care and other goods, labour market outcomes such as employment and wages, and technological changes.

#### Health Issues in India

India still has potential to be a super power in the world. However, a major road block in this regard is the health issue in India. The general health standard of India is extremely poor. It is a shame that, even in this modern world, there are kids who die out of malnutrition. Several surveys have proved that the major section of the new born suffer from malnutrition.

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Major section of the children does not get the required vaccinations done. A very big percentage of the children die before crossing the age of five. This is a very shameful fact. The Government of India has revived the health system in several ways. The Health for All Program saw several free hospitals being setup. The international organizations like the WHO and UNICEF have extended their hands to help India in this context. These movements have helped the cause in some way. However there is still a lot of work to do in this regard. The first thing that needs to be done is to make the common mass aware of certain things. The country still witnesses shameful acts of killing the girl child. We Indians should come forward to save the girl child.

The exact picture of the health condition of India is not a pretty one by any means. The government would need to take the issue very seriously and must come with proper plans to solve this problem. The health problems of India have affected India in other sectors as well. Thus, it is extremely important for us to get rid of this problem. The government had been trying, but it is tough to solve a problem of this magnitude in a country like India, which has such a huge population pressure. India is the emerging leader in medical advancements with many skilled health professionals. However the quality of health care still remains a back. There are many issues in the health sector of India that need a firm uplift and thorough review. With the increasing population and following western culture, India is raising concerns over these issues.

#### **Health Habits**

Parents and teachers must emphasize personal hygiene and healthy habits among the students. Of these, three are the most important ones – Cleanliness, Diet habits and Physical exercises.

#### i) Cleanliness

Students should be urged to keep their body, hair, eyes, ears, teeth, mouth, limbs and nails clean and trim.

#### ii) Diet Habits

Students should be advised to follow proper food habits and hygienic conditions like eating three times in a day at scheduled in a times, eat only, when one feels hungry, avoiding the habit of eating at odd hours, keeping all the eatables and foodstuffs well covered, drinking always protected water (preferably well boiled water), washing hands every time before eating.

#### iii) Physical Exercises

Students should be encouraged to do some simple exercises daily for half an hour in the morning and evening, they should also be advised to develop the habit of availing proper rest and sleep.

#### **Nutrition and Health**

Food substances which offer us high calories of energy and stimulate the body growth are called 'nutrition'. It is categorized into five essential types,

- i) Carbohydrates
- ii) Protein
- iii) Fat
- iv) Minerals and
- v) Vitamins

The deficiency of any one causes malnutrition which ultimately affects our health. Nutrition is a vital aspect of health that regulates the well-being of the individual. It is important for the maintenance of health and efficiency of the individual. Nutrition and balanced diet form the basis of health. Nutritious food supports good health and high spirits and provides the requisite energy to carry out the activities of daily life as well as constructive developmental work. Healthy people can work for longer duration and contribute to the generation of increased output which in turn results in the prosperity of the nation.

#### **Health Education**

World Health Organization (W.H.O 1974) had pointed out three important objectives for providing health education. They are

- i) To make an individual learn the habits and practices which promote health and follow them throughout his life faithfully.
- ii) To enable everyone to make use of all available community facilities and resources to preserve and improve health.
- iii) An individual /community refrain from doing anything that may be injurious to the health of any other individual or community.

The ultimate goal of health education is the 'adoption of healthy life – style' by every individual. Education is needed to replace ignorance by knowledge, remove prejudices and bring about changes in beliefs and attitudes. Immunization protects children from infection. It is the responsibility of parents and teachers to protect the child from infection and communicable disease.

#### Conclusion

#### "When wealth is lost, nothing is lost

#### When health is lost, something is lost"

What we need today for the progress of our country is enriched human resources made up of youths not only well educated and skilled but also well built and robust in health. The health of a family, community or a nation is ultimately determined by the health of individual members. That is why, health and hygiene of every individual citizen is emphasized and is given due consideration. A prosperous country can arrange for better medical facilities for its citizens which enhance the health of people. Therefore providing health education in schools and colleges could be considered in a way as an investment for the economic development and progress of the country.

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# **Poverty and Malnutrition**

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#### Abstract

The problem of poverty is considered as the biggest challenge to development planning in India. High poverty is synonymous with poor quality of life, malnutrition, under-nutrition, nutrition insecurity, food insecurity and low human resource development. Due to chronic poverty even after 65 years of independence, India is still a country in developmental transition and continues to battle with conditions related to malnutrition and under nutrition.

Approximately 50% of pre-school children and 30% of adults are under-nourished and over 70% of women and children suffer from anemia as judged by anthropometric indices. Every third child is born with low birth weight and may have impaired mental and physical development and immunity. Apart from human suffering caused due to morbidity and mortality, malnutrition is severely denting India's productivity and development and adding to health expenditure.

The economic cost of hunger and malnutrition as reflected in lost productivity, illness and death, is extremely high. Undernourishment significantly lowers physical ability, cognitive development and learning achievement, resulting in lower productivity.

Malnutrition is often considered as both an outcome and manifestation of chronic poverty. "Being poor almost always means being deprived of full nutritional capabilities" (Osmani 1992).

The term *malnutrition* includes both under-nutrition in terms of proteins, calories, fats, vitamins and minerals and over-nutrition leading to obesity. If we apply the concept of Cause and Effect

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analysis to the problem under study, chronic poverty and income inequality form the basis for malnutrition-under-nutrition and over- nutrition.

#### **Objectives of the Study**

1. To ascertain the causes and consequences of malnutrition in India.

2. To appraise the efficacy of various schemes and programmes of direct nutrition interventions aimed at ensuring nutrition security.

3. To analyze the performance of Government of Tamilnadu in ensuring nutrition security among children

4. To suggest meaningful measures to further improve the Mid-Day Meals scheme of Government of Tamil Nadu and make it as a trend setter in the international arena.

#### Methodology

The study was based on a review of already existing material on poverty and malnutrition. In order to make a fair assessment of the policies and programmes aimed at ensuring nutrition security, a desk review of the relative policy documents reflecting National policies on nutrition and various progressive policies and programmes of Government of Tamilnadu was carried out. Research methods required at this stage included review of relevant literature on nutrition and reliable primary as well as secondary data analysis published by authentic sources. The present study is based on descriptive method of research, by way of investigating all the proven facts with meaningful interpretation to arrive acceptable solutions.

#### Malnutrition Due to Low Intake of Income-Elastic Foods

Malnutrition has a complex etiology and its prevention requires Awareness, and Access to nutritious balanced diet at Affordable cost.

Nationwide diet surveys show that Indian diets are qualitatively more deficient in vitamins and minerals(hidden hunger)than proteins due to low intake of income-elastic foods like vegetables, fruits, pulses and foods of animal origin.

#### **Under-nutrition**

Over the past decade, there has been a decrease in stunting among children in rural India, but inadequate calorie intake and chronic energy deficiency levels remain steady. Today, child malnutrition is prevalent in 7 percent of children under the age of 5 in China and 28 percent in sub-Saharan African countries compared to a prevalence of 43 percent in India. Under-nutrition includes both protein-energy malnutrition and micronutrient deficiencies. Undernourishment not only affects physical appearance and energy levels, but also directly affects many aspects of the children's mental functions, growth and development which have adverse effects on children's ability to learn and process information and grow into adults that are able to be productive and contributing members of society. Undernourishment also impairs immune function leaving them more susceptible to infection. Child malnutrition is responsible for 22 percent of India's burden of disease.



#### **Over-nutrition**

A large number of population suffers from malnutrition, while more than 100 million people (11% of India population) in India are over – nourished. Over nutrition can be defined as consuming either too much calories or the wrong types of calories such as saturated fat, transfat or highly refined sugar which leads to obesity and many other chronic diseases. For example, there were over 30 million people with diabetic in 1985 and by the end of the year 2012., India is projected to have 50.8 million diabetics. India is hence considered as the country with the largest population of diabetics. This diabetes (diabetes mellitus) is one of the diseases closely associated with overweight. The direct cause of overweight in India includes lack of physical activity due to sedentary life-style, loss of traditional diet, faulty diet, high stress etc., Over-nutrition is most prevalent in the cities among affluences.

Т	Table: computed energy requirements for actual						
	current weight in different groups						
Group	Mean wt.	Req. for	Actual	Gap			
	NNMB	mean Wt.	intake				
Adult man	51	2346	2000	-346			
Adult woman	46	1886	1738	-148			
Pregnant		2236	1726	-510			
Lactating		2386	1878	-518			
Children							
1-3 years	10.5	840	714	-126			
4-6 years	14.6	1095	978	-117			
7-9 years	19.7	1379	1230	-149			
Boys							
10-12 years	26.6	1729	1473	-256			
13-15 years	36.8	2208	1645	-563			
16-17 years	45.7	2514	1913	-601			
Girls							
10-12 years	26.7	1469	1384	-85			

Computed energy requirements for current average weight in moderately active individuals

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13-15 years	36.9	2030	1566	-464
16-17 years	42.6	2130	1630	-500

of varying age, their actual food intake as reported by National Nutrition Monitoring Bureau and the average gap between intake and expenditure is given in Table 1. The gap between the requirements and the intake is highest in the adolescent girls and boys. Viewed in this context the initiation of the MDM for the upper primary school children is an appropriate step to bridge the gap in adolescent girls.

#### Adult Malnutrition

Adult malnutrition can be measured by Body Mass Index(BMI) and a BMI below 18.5 indicates chronic malnutrition. Approximately 37% of adult Indians,50% of adults belonging to scheduled tribes and 60% of adult Indians belonging to scheduled castes have a BMI below 18.5, which makes them chronically undernourished.

#### Malnutrition among Elderly

Protein energy malnutrition (PEM) is a common, potentially serious, and often under-diagnosed condition among elderly individuals. Poverty is the predominant social cause for protein energy malnutrition and weight loss among elderly individuals. When physicians prescribe expensive medications, elderly individuals with limited income and resources often reduce food budget to afford their medications.

#### Steps Taken in India to Address Child Malnutrition

The Government of India has launched several programs to converge the growing rate of undernourished children. They include ICDS, NCF and National Rural Health Mission.

Existing Government	Interventions (	(Listed By Li	<u>ife Cycle Focus A</u>	<u>Area)</u>

BENEFICIARIES	SCHEMES
Pregnant and Lactating	ICDs, RCH-II, NRHM, JSY, Indira Gandhi Matriva Sahyog Yojamana (IGMSY) -
mothers	The CMB Scheme
Children 0-3 years	ICDS, RCH-II, NRHM, Rajiv Gandhi National crèche scheme

Children 3-6 years	ICDs, RCH-II, NRHM, Rajiv Gandhi Nationalk Creche Scheme, Total Sanitation				
	Campaign (TCSC) National Rural Drinking Water Programme (NRDWP)				
School going children 6-14	Mid Day Meals, Sarva Shiksha Abhiyan				
years					
Adolescent Girls 11-18	Rajiv Gandhi Scheme for the Empowerment of Adolescent Girls (RGSEAG),				
years	Kiswhori Shakti Yojana, Total Sanitation Campaign (TSC), National Rural Drinking				
	Water Programme (NRDWP)				
Adults	MGNREGS, Skill Development Mission, Women Welfare and Support, programme,				
	Adult Literacy Programme, TPDS, AAY, Old and Infirm persons Annapurna,				
	Rashtriya Krishi Vikas Yojana, Food Security Mission, Safe Drinking Water and				
	Sanitation Programmes, National Horticulture Mission, National Iodine Deficiency				
	Disorders Control Programme (NIDDCP), Nutrition Education and Extension, Bharat				
	Nirman, Rashtriya Swasthya Bima Yojana				
Adapted from overcoming	Adapted from overcoming the Curse of Malnutrition in India: A Leadership Agenda for Action, First				
Edition: First Edition: Sep	tember 2008, The Coalition for Sustainable Nutrition Security in India				

#### Nutrition Security in Tamilnadu – Model of Excellence

Tamil Nadu is the pioneer state in implementing the massive programme of providing Nutritious Mid-Day Meal to several lakhs of school children. The Mid Day Meal Programme was introduced in 1925 for the disadvantaged children in Madras Municipal Corporation and in the year 1956, the programme was introduced in schools. On 1<sup>st</sup> July 1982, the 'Puratchi Thalaivar MGR Nutritious Meal Programme' was introduced and initially implemented in Child Welfare Centres for pre-school children in the age group of 2 to 5 years and to the primary school children in the age group of 5 to 9 years in rural areas. The programme was subsequently extended to Nutritious Meal Centres in urban areas from 15<sup>th</sup> September 1982 and later extended to school students of age group of 10 to 15 years from September 1984. The children in the age group of 2 to 5 years and the students in 1<sup>st</sup> to 5<sup>th</sup> standard receive nutritious meal throughout the year (365 days) and those in standard 6<sup>th</sup> to 10<sup>th</sup> receive the meal on all school working days (220 days approximately). The Nutritious Mid Day Meal is freshly cooked and served hot to all 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 M. Kaliamoorthi Poverty and Malnutrition

willing children in the school premises itself, where they are studying. The scheme is successfully implemented throughout Tamil Nadu, to improve the nutrition status among school children.

The foremost objectives of the scheme are:

- Eradicating extensive poverty and hunger among children particularly economically disadvantaged so as to improve their nutritional and health status.
- Reducing the child mortality, morbidity and mal-nutrition.
- Combating all diseases including those resulting due to deficiencies.
- By providing Mid Day Meals to the children especially in rural areas, in order to motivate them to attend the School regularly, and it will also reduced the "Child Labour" in Tamil Nadu.

Day	Menu
Monday	White Rice, Vegetable Sambar with one boiled egg (one banana
	for those who do not eat egg)
Tuesday	White Rice, Vegetable Sambar with one boiled egg (one banana
	for those who do not eat egg) and 20 gms of boiled green gram or
	Bengal gram alternatively
Wednesday	White Rice, Vegetable Sambar with one boiled egg (one banana
	for those who do not eat egg)
Thursday	White Rice, Vegetable Sambar with one boiled egg (one banana
	for those who do not eat egg)
Friday	White Rice, Vegetable Sambar with one boiled egg (one banana
	for those who do not eat egg) and 20 gms of boiled potato.

Hot cooked, wholesome food is being served weekdays as per details given below:

#### **Amma Recipe to Ensure Nutrition**

According to the details of mid-day meals to be served in State run schools announced by Chief Minister of Tamil Nadu, students would get 13 varieties of rice and four different types of egg masalas. The menu was decided by the Chief Minister herself based on recommendations and suggestions made by a team of nutrition experts and eminent chefs. Vegetable biryani, channa pulav, tomato rice, curry leaf rice, sambar rice, mixed vegetable rice, tamarind rice and lemon rice are some the items to be served on alternate days. The Chief Minister has directed to serve four types of exotic egg masalas with rice varieties in the nutrition's meal programme. In order to increase enrolments in schools, whittle down the drop-out rate and improve nutrition status physical and mental health of student's delicious menu was included in the NMP.

#### Strategic Choices and Suggestions to Uphold Nutrition Security

In order to uphold nutrition security at National level and further improve the commendable performance of Government of Tamil Nadu in the area of Nutrition security, the under noted strategies and suggestions may be considered by the policy makers and planners for meaningful analysis and meticulous compliance.

- 1. Distribution of salt fortified with adequate iron and iodine through Anganwadi centres and Nutrtious Meal Centres.
- 2. Effective distribution of iron folic acid tablets and de-worming medicines to all children, adolescent girls and lactating mothers.
- 3. Half yearly distribution of massive dose of vitamin a in areas, where vitamin A deficiency is a public health problem.
- 4. Increasing food production/nutrition oriented crops using proven new technologies.
- 5. Creating Nutrition awareness by way of popularising the dietary guidelines through electronic media and educational channels.
- 6. Strengthening the Public Distribution System and broadening the basket with nutritious millets, pulses and oils.

- Establishing kitchen gardens at all Anganwadi centres and Nutritious Meal Centres to get fresh vegetables and green leafy vegetables for Mid Day Meals scheme and reduce the cost to exchequer.
- Already banana is being offered to children who do not eat eggs by Government of Tamil Nadu. In addition to bananas, cost conscious seasonal fruits may be added to further improve the nutrition and micronutrients.
- 9. Nutrtion education should form a vital component in the school syllabus to create awareness among children.
- 10. Export of soya bean products should be stopped till our country achieve a considerable increase in the production of nutritious pulses.
- 11. Soya bean can be used to fortify wheat flour to improve the nutrition content.
- 12. Government of India should adopt a fair and transparent policy to allot foodgrains to all the States purely based on need and the number of BPL families to ensure fair play.
- 13. Government of India should extend need based financial assistance to all the State governments to modernise the kitchens with gas connections at all Anganwadi centres and Nutritious Meal Centres.
- 14. Introducing innovative Nutrition Supplementation schemes to schools and Nutritious meal centres located at Primitive Tribal Group(PTG) Settlements.
- 15. Establishing ICDS centres as a priority in all Primitive Tribal Group (PTG) settlements and the most marginalised Scheduled Castes (SC) settlements without any ceiling on number of minimum children.
- 16. Improving people's purchasing power through appropriate programmes including 'Food for Work' programme.
- 17. Increasing production of coarse grains to meet the energy requirements of the BPL families at a lower cost.
- 18. Ensuring paradigm shift from food security to nutrition security.
- 19. Improving the availability of vegetables and fruits at an affordable cost throughout the year in urban and rural areas.

- 20. Increasing the per capita availability of food grains to eradicate hunger and reduce the level of malnutrition and under-nutrition among vulnerable groups
- 21. Introducing green leafy vegetables to all the children under Nutritious Meals Scheme thrice a week.
- 22. Providing Take- Home nutritious food supplements to children belonging to BPL families in the age group of 6 to 36 months.
- 23. As a natural product, *spirulina*, provides a comprehensive solution to malnutrition and under-nutrtion. Providing one gram of spirulina per day to a child for a few weeks is a sustainable solution to combat the problem of malnutrition.
- 24. In order to eradicate twin problems of malnutrition and hunger, Government of India should devise plans to expand cultivation of maize throughout the country.
- 25. Government of India should devise a scheme to plant fruit trees on degraded forests and homestead lands that belong to or have been allotted to the poor. By way of implementing this meaningful scheme, Government can enrich poor people diet with adequate nutrition.
- 26. Restructuring I C D S is the need of the hour. The focus of I C D S should be health and nutrition education, encouraging women to breastfeed exclusively for first six months and after that to add semi-solid food, four to six times a day in appropriate quantities.
- 27. In the state of Jharkhand, for a paltry sum of Rs 5, nutritious hot cooked full mid-day meals is being served to destitute individuals, deserving elderly and urban homeless poor under, "Mukhyamantri Dal-Bhatt Yojana" scheme. Government of Tamil Nadu should examine the feasibility of extending a similar improved scheme for the benefit of deserving poor.
- 28. Malnutrition Treatment Centres (MTC) have been established in the state of Jharkhand to ensure nutrition security. Government of Tamil Nadu should formulate a better scheme in this regard to make the position of the state ever high as never before in terms of nutrition security.
- 29. Ensuring that economic growth and poverty reduction policies reach the poor

30. An evidence-based, research-intensive approach which has shown Proven success in developed countries should be actively considered for meticulous compliance to uphold nutrition security.

#### **Concluding Comments**

India will have to define the "Indian way" to nutrition improvement, which may involve different approaches in different regions and states. It is a great challenge to properly target poor and vulnerable groups in order to improve their nutrition status. Solutions can only become effective if the underlying causes of malnutrition – such as poverty, lack of income, economic and social vulnerability, marginalization – can be tackled as well. In the Indian context the problem of malnutrition and under-nutrition can be viewed as an opportunity to demonstrate how the country can cope with major challenges in nutrition and health sectors effectively.

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#### Awareness Level of Health Habits among Working Women in Thanjavur District, Tamilnadu

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#### Abstract

An apple a day keeps the doctor away. Prevention is better than cure. These quotes suggest that, a healthy diet and good habits keeps many diseases away from our day to day life. If a male is unhealthy, his family may be affected financially slightly. But, if a woman in a family gets ill, her whole family routine work as well as happiness of the family would be collapsed. In this era, woman is expected to play several roles in her home as well as in the organisation. So she should be hale and healthy. Her mind and body well being is important for both the home as well as nation. But, many of our women do not pay much attention to their health due to several factors. They prefer to sacrifice many good things for their family. They do not find and allot time for themselves which ultimately affects the health and wealth of their family. This paper tries to understand the present day working women changing attitudes towards the awareness level of their health and their habits to maintain health in Thanjavur district, Tamilnadu. It covers the habits of the women who occupy various positions in different fields.

Key Words: Women Attitudes, Food, Exercise, Life Style

#### Introduction

In this modern era, life is busy and complicated. In olden days people led a simple life. Due to technological and civilization development, people's responsibilities and their needs are multiplied. They go after money, name, fame, etc., in a family. Women are also expected to shoulder the responsibilities of their spouses. They are educated, and they work and earn money for the sake of their family. They are very busy and tense. They may not find time to

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take care of their health which is very precious both for the women as well as for their family. They have a lot of stress, both physical and mental in work place, which may affect the soundness of their health. If a woman is ill, it will affect her family, in many ways. So it is a must for the women to maintain their health.

Generally speaking, there is a wrong concept prevailing among women. That is, after marriage they should never care about themselves and their health. They should sacrifice many things for the sake of their family. They are taught like that and they are expected in that way only. But that is meaningless. In cities like Chennai that trend is changing. Women are now regular visitors of gym and they care about their health. But, in Thanjavur, situation seems to be different. This paper tries to find out what is the position and perception of women and how do they maintain health and how many of them exercise and how many of them practice yoga. This paper reveals answers for the above questions.

The objectives of this paper is to

- 1. To find out the regular and occasional exercise doers and how many working women do not exercise on the basis of marital status, income, educational qualification.
- 2. To understand the types of exercises and the reasons behind the habit of exercise.
- 3. To list out the factors that prevent working women to do exercise.
- 4. To understand the awareness level of working women towards oily and junk food.
- 5. To know the habit of taking old food is still prevailing among working women.
- 6. To find out how many practices yoga.
- 7. To understand their consumption style of sugar and salt.
- 8. To know the awareness level towards medical insurance.
- 9. To measure the personal medical expenditure per month for working women.

#### Methodology

Both primary and secondary data are used. Primary data is collected with the help of well designed questionnaire and secondary data collected from the Internet, books, etc.

#### Sampling

Convenience sampling is used.

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#### Area of the Study

Orathnadu, Thiruvaiyaru, Thanjavur, Kumbakonam, Poothalur were selected for the purpose of this study.

#### Tables

Marital	Exercise doers		Total	%	Non-	%	Total
status	Regular	Occasional			doers		
Married	6	10	16	47.05	18	52.94	34
Unmarried	3	6	9	56.25	7	43.75	16
Total	9	16	25	50	25	50	50

#### MARITAL STATUS VS EXERCISE HABITS

Source: Primary data

#### **TYPES OF EXERCISE**

Types of exercise	No. of respondents	%
Walking	16	64
Jagging	1	4
Cycle	3	12
Simple floor exercise	3	12
Jim	2	8
Others	-	-

Source: primary data

#### **REASONS FOR EXERCISE**

Reasons for exercise	No. of respondents	%
To reduce obesity	9	36
Diabetics	2	8
Habitual	-	-
Doctor's Advice	1	4
My passion	4	16

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To maintain health	9	36
Others		-
Total	25	100

#### **REASONS FOR NOT TO EXERCISE**

Reasons for not to exercise	No. of respondents	%
Lack of time	9	36
Not interested	9	36
No need	1	4
Fear (chain snatching)	2	8
Not used to it	4	16
Others		-
Total	25	100

Source: primary data

#### AWARENESS LEVEL ABOUT THE BENEFITS OF EXERCISE

Educational	Fully	%	Partly aware	%	Fully	%	Total
status	aware				unaware		
Illiterate	1	7.14	6	42.86	7	50	14
School	3	33.33	6	66.67	-	-	09
College	9	75	3	25	-	-	12
Professional	9	75	2	16.67	1	8.33	12
course							
Diploma	3	100	-	-	-	-	3
Others							
Total	25	50	17	34	08	16	50

Source: primary data

#### YOGA PRACTICE

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Mode of yoga practice	No. of respondents	%
Regular	06	12
Occasional	10	20
Never	34	68
Total	50	100

#### STYLE OF CONSUMPTION OF BREAKFAST

Consumption style	No. of respondents	%
Regular	32	64
Sometimes	15	30
Never	03	06
Total	50	100

Source: primary data

#### HOTEL FOOD CONSUMPTION

Particulars	No. of respondents	%
Never	16	32
Some times	30	60
Always	04	08
Total	50	100

Source: primary data

#### ACTION OF THE RESPONDENTS WHEN THEY ARE ILL

Action of the respondents	No. of respondents	%
Consult a doctor	28	56
Using old prescription		
Self medication	17	34
Local medicine	04	08

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Others	01	02
Total	50	100

#### **REASONS FOR THE PREFERENCE OF SELF-MEDICATION**

Reasons for self-medication	No. Of respondents	%
Lack of time	04	18.18
Save money	10	45.45
Doctors heavy medicine and bill	06	27.27
Others	02	9.10
Total	22	100

Source: primary data

#### HABIT OF CONSUMING EXCESS OLD FOOD

Particulars	No. of respondents	%
Consumption	20	40
No consumption	30	60
Total	50	100

Source: Primary data

#### CONSUMPTION OF OILY AND CHANK FOOD

Particulars	No. of respondents	%
Never	10	20
Some times	35	70
Always	05	10
Total	50	100

Source: primary data

#### FOLLOWERS OF DIET CHART

Particulars	No. of respondents	%
Followers	20	40

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Not-followers	30	60
Total	50	100

#### CONSUMPTION OF SUGAR AND SALT

Particulars	No. Of respondents	%
Consume in a low level	25	50
Consume without any restriction	25	50
Total	50	100

Source: primary data

#### TIME ALLOCATION EXCLUSIVELY FOR HEALTH

Particulars	No. of respondents	%
Time allotted	15	30
Time not allotted	35	70
Total	50	100

Source: Primary data

#### **REASONS FOR NOT ALLOCATED TIME FOR HEALTH**

Reasons	No. of respondents	%
Lack of time	21	60
Not necessary	14	40
Others		
Total	35	100

#### FINDINGS

- 1. In Thanjavur, 50% of the working ladies are doing exercise and another 50% are not doing exercise.
- 2. Almost in all the age group, non doers of exercise is more in numbers.

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- 3. 56.25% of unmarried working ladies do exercise and majority of the Married women do not prefer exercise.
- 4. Majority of Both the illiterates and the professional people do not exercise. School and college educated women do exercise.
- 5. Teachers, Lecturers, Clerk, Manager category working ladies do exercise. But ladies belong to Agriculture, Construction and Servant Maid category do not exercise.
- 6. Exercise doers are more in number in the income level of 10000-200000. It is less in the income group of 1000-5000 groups.
- out of 25, 16 (i.e.) 64% prefer walking, and 12% prefer cycle and simple floor exercise each and 8% prefer gym and only 4% prefer jagging. In Thanjavur, among the working women, jagging is not popular.
- 36% of working women do exercise in order to reduce obesity and to maintain health and 16% prefer it due to their passion towards exercise and 8% do exercise due to diabetics.
- 9. Majority of the working women in Thanjavur, (i.e.) 36% do not prefer exercise since they do not find time and another 36% are not interest to do exercise. Only 1 respondent out of 25 fell that it is not necessary for her.
- 10. House hold work burden is the main reason for the working women to not to do exercise. Nearly 78% do not exercise due to this reason.
- 11. In Thanjavur, among the working women illiterates lack of awareness about the benefit of exercise is found. Majority of the illiterates (i.e.) 50% do not aware of it.
- 12. Yoga practice is not popular among working women .Only 12% practice Yoga and 68% never practice yoga.
- 13. Majority of the working ladies (i.e.) 64% do not skip breakfast. And only 6% skip breakfast.
- 14. In Thanjavur, among working women, hotel food is not very popular. Only 4 out of 50 prefer hotel regularly and 30 out of 50 prefer it occasionally and 16 never prefer hotel.
- 15. Nearly 67% of working women in Thanjavur, aware of the quality of hotel food and they feel that it is harmful to their health in the long run and no one in Thanjavur are unaware of the quality of hotel food.

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- 16. Majority of the working women in Thanjavur consult a doctor when they are ill, and34% prefer self medication and 8% prefer local medicine
- 17. Majority of the respondents in Thanjavur prefer self-medication in order to save money and the second reason is they feel doctors charge heavy fees and dosages also are heavy and 19% do not find time to consult a doctor.
- In Thanjavur, majority working women (i.e.) 60% of their personal medical expenses falls between 100 and 500 and 26% spent between 500-1000 and only 2% spent above 1500.
- 19. Awareness level about the medical insurance is high in Thanjavur, 56% fully aware and 8% partly aware and 36% unaware of the medical insurance.
- 20. Though 32 respondents out of 50 aware medical insurance, only 22% are the holders of it and 78% do not take any medical insurance policy
- 21. Majority working women in Thanjavur do not take excess old food and only 40% take it.
- 22. The awareness level of the quality of old food is high (i.e) around 62% are fully aware and 24% partly aware and only 14% are unaware of old food features.
- 23. Consumption of oily food is not very popular among working women in Thanjavur. Majority of them take it occasionally and only 10% take it regularly.
- 24. Awareness level about the oily food is high, 50% are fully aware 40% are partly aware and only 10% are unaware of the harmful effect of oily food.
- 25. Majority of the working women in Thanjavur do not follow any diet chart. Only 40% follow diet chart
- 26. 50% of respondents take sugar and salt without any restriction and another 50% consume it in a low quantity.
- 27. Majority of the respondents take low sugar and salt due to their awareness of the illeffects of salt and sugar, and 20% of the respondents take it due to doctor's advice and 16% take low sugar and salt due to elders' and friends' advice.
- 28. : majority of the respondents take low sugar and salt due to their awareness of the illeffects of salt and sugar, and 20% of the respondents take it due to doctor's advice and 16% take low sugar and salt due to elders and friends advice.

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29. More than 50% of the respondents feel that it is not necessary to take salt and sugar in a low quantity and 28% do not have awareness and 12% cannot take food without these two.

30. Exactly 70% of the respondents do not take pills for obesity and only 30% take pills for obesity.

- 31.: Exactly 60% of the respondents do not find time to allocate time exclusively for their health, and 40% feel that it is not necessary.
- 32. Majority of the respondents (i.e.) 60% spend 100 to 500 Rs. per month and 26% spend 500-1000 Rs. and no respondents spend more than 2000 Rs. per month.

#### Suggestions

- Women who have crossed the age of 40 should be very careful about their health. They face many physical problems which lead to psychological problems to them. So the family members (husband, son and daughter may educate them to do exercise.
- 2. Married women do not exercise properly may be due to their attitude or their household work burden. The burden of household work should be shouldered by their family members. Women organisation may take steps to educate them about the benefit of exercise and they try to change the well frog attitude of the women. Though they are educated and employed their attitude is not changed. That is the position which is prevailing in Thanjavur. After marriage they do not care about their health and individuality. It has to be changed.
- 3. Women who have crossed the age of 40 should be very careful about their health. They face many physical problems which lead to psychological problems to them. So the family members (husband, son and daughter may educate them to do exercise.
- 4. Married women do not exercise properly may be due to their attitude or their household work burden. The burden of household work should be shouldered by their family members. Women organisation may take steps to educate them about the benefit of exercise and they try to change the well frog attitude of the women. Though they are educated and employed their attitude is not changed. That is the position

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which is prevailing in Thanjavur. After marriage they do not care about their health and individuality. It has to be changed.

- 5. Lack of time is the major reason for the working women to not to exercise. Family members only should solve this problem by way of sharing the household work. In Sundays also she is very busy with special meal preparation for her family. So, the major reason which prevents them to do exercise is insufficient time and the second reason is lack of interest. This can be changed only if their attitude is changed.
- Government and NGO and women liberalisation movement may take steps by way of organising camp to create awareness about the benefit of yoga in Sundays. Since, 50% of population is women and if their health is a serious problem.
- 7. Self-medication is a dangerous one. But, in Thanjavur among the working women, in order to save money they are doing this wrong practice. Doctors may consider this point and they may charge reasonable fees and try to avoid unnecessary test and heavy dosages of medicine, or they try to convince them the dosages and tests are necessary and must.
- 8. Medical insurance awareness programmes should be taken by the respective company for the benefit of both.
- 9. Consumption of old and excess food invites many health problems. Due to practice and economy women may do this. During popular serials intervals ill effects of old food may be educated in local channel.
- 10. Only 40% of the working women follow diet chart. Like beauty tips programme Health programme also telecasted to create awareness among the working women.
- 11. The significance of Sugar and salt minimum consumption to be imparted among working women.
- 12. Time management should be taught to the working women. Then only they may find time to take care about their health.

#### Conclusion

"A woman is the full circle. Within her is the power to create, nurture and transform." ~Diane Mariechild. "Prevention is better than cure" a popular saying. Diseases kill not only the health but also the happiness of that particular person as well as family. So, health should be

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considered precious. Particularly woman should take care about herself in order to run the family in an efficient way. The whole family depends on her. Though she is working, she cannot forgo the family responsibilities. If her physical health is affected her mental health will also be affected.

Like ancient days she is not leading a simple life. She has to support financially her family just as her husband does due to heavy and rising cost of living. So, practising yoga, exercise, low sugar and salt consumption, following diet chart, avoidance of oily food and old food, self-medication, frequent consumption of hotel food, awareness of medical insurance, allotting time exclusively for her health are very very important. But, in Thanjavur, working women do not take care much care about their health it seems. Many of them feel that the above practices are not necessary and it has to be followed only when they are ill. Their perception is wrong. They have to be educated a lot. They are ignorant about the area of exercise and yoga. But, they do not consume much oily food, old food, hotel food etc. This shows that they are slowly coming out of their well. If they are given motivation and friendly suggestions they would improve themselves and they will be very healthy in future.

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#### Health Insurance... Do You have a Choice?

#### Dr. K. B. Laliytha, B.D.S.

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#### Abstract

Health insurance is a contract between the Insurer and the Insured wherein the former agrees to pay to the latter hospitalization expenses to the extent of an agreed sum assured in the event of any medical treatment out of an illness or an injury. With increasing medical problems and the treatment cost being even more, it has become essential for each and every one of us to possess a health insurance. This paper deals with the various types of health insurance and also the method of selecting a scheme which will be appropriate for every individual.

Keywords: Health insurance, Insured, Insurer, Premium

#### Introduction

Health Insurance is a contract between the Insurer & the Insured wherein the former agrees to pay to the latter hospitalization expenses to the extent of an agreed sum assured in the event of any medical treatment out of an illness or an injury.

#### What is Health Insurance?

Health Insurance is a policy which covers you & your family against medical expenses due to sickness, accident, etc.

The Insured in return has to pay a regular premium to the insurer.

#### Why You Need Health Insurance?

It is indisputable that Health Insurance has become an important element in one's life owing to increasing medical costs these days & uncertain environment; it comes to your rescue

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* Dr. K. B. Laliytha, B.D.S. Health Insurance... Do You have a Choice? acting as precautionary measure in today's tough time while acting as a life saver boat in case of any medical contingency. If you don't have Health Insurance, you end up paying hefty medical bills in the event of hospitalization out of illness or injury, therefore insuring your family against Health Insurance is a must thing & should surely be a part of your regular financial planning. All we have is our health which needs to be protected & taken care of by acquiring the best health insurance policy suited for us.

#### **Types of Health Insurance Plans**

Health Insurance Plans are segregated into three categories, firstly the Mediclaim Plans by Non-Life or General Insurance Companies, secondly the Hospitalization Cash Policy by both Life & Non-Life Insurers and thirdly the Critical Care Plans offered by both Life & Non-Life Insurers.

**Mediclaim Policy** is basically a reimbursement plan offered by General Insurers wherein the insured gets reimbursed of the total bill amount of the medical expenses to the extent of an agreed sum assured. It includes the room charges, ICU charges, surgery & doctor charges etc. It includes a lot of exclusions which the policy holder must read before buying the Mediclaim. The Mediclaim includes the following two further categories:

#### 1) Family Floater Plan

It is a very common plan these days which covers your entire family under one premium payment giving coverage to the family members together. This plan is being offered by almost all the General Insurance Companies with a specific criterion of covering individuals in the age group between 90days and 55 years.

#### 2) Group Mediclaim Insurance:

It is the second variant of Mediclaim which covers a group of individuals simultaneously. This form of insurance includes the category of Employer's Health Insurance Cover wherein the sum assured normally varies between Rs. 15,000 and Rs.5, 00,000.

Hospitalization Cash Policy is a plan offered by both Life & Non-Life Insurers wherein the Insured gets pre-determined cash benefit on a daily basis irrespective of the hospitalization expenses being incurred. It is not a fully comprehensive health insurance plan because it doesn't cover the cost of medical treatment but pays lump sum amount to the policy holder on per day basis during the treatment/hospitalization.

It acts a complimentary plan to the Mediclaim plans. TATA-AIG General Insurance & Royal Sundaram offer Hospital cash benefit plan among Non-Life Insurers.

#### **Critical-Care Plan**

It is offered by both Life & General Insurers covering an individual for certain specified critical illnesses like cancer, stroke etc. This is also offered as a rider by Life Insurance companies for quite some time now attached to their Life Insurance Plans.

You must take a cover either as a rider or as a standalone plan in your portfolio.

#### **Health Insurance Tax Benefits**

Health Insurance products are eligible for tax benefits under section 80D of the Income Tax Act, 1961. Premium paid under health insurance holds a tax deduction upto Rs 15,000 for you, your spouse and dependent children.

Furthermore, you can also claim another Rs. 15, 000 for tax deduction for your parents, in case of senior citizens (65 years or more) the above deductions are increased to Rs. 20,000

#### **Family Floater Plan- in Detail**

For instance a person wants a health insurance for himself, his spouse & their children, the Family Floater plan offers insurance coverage to the entire family under one premium payment. Let's take an example wherein the person insures himself, his spouse & the dependent children with the individual insurance plans with a sum assured of Rs. 1 lakh each, he ends up paying premium ranging between Rs. 1000 - Rs. 2000 for each family member. On the other hand if the person would have opted for the family floater plan with the sum assured of Rs. 3 Language III IIIUIa www.ianguageminula.com 1501 1730-2740 15:4 April 2015 C. Subburaman, Ph.D. (Ed.) Health and Medical Care Services: Claims on National Resources Dr. K. B. Laliytha, B.D.S. Health Insurance... Do You have a Choice?

lakhs, the total premium would surely be less than the separate premium payments in individual health insurance plans. Moreover the separate health plan holds the cover of only Rs. 1 lakh as against Rs. 3 lakh in case of the Floater plan thus helping the family in case the medical treatment costs go beyond that.

#### **Cashless Hospitalization**

Cashless settlement implies that an individual doesn't have to settle a hospital bill out of his pocket; rather the bill gets settled directly by the insurance company. When you buy a Health Plan you are issued a Health Card along with the policy documents which would entitle you to get cashless claim at any of the company's network hospitals.

#### What do You do in Case of a Claim?

You should walk into a network hospital & get the treatment done & the bills paid through the Health Card.

In case of hospitalization you need to give the card number to the network hospital, you must pre-authorize from the TPA (Intermediary between the Insurance Company & the hospital) & will process the cashless settlement after the verification of your policy details.

You should know the formalities required for cashless settlement as some insurance companies are required to be notified 48 hours before hospitalization.

If you don't opt for cashless settlement, you need to settle bills at the hospital and get them reimbursed later.

#### Health Insurance Covers & Benefits

• Room & Boarding expenses: There are further limits to this feature varying from company to company.

- Ambulance Charges: They are normally covered upto Rs. 1000.
- ICU charges, doctor, consulting, anesthetist and surgeon fees, operation and other diagnostic

and surgical material costs are covered.

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• Day-Care expenses such as Chemotherapy, Dialysis & Radiotherapy etc.

• Pre & Post Hospitalization Expenses which normally are 30 days prior and 60 days after hospitalization.

• Cashless Hospitalization is offered by almost all Non-Life Insurers.

#### **Points to Remember**

• You must read the policy exclusions & the limitations in various covers properly before buying a Health Insurance plan because you should know what all covers your policy include & exclude.

• You should note the number of network hospitals covered in the Insurer's list of network hospitals as this will help you to get cashless & hassle-free claim.

• You must read the names of critical diseases being covered before buying a Critical-Care plan.

• You must know that the medical expenses incurred within the first 30 days of buying the health insurance plan are not covered unless the injury has occurred out of an accident.

• You must disclose all the Pre-Existing diseases to the insurer before buying the health plan as the insurer doesn't cover them, now a day's General Insurers have started covering these diseases normally after 3-4 years varying from company to company.

#### Conclusion

With increasing medical problems and its expenses each and every individual should have a health insurance policy. However, one must be careful while enrolling the policy by reading all the terms and conditions. Old proverb is that a small family is a happy family. For the current scenario, "an insured family will be a happy family".

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#### Healthcare Expenditure in Mizoram An Economic Appraisal

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#### Abstract

The relationship between health expenditure and income has always been a focus of research for it helps us understand the key determinants of healthcare expenditure and provides linkages between the income factor and demand side of health. The main objective of this paper is to examine the relationship between healthcare expenditure and income. This relationship is examined using primary data collected by the researchers from Bawngkawn locality in Aizawl district of Mizoram. t-test and linear regression estimators are used to examine this relationship. The study found that there is a positive relationship between healthcare expenditure and the income of a family. When income increased by 1 rupee, expenditure on health is also increased by 5 paise. The regression result shows that with the increase in the educational qualification of the respondent, the expenditure on health increased by Rs. 297.54. The t-test shows that the difference in health expenditure between high and low income groups is highly significant.

#### Introduction

Health is an important aspect of human resource development. Good health care facilities and services are essential for creating healthy citizens and society that can effectively contribute to social and economic development. Economic development of an economy depends on the quality of its people. By quality of people we mean the several health of the people living in a country. Undoubtedly, better health of people, in turn will lead to better sustainable development.

#### **Definition of Health**

There are many definitions of health, although there is no one accepted definition. To the layman, health implies a sound body in a sound mind. The World Health Organization

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defines health as "a state of complete physical, mental and social well being, and not merely the absence of disease or infirmity".

#### Healthcare

Healthcare implies the provision of conditions for normal, physical and mental development and functioning of human being individually and the group. It provides a wide spectrum of services; the delivery of primary healthcare foundation of rural healthcare system and forms an integral part of the national healthcare system. Primary healthcare is accepted as one of the main instruments of action in the delivery of health in rural areas.

Healthcare is one of India's largest sectors, in terms of revenue and employment and the sector is expanding rapidly. During the 1990s, Indian healthcare sector grew at a compound annual rate of 16 %. Today the total value of the sector is more than \$ 34 billion. This translates to \$ 34 per capita, or roughly 6 % of GDP. The private sector accounts for more than 80 % of total healthcare spending in India. Unless there is a decline in the combined federal and state government deficit, which currently stands at roughly 9 %, the opportunity for significantly higher public health spending will be limited.

#### **Review of Earlier Studies**

**Ramesh Bhatt and Nishant Jain (2006)** in their study they found that per capita private health expenditure has grown substantially faster than real incomes. For each 1% increase in real per capita income (PCI), the real per capita expenditure on health has gone up by 1.95%. During the last decade PHE (per capita health expenditure) has grown by 18% per annum in nominal terms and about 11% in real terms.

**Ravi Duggal(2006),** in his study he found that the central government's own expenditure is increasing rapidly, whereas its grants to the state government's health spending is stagnating and, as a consequence, the overall public health expenditure remains below 1% of GDP.

Indrani Gupta and Arindam Dutta(2003), in their study they found that expenditure is a positive function of income, with richer households spending more on both

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acute and chronic illnesses, than poorer households. Also, for both acute and chronic illnesses, often expenditures in the urban areas seem to be lower than in the rural areas for the same deciles. The expenditure pattern thus indicates that health imposes a significant burden on individuals and households both in rural and urban areas.

#### **Objectives and Methodology**

The main objective of this study is to examine the relationship between healthcare expenditure and income of Mizoram. For this purpose, primary data had been collected from Bawngkawn locality in Aizawl district of Mizoram. The primary data is based on information given by 100 respondents. The sample respondents were selected through stratified random sampling technique from the study area, through questionnaire method using specially structured schedule. The respondents were divided into two groups based on their family monthly income – those families whose monthly income is below 15,000 and those higher than 15,000. Based on this division, the researchers examined whether the expenditure of a family on healthcare is influenced by their income level, educational level of the head of the household, number of members in the family and medical institutional choice of a family. For this, t-test and linear regression estimators were used.

#### **Patterns of Health Expenditure in India**

In India, private households' contribution to healthcare is 75%. Most of these are outof-pocket costs. State governments' contribute 15.2, the central government 5.2, and thirdparty insurance and employers put in 3.3% of the total. Local governments' and foreign donors' contribute 1.3% (World Bank 1995). Out of this amount, 58.7% is spent on primary healthcare (curative, preventive and promotive); 38.8% on secondary and tertiary inpatient care and the rest on non-service cost.

In Table 1, we see that both the per capita spending and the share of households in healthcare expenditure varied widely across states. Per capita spending in the state with the highest rate(Goa) is nearly 7 times that of per capita spending in the state with the lowest per capita spending (Meghalaya). Interestingly, the share of household spending is the lowest in Meghalaya, but was among the highest in Bihar which has relatively low per capita spending.

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There are many states where households undertake more than 80% of all health spending, indicating an exceptionally high burden upon them.

STATE	Per capita Health	Per cent spent		
	Exp. (Rs.)	Household	Public	Other
Andhra Pradesh	410	73.4	19.4	7.2
Arunachal Pradesh	771	86.5	13.5	0
Assam	471	80.8	17.8	1.4
Bihar	173	90.2	8.3	1.5
Chhatisgarh	378	NA	NA	NA
Delhi	798	56.4	40.5	3.1
Goa	1149	79.2	17.5	3.3
Gujarat	270	77.5	15.8	6.7
Haryana	280	85	10.6	4.4
Himachal Pradesh	884	86	12.4	1.6
Jammu & Kashmir	845	77.3	20.7	2
Jharkhand	328	NA	NA	NA
Karnataka	419	70.4	23.2	6.4
Kerala	454	86.3	10.8	2.9
Madhya Pradesh	235	83.4	13.6	3
Maharashtra	278	73.3	22.1	4.6
Manipur	695	81.2	17.2	1.6
Meghalaya	690	36.5	58.4	5.2
Mizoram	1611	39.4	60.6	0
Nagaland	794	91.7	7.6	0.7
Orissa	263	79.1	18	2.9
Punjab	360	76.1	18	5.9
Rajasthan	287	70	24.5	5.5
Sikkim	1446	56.9	43.1	0
Tamil Nadu	410	60.7	26.6	12.7
Tripura	740	69	27.4	3.6
Uttar Pradesh	293	84.3	13	2.7
Uttarakhand	630	NA	NA	NA
West Bengal	1188	78.4	17.3	4.3
Union Territories	938	85.1	8.8	6.1
All India	1377	73.5	22	4.5

 Table 1: Health Expenditure of Indian states (2008-09)

Source: Report of National Commission on Macroeconomics and Health, Government of India

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#### **Profile of Health in Mizoram**

Mizoram, which is in the north-eastern part of India has a total population of 10,91,014. The decadal growth rate is 22.78%, which, compared to all India level is quite high. The population density is 52 persons/sq. km. The sex ratio is 975 females per 1000 males. Of the total population, 91.58% are literates.

The life expectancy of Mizos is 64 years. Infant and Child mortality rates have been on the decline compared to the last 3-4 decades. Infant mortality rate is 23 per thousand live births. Maternal mortality rate has also declined to 163 per 100,000 live births since 1970s. The birth rate is 18.2 and death rate is 5.2 (2007).

Among the common diseases prevailing in Mizoram, Malaria continues to be the major disease accounting for the greatest level of morbidity and preventable death. There were 2984 cases in 2004 and 48 deaths. The other common diseases include Tuberculosis, Diabetes, Hypertension, Anaemia etc.

Total fertility rate has increased from 2.30% in 1992-93 to 2.86% in 2005-06. Among women, 59.9% used contraceptives of any kind. 57.8% of women received at least 3 ANC check-up, which shows a decline of around 17% from 1998-99. And 73.2% of Mizo women participate in decision-making about their own healthcare as compared to 52% of the country as a whole.

Among children age 12-23 months, 46.4% are fully immunized where 57.4% accounts for urban areas and 36.2% rural areas. There are 51.7% of children age 6-35 months who are anaemic and 21.6% children who are underweight, also 30.1% and 9.2% of children under 3 years are stunted and wasted respectively.

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Population	10,91,014
Decadal growth rate	22.78
Population density(persons per sq km0	52
Sex ratio (no. of females/1,000 males)	975
Literacy rate	91.58
Infant mortality rate(per 1000 live births)	23
MMR( per 1,00,000 live births)	163
Birth rate	18.2
Death rate	5.2
No. of hospitals	10
No. of CHC	9
NO. of PHC	57
No. of SC	366
No. of doctors	155
No. of Nurses	393
No. of Health workers	656
Life expectancy	64
Malaria cases(2004)	29874
No. of deaths due to malaria(2004)	48
Total fertility rate	2.86%
Women receiving 3 ANC check up	57.8%
% of women involved in decision making	73.2%
about their own healthcare	
% of children fully immunized	46.4%
% of children 6-35 months anaemic	51.7%
Children under3 yrs. Underweight	21.65
Children under3 yrs who are stunted	30.1%
Children under3 yrs who are wasted	9.2%

#### **Table 2: Basic Health Indicators of Mizoram**

Source: NFHS-3 2005-06; Annual Report, Health and Family Welfare Department, Mizoram; Economic Survey of Delhi, 2005-06.

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#### **Relationship between Healthcare Expenditure and Income**

The relationship between healthcare expenditure and income has always been a focus of research for it helps us understand the key determinants of healthcare expenditure and provides information about linkages between the income factor and demand side of health. In this study, this relationship is examined using primary data collected by the researcher from Bawngkawn locality in Aizawl district in the state of Mizoram. The respondents were divided into two groups based on their monthly family income - those families whose monthly income is below 15,000 and those higher than 15,000.

#### **Cause and Effect (t-Test)**

#### Monthly Expenditure on Health Between High and Low Income Groups

Group Statistics					
	Total family monthly				Std. Error
	income( in rupees )	N	Mean	Std. Deviation	Mean
Monthly expenditure of a	>= 15000	60	1702.50	728.501	94.049
care(in rupees)	< 15000	40	483.75	364.865	57.690

Assuming equal variance in health expenditure between the two income groups, the mean value of health expenditure in high income groups is Rs. 1702.50, while low income groups is Rs. 483.75, a significant difference of Rs. 1218.75. It is accepted that the difference in health expenditure between the two income groups is highly significant; with the higher the income, the expenditure on health also increasing.

#### Medical Institutional Choice and Health Expenditure

Group Statistics					
	Medical institutional choice of a family for	N	Mean	Std. Deviation	Std. Error Mean
Monthly expenditure of a family on health/medical	Government/ Civil Hospital	39	871.79	670.506	107.367
care(in rupees)	Priv ate Hospital/clinic	61	1434.43	890.110	113.967

Assuming the equal variance in monthly expenditure of a family on health between the different groups, the mean value of health expenditure in private hospital is 1434.43, which is greater than the health expenditure in government hospital 871.79. Hence, it is

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concluded that the difference in health expenditure between government and private hospital is highly significant.

#### **Educational Qualification and Health Expenditure**

Group Statistics					
	Educational qualifications				Std. Error
	of respondent	N	Mean	Std. Deviation	Mean
Monthly expenditure of a	Matric/ Higher Secondary	40	771.25	741.869	117.300
f amily on health/medical care(in rupees)	Graduate/post graduate	57	1458.77	778.857	103.162

Assuming the equal variance in health expenditure between the two income groups, the mean value of health expenditure by graduate/post graduate is 1458.77, which is greater than the mean value of health expenditure by matric/higher secondary 771.25. It is accepted that the difference in health expenditure by matric/higher secondary and graduate/post graduate qualifications is highly significant.

#### Regression

#### Health Expenditure and Income of the Family with Number of Members in the Family.

Health exp i = 
$$174.23 + 11.86$$
 (members of the family) + 0.05 (Income)  
t (0.331) (10.53)\*

$$R \ square = 0.56$$
  $F = 60.67$ 

The regression result shows that the income of the family is significantly influencing the expenditure on health. When income increased by one rupee, the expenditure on health also is increased by 5 paise. The number of members in the family is not significantly influencing the expenditure on health. The R square indicates that 56 per cent of variation in health is explained by the two variables in the model. The 'F' statistic shows the model is significant.

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# Health Expenditure and Educational Qualification of Head of the household with medical institutional choice of the family

Health expi = 186.71 + 225.88 (MIC) + 297.54 (EQ)

(2.48) (3.65)\*

**R** square = 0.24 **F** = 15.02

MIC = Medical Institutional Choice of a family. EQ= Educational Qualification of respondents.

The regression result shows that the educational qualification of the respondent is significantly influencing the expenditure on health. With the increases in the educational qualification of the respondent, the expenditure on health is increased by Rs. 297.54 paise. The medical institutional choice of a family is not significantly influencing the expenditure on health. The R square indicates that 24 per cent of variation in health expenditure is explained by the two variables included in the model. The 'F' statistic shows the model is significant.

Health expenditure is, thus, significantly influenced by income level of a family. When income is increased by one rupee, the expenditure on health is increased by 5 paise. Thus, expenditure is a positive function of income, with richer households spending more on illness, than poorer households. The number of members in the family and medical institutional choice of a family is not significantly influencing the expenditure on health. Increased in income and educational levels of the households improved health consciousness and the households can afford to pay for healthcare with increased in income.

#### **Findings and Conclusion**

Analysis of the relationship between healthcare expenditure and income shows that there is a positive relationship between healthcare expenditure and income of a family. Expenditure is a positive function of income, with richer households spending more on income than poorer households. The analysis shows that when income increased by 1 rupee, expenditure on health also increased by 5 paise.

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C. Lalrinmawii, M.A, M.Phil. and Dr. A. Duraisamy, M.Sc., M.Phil., Ph.D. Healthcare Expenditure in Mizoram - An Economic Appraisal

Health expenditure is influenced by income and educational qualifications of households. Increased income and educational levels of the households improved health consciousness and the households can afford to pay for healthcare with increased income. However, the medical institutional choice of a family and the number of members in the family is not significantly influencing the expenditure on health.

The regression analysis shows that with the increased in the educational qualification of the respondent, the expenditure on health increased by 297.54. When income increased by 1 rupee, expenditure on health also increased by 5 paise. Thus, expenditure on health is influenced by the income level of a family.

The t-test shows that the difference in health expenditure between high and low income groups is highly significant. The mean value of health expenditure in high income groups is Rs. 1702.50, which is higher than the low income groups Rs. 483.75. This difference can be attributed to the spending habit of the family as well as their income level. With the increased in income level, the household can afford to pay higher level for healthcare.

The mean value of health expenditure by graduate / post-graduate is 1458.77, which is higher than matric / higher secondary 771.25. Thus, the difference in health expenditure between the two groups is highly significant. This is because with the increased in educational level, health consciousness also increased.

The mean value of health expenditure by private hospital is 1434.43, which is higher than the health expenditure by government hospital 871.79. Thus, the difference between the two medical institutions is highly significant.

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C. Lalrinmawii, M.A, M.Phil. and Dr. A. Duraisamy, M.Sc., M.Phil., Ph.D. Healthcare Expenditure in Mizoram - An Economic Appraisal

## Estimation of Cost and Utilisation of Anti-Diabetic Drugs in Geriatric Patients

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#### Abstract

This study was designed to analyse the cost and utilisation of anti-diabetic drugs prescribed for the diabetic patients. This prospective observational study was carried out in the Medicine ward of Rajah Muthiah Medical College and Hospital, Annamalai University. The study included 30 hospitalised diabetic geriatric patients of both sex. Demographic data, medical and medication history were collected from the patient's case sheet and analysed for the cost of anti-diabetic drugs prescribed. The study included 56.67 % (n=17) males and 43.33 % (n=13) females 60 years old and above. Most male diabetic patients were in the age group of 65-70 years and females were in the age group of 60-65 years. Systemic hypertension was the major coexisting disorder in the study. About 96.66% of prescription contain Tab. Metformin 500 mg (cost per unit: INR 0.82), 80% of prescription contain Inj. Plain Insulin (cost per unit: INR 169.04), 76.66% of prescription contain Inj. Actrapid (cost per unit: INR 169), 56.66% of prescription contain Tab. Glimipride 1 mg (cost per unit: INR 1.92), 43.33 % of prescription contain Inj. Lente Insulin (cost per unit: INR 96.63) and 26.66 % of prescription contain inj. Mixtard Insulin (cost per unit: INR 169). Out of four Insulin injections, Inj. Actrapid was used in larger quantity (558 units) followed by Inj. Mixtard Insulin (194 units). Out of two tablets, Tab. Metformin was used in larger quantity (47 units). The study concludes that the cost associated with diabetes is enormous. Insulin treatment has substantial impact on the direct medical costs of diabetes mellitus.

#### Introduction

Definition

Diabetes Mellitus is the metabolic disorder of multiple aetiology characterized by chronic hyperglycaemia with disturbances of carbohydrate, fat and protein metabolism, resulting from defects in insulin secretion, insulin action or both (WHO/NCD/NCS/99.2; National Diabetic Group 1979).

#### Epidemiology

India leads the world with largest number of diabetic subjects earning the dubious distinction of being termed as the "diabetic capital of the world". According to the diabetes atlas 2006 published by the international diabetic federation, the number of people with diabetic in India in around 40.9 million and is expected to raise 69.9 million by 2025 unless urgent steps taken (Mohan et al.,2007)

Diabetes Mellitus, long considered a disease of minor significance in world health, is now taking its place as one of the main threats to human health. The past two decades have seen an explosive increase in the number of people diagnosed with diabetes worldwide (Zimmet, Alberti, & Shaw, 2001). Recent economic change, reflected by rapid industrialization, urbanization and increased wealth at both national and household levels, has led to an increasing proportion of the Thai population living with diabetes. According to the cross country survey in the InterAsia study, the prevalence of type 2 diabetes in Thailand was 9.8%, which was doubling the number forecast by the WHO (Aekplakorn, Stolk, Neal, Suriyawongpaisal, Chongsuvivatwong, & Cheepudomwit, 2003). The hospitalization rate for diabetes in Thailand had shown a rising trend over the years, from 33.3 per 100,000 population in 1985 to 91.0 in 1994 to 380.7 in 2003 and 586.8 in 2006. Hence, Thailand is inevitably moving towards the burden of such a public health problem (Ministry of Public Health Thailand, 2009).

People with diabetes are prone to consequences in both short-term and long-term complications. The chronic nature of diabetes and its devastating complications make it a very costly disease. In the United States, the total estimated cost of diabetes in 2007 was USD 174 billion (American Diabetes Association, 2008). In Latin America and the Caribbean,

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total annual cost associated with diabetes was estimated as USD 65,216 million in 2000 (Barcelo', Aedo, Rajpathak, & Robles, 2003). In Thailand, there also exist some studies on cost of diabetes. A study based on four government hospitals in Thailand found that for outpatients, annual direct medical expenditure was more than five times higher for diabetic patients as compared to non-diabetics and for inpatients, the expenditure was more than two times higher in 2002-03 (Pongcharoensuk, Kongsaktrakool, Tantivipanuwong, Sema-ngern K, & Chaiyakunapruk, 2006). Riewpaiboon et al. (2007) estimated cost of diabetes at a district public hospital in Thailand and found that the direct medical cost was 6,331 baht per person per year in 2001 (Riewpaiboon, Pornlertwadee, & Pongsawat, 2007). However, all those studies estimated the cost from provider perspective, hence, reported only the direct medical cost of diabetes. In order to gather a comprehensive idea on economic burden of diabetes in 3Thailand, the present study aimed to estimate the cost of illness of diabetes from societal perspective. As per the researcher's knowledge, this study was the first attempt to explore the cost of illness of diabetes from societal perspective in Thailand.

#### Costs

Cost of illness estimates using a prevalence based approach indicate the economic burden of the disease at a given point of time – for the present study the time frame was the financial year 2008 (1stOctober 2007 – 30th September 2008). In this study the cost components consisted of both direct and indirect costs. The direct economic costs reflected the resources used in treating or coping with the disease, including expenditures for medical care and the treatment of illness. Direct cost had been divided into two sub categories – (a) direct medical costs which included costs of hospitalization, outpatient visits, drug, laboratory tests, materials, emergency services (such as dressing for diabetic patients), dental services and traditional medicine services (e.g. foot massage for diabetic patients who had absence of foot pulse) and (b) direct non-medical costs. Direct non-medical costs included cost of transportation to the health care providers, costs of the patient and the accompanied person for visiting the health care providers, costs of meal and accommodation during these 5visits, costs of personal facilities needed (e.g. home modifications, personal devices) and

cost of informal care. In this study, indirect cost included the societal cost of morbidity, permanent disability and premature mortality.

## Methods of cost calculation Direct Cost

The direct medical cost was calculated by multiplying the quantity of medical services consumed by their unit costs. The study participants received treatment from Waritchaphum hospital, from nine health centres under the hospital and the severe patients received treatment from the provincial hospital as well. Some patients also received treatment from other health care providers such as private clinics, hence, direct medical costs were calculated for all health care services availed by the study participants. Standard costing method was used to calculate the unit cost of medical services at Waritchaphum hospital (Brouwer et al., 2001).

For calculating the cost per visit at the health centres (there were no inpatient services at the health centres) the study result of Kongsawat (1999) was used which calculated the unit cost of services provided at the health care settings in 5 provinces of Thailand during the financial year 1997 under the health system reform project in the Ministry of Public Health (Kongsawatt, 1997). The outpatient visit and inpatient day cost at the provincial hospital was calculated on the basis of approximate average of the results of four studies conducted in different provincial hospitals in Thailand (Jawrakate, 2001; Koopitakkajorn, 2009; Pattanaphesaj, 2008; Tisayaticom, 2000). All costs were converted into 2008 price by using consumer price index for medical care of Thailand. For the drug and laboratory cost per visit at the provincial hospital, the same costs incurred at Waritchaphum hospital were used on the assumption that the drug and laboratory cost per visit will almost be the same at district and provincial hospital.

#### **Indirect Cost**

In this study the indirect costs associated with diabetes included health related days absent from work and / or normal activities, leisure time loss, lost earning capacity from permanent6disability and lost productivity from premature mortality. Human capital approach was used for indirect cost calculation (Pritchard & Sculpher, 2000). For calculating the work absence / normal activity lost days, the number of such lost days mentioned by the study participants during last three months from the date of interview was taken into account (following the maximum allowable recall period of 3 months) and then extrapolated the same for the whole year (Kobelt, 2002). Those lost days mentioned by the patients were excluding hospitalization days, hence total hospitalization days during the study period were added to get a complete picture of work absence / normal activity lost days of the study participants. For estimating the mortality cost, the number of death cases occurred among the study participants during the study period was considered and for permanent disability, the patients who reported during interview that they were out of the labour force because of disability were considered. Their Barthel index score (a simple index of independence useful in scoring improvement in the rehabilitation of the chronically ill) also confirmed their severity of disability. For calculating loss of productive life in both deceased and permanent disabled persons, the age of 60 years was considered (the official retirement age in Thailand).

For calculating indirect cost and cost of time loss of the study participants, accompanied persons and informal caregivers, the official minimum wage rate of Sakhon Nakhon Province (148 baht per day) was used in order to average out the differences in earning power of the study participants (Ministry of Labour, 2009). As most of the study participants were agriculturists, they didn't have regular income. Further, some of them must earned more than the minimum official wage while some others earned less than that, hence, using minimum wage was found appropriate. When a person in the active labour force dies or is out of the labour force because of permanent disability, his contribution to the country's Gross Domestic Product (GDP) is lost. Hence, a sensitivity analysis was conducted by using GDP per capita in mortality and permanent disability cost calculation in order to capture how the assumption of using minimum wage rate affected total cost of illness of diabetes.

A constant 5% growth rate in the minimum wage rate was used to calculate income in the future years, this was the average percentage increase in minimum wage in Sakhon Nakhon 7province for last 5 years. The projected GDP growth rate was used from the International Monetary Fund's World Economic Outlook, 2008 report for Thailand. A 3% discount rate was used to convert future earnings to current value. However, this discount rate was varied to 0% and 6% to see the effect on cost (Edejer, Baltussen, Adam, Hutubessy, Acharya, Evans et al., 2003).

According to the WHO estimates, India had 32 million diabetic subjects in the year 2000 and this number would increase to 80 million by the year 2030. Diabetes has become a major health problem in India. Recent studies have shown that healthcare expenditures are as much as five times as high for individuals with diabetes compared to individuals without diabetes.

#### **Objectives of Study**

- 1. To calculate the cost of prescribed anti- diabetic drugs.
- 2. To analysis the usage of anti -diabetic drugs.
- 3. To find out the most utilised anti-diabetic drugs.

#### **Plan of Work**

- Literature review on cost study on diabetic drugs.
- To prepare a proforma for collection of information from physicians, patients & case sheet.
- > To evaluate & analyze the collected information with help of data format.
- > To calculate the cost of prescribed anti-diabetic drugs
- Data analysis & interpretation of the results
- Preparation & submission of report

#### Methodology

#### **Study Site**

The study was carried in the Medicine ward of Rajah Muthiah Medical College Hospital, Annamalai University, and a multi specialty 1625 bedded tertiary care teaching hospital

#### **Study Design**

Prospective Observational study method. Total 30 geriatric patients enrolled in the study, Data collection form was designed to collect patient's information during hospitalization.

#### **Inclusive Criteria**

Only admitted diabetic patients (inpatients) in the medicine ward were included in the study

#### **Exclusive Criteria**

Outpatients were excluded from study, pregnant women also excluded

#### Procedure

Collection of data  $\rightarrow$  Analysis  $\rightarrow$  Result and discussion  $\rightarrow$  Conclusion

#### **Observations and Results**

Total of 30 diabetes mellitus patients were collected in the study. The following parameters were analyzed in the study.

 Table – 1 Gender distribution of patients

Gender	No. Of patients	% distribution
Male	17	56.66%
Female	13	43.33%

Fig. 1: Graph represents the data from Table- 1



SL.No	Blood sugar level	Total No. Of	%
	(mg/dl)	patients	(percentage)
1.	RBS(140-200mg/dl)	13	43.33%
	(155-197)		
2.	FBS(140-200mg/dl)	10	33.33%
	(170-200)		
3.	PPBS(120-140mg/dl)	7	23.33%
	(121-137)		

 Table -2: Blood sugar level (Random, Fasting and Post Prandial)

### Fig. 2: Graph represents the data from table-3



SL.NO	Associate diseases	Total No. of	%
		patients	(percentage)
1.	Systemic hypertension	5	16.66%
2.	Tuberculosis	4	13.33%
3.	Alcoholic liver diseases	4	13.33%
4.	Persistent hypertension	2	6.66%
5.	Anaemia	2	6.66%
6.	Transverse Myelitis	3	10%
7.	Ischemic DCM	1	3.33%
8.	Anterio Lateral	1	3.33%
9.	Chronic Kidney disease	2	6.66%
10.	Bronchial Asthma	2	6.66%
11.	Myocardial Infraction	1	3.33%
12.	Unstable Angina	1	3.33%
13.	Coronary heart disease Failure	2	6.66%

#### **Table- 3: Diabetes mellitus patients with co-morbidities**

#### Fig. 3 Graph represents the data from Table 3



SL.No	Drugs	Total No.of patients	% (percentage)
1.	Inj.plain insulin	24	80%
2.	Inj.Lente insulin	13	43.33%
3.	Tab.Metformin 500mg	29	96.66%
4.	Tab.Glimipride 1mg	17	56.66%
5.	Inj.Actrapid	23	76.66%
6.	Inj.Mixtard insulin	8	26.66%

#### Table – 4 : Anti-Diabetic Prescribed Drugs

#### Fig. 4: Graph represents the data from Table-4



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S. No	Drugs Prescribed	Unit	Rate	Cost
1.	Tab. Metformin 500mg	47	0.82	38.54
2.	Tab. Glimipride 2mg	32	1.92	61.44
3.	Inj. Plain Insulin 40/iu	166	169.04	280.60
4.	Inj. Lente Insulin 40/iu	110	96.63	105.60
5.	Inj. Mixtard Insulin 3- 70mg	194	169	327.86
6.	Inj. Actrapid	558	169	943.02

 Table- 5: Cost of Prescribed Drugs

Fig. 5: Graph represents the data from Table-5



### Table-6: Cost distribution of Anti-diabetic drugs prescribed

Sl.No	Drugs	Cost (Rs)	Percentage (%)
1	Oral hypoglycaemic Agents	99.98	5.70
2	Insulin	1657.02	94.30

## Fig. 6: Graph represents the data from Table - 6



#### Discussion

#### **Age Distribution**

The age distribution is diabetic mellitus cover assessed that most male diabetic patients were in the age group of 65-70 years and females were in the age group of 60-65 years.

#### **Gender distribution**

Majority of patients under study belonged to male group (n=17).Female patients were less in no (n=13).

#### Diabetic's Mellitus with co-Morbidities

Most common disease associated with diabetics mellitus was found to be systemic hypertension (n=5) followed by alcoholic liver diseases (n=4) other diseases associated as TB, chronic kidney disease, Transverse myelitis.

#### **Adverse Drug Reactions**

Adverse drug reaction is any undesirable affect of a drug beyond its anticipated therapeutic affects occurring during clinical use. Most common adverse drug reaction was found to be Vomiting (13.3%), Giddiness(10%) other are nausea

#### **Cost of Therapy**

The maximum cost of therapy per day was found to be Rs.150 to 300.

#### Conclusion

Out of four Insulin injections, Inj. Actrapid was used in larger quantity (558 units) followed by Inj.Mixtard insulin (194 units). Out of two tablets, tab.Metformin was used in larger quantity (47 units). The study concludes that the cost associated with diabetic is enormous. Insulin treatment has substantial impact on the direct medical costs of diabetic mellitus. Routine measurement of economic and quality of life outcomes alongside clinical

outcomes will become necessary for assessing the total value that new anti diabetic medications provide and whether cost offsets to managed care exist.

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## **Factors Determining Morbidity in Kerala**

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#### Abstract

The study analyzes the factors that determine morbidity in Kerala. "Morbidity is a state of affair in which an individual is feeling physical, mental or social sufferings". Loss of life and morbidity are important components of human welfare. Kerala, in its fourth stage of epidemiological transition, gives a clear picture of a state facing the problem of lifestyle related diseases. Kerala attracts the attention of everyone within its co-existence of high level of morbidity with low levels of mortality and high life expectancy. Morbidity pattern of Kerala underwent major changes because of the ageing of population as a result of the declining birth rate and the migration of young adults to the Gulf and other countries. Socio economic factors such as, ageing, literacy, per capita income, health expenditure, Health Care, IMR and population determines morbidity in Kerala.

The hypothesis of this study is: Morbidity is negatively influenced by health expenditure and literacy and Per capita income is negatively related to morbidity. This study is based on secondary data and period covers from 1991 to 2011. The influence of these factors can be analyzed by using tables and multiple regressions. The study found that morbidity and health expenditure are inversely related. The government's health expenditure which was increasing trend over the study period has augmented health facilities which have an impact on morbidity.

Key words: health, morbidity, ageing, expenditure

#### Introduction

Health is an important determinant of wellbeing. It is positively related to labour productivity and economic efficiency. Therefore, maintaining good health is important for an individual or a household at the micro level and for the society at the macro level. Health status in most developing countries is constrained by poor working and living conditions on the one hand and supply and demand factors on the other.

"GOOD HEALTH = f (nutritious food, pollution free environment, drinking water, mental peace, opportunity for work and recreation, genetic endowment, and use of health services)".<sup>1</sup>

The concept of health, disease and treatment are related to the social structure of the community. Our health is affected not by only unbalanced diet but also by disease, which may be water borne, airborne, or food borne. More than how what a person looks like and how intelligent he or she might be, genes are determining factors whether a person is predisposed to certain illness like specific cancer, heart problems, diabetes, obesity sickle cell anemia and Alzheimer's diseases.

Kerala which has a low income status in the Indian context has achieved tremendous development in the areas of health status of its population when taken into account the life expectancy at birth, mortality, utilization of health and health transition. The progressive socio economic and Educational reform movements that took place in Kerala have substantially contributed to the overall transformation.

#### What is Morbidity?

Morbidity is an incidence of ill health. "It is a state of affair in which an individual is feeling physical, mental or social sufferings".

Morbidity can be calculated  $as^2$ ,

<sup>&</sup>lt;sup>1</sup>A Primer of Health Systems Economics- V Raman kutty, Allied publishers 1999

Morbidity = 
$$\frac{\text{Number of ailing persons in the state}}{\text{Total number of population in the state}} \times 1000$$

Morbidity measures are of two fundamental types, self-perceived and observed.

**Self-perceived morbidity** refers to measures that are perceived and reported by an individual, usually in response to inquiries regarding illness. It depends upon an individual's perception of illness.

**Observed morbidity,** is assessed through an independent observer employing specific methods that can be repeated with some degree of consistency.

#### **Morbidity Profile of India**

Loss of life and morbidity are important components of human welfare. Connections between mortality and morbidity are an area of wider discussions in the present Indian context. The current health scenario in India is often described as "Dismal" or "Disturbing". Even though the life expectancy of Indian has increased in the last few decades, level of morbidity is still in pathetic condition. Socially advanced states like Kerala, Punjab and West Bengal have lower infant mortality and greater life expectancy for its people, but in contrast have high morbidity rate also contrary to that morbidity rate is low in states like Bihar, Madhya Pradesh and Rajasthan. One of major reasons put forwarded the low level achievement in health in India is the systematic lack of investment by the government, which adversely affects the poor. This may be due to the fact that states which are economically and educationally well off early report their ailments, and will be more vulnerable to life style related diseases.

#### **Morbidity Profile of Kerala**

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<sup>&</sup>lt;sup>2</sup> Soumitra Ghosh. P. Arokiasamy, "Morbidity in India: Trends, Patterns and Differentials", Journal of Health Studies, 2009, pp. 136-148.

Nimisha P., M.A., M.Phil., B.Ed. Factors Determining Morbidity in Kerala

Kerala has received wide appreciation for her public involvement to encourage human development and welfare. Kerala which is in the fourth stage of the epidemiological transition proves to be the state where lifestyle related diseases are prevalent. Kerala attracts the attention of everyone within its co-existence of high level of morbidity with low levels of mortality and high life expectancy. Among the rural and urban sectors and among all age groups and gender morbidity rates are highest in Kerala. The morbidity pattern in Kerala underwent major changes because of the ageing of population as a result of the declining birth rate and the migration of young adults to the Gulf and other countries. Human Development Report 2005 for Kerala points to the fact that the issue of high morbidity hinders human development and lead to rise in issues regarding "quality and affordability of health care" (CDS, 2006). Table 1 shows that the past studies related to chronic and acute ailments in Kerala.

Studies	Year	Acute	Chronic
NSS28th	1974	74.21	63.38
KSSP	1987	206.39	138.02
KSSP	1996	121.86	114.60
NSS52nd	1995-96	141.00	65.00
NCAER	1993	130.00	65.00
Paniker	1999	78	58.60
Krishna swami	2000	119	127
Sample Survey	2004	218.34	155.46

Table 1: Morbidity rates in Kerala from different studies

Source: P. Krishna swami, Discussion Paper No. 63, CDS.

#### **Statement of the Problem**

Kerala has achieved a lot in the health sector which is visible through a positive trend shown by the health indicators. In recent years the problem of morbidity has evolved as a major threat to the health care sector. The 52nd round of NSS (1995-1996) has found that the combined morbidity rate for acute and chronic ailments for Kerala was 118 per 1000 for rural and 88 per 1000 for urban which higher than the national rate of 55 per 1000 for rural and 54 per 1000 for

urban India. Kerala facing many socio economic factors like Poverty, population, aging, literacy and also inadequate nutrition which caused an increase in the morbidity rates. In Kerala, morbidity rate has been increasing over the years especially for non-communicable diseases. The present study concentrates factors determining morbidity pattern of Kerala.

#### **Objectives of the Study**

1. To analyze the factors determining the morbidity pattern of Kerala.

#### Hypotheses of the Study

- 1. Morbidity is negatively influenced by health expenditure and literacy.
- 2. Per capita income is negatively related to morbidity.

#### Methodology

This study is based on secondary data only. The study period covers from 1991 to 2010. The data were collected from various sources like articles, Hand Book of Kerala, Economics and statistics department of Kerala, National Health Intelligence Reports, RBI hand book of statistics, India stat.com and internet sources. For empirical analysis this study used simple statistical tools and simple econometric tools based on the requirements.

The present study used multiple regressions for analyzing the factors determining morbidity pattern of Kerala.

 $Y = \alpha + \beta 1HE + \beta 2IMR + \beta 3L + \beta 4OLD + \beta 5P + \beta 6HF + \varepsilon$ 

#### Where,

*Y*= Morbidity, HE= Health Expenditure, *IMR*= Infant Mortality Rate, *L*= Literacy, *OLD*= Old Age Dependency Ratio, *P*= Population, *HF*= Health Care Facilities  $\alpha$ = intercept term, and  $\beta_1$ ,  $\beta_2$ ,  $\beta_3$ ,  $\beta_4$ ,  $\beta_5$ ,  $\beta_6$  are the slope of the coefficients.

#### Scope of the Study

The Kerala model, based on the development experience of the southern Indian state of Kerala, refers to the state's achievement of significant improvements in material conditions of living, reflected in indicators of social development that are comparable to that of many developed countries even though the state's per capita income is low in comparison. Achievements such as low levels of infant mortality and population growth, and high levels of literacy and life expectancy, along with the factors responsible for such achievements have been considered the constituting elements of the Kerala model. Kerala is one of the first Indian states to relax narcotics regulations to permit use of morphine by palliative care providers. Kerala model of Development is followed by many developed countries.

#### **Review of Literature**

**Krishnasami. P** (2004) opined that Kerala holds the highest position in morbidity in comparison with all other Indian states. That is, morbidity rate for acute and chronic ailment for Kerala as 118 per 1000 for rural and 88 per 1000 for urban as against 55 and 54 for all India. The morbidity pattern of Kerala has undergone changes mainly because of the aging of its people as a result of the declining birth rate and migration of young adults to gulf and other countries. The study obtained illness rates which were lower than the Kerala Sasthra Sahithya Parishad (KSSP) Rates of 1996, 48.04% of the diseases came from fever nonspecific diseases. Acute morbidity is lower among males than females under the age group of 15-44.

**Suryanarayana M.H.** (2008) examined the economic profiles of morbidity by disease in Kerala and all-India. Morbidity rates, in general, are more for the rich than for the poor. There could be factors other than income, which influence the morbidity rates as revealed by horizontal pseudo-Lorenz curves for distribution of reported total morbidity across households. This study found that diabetes mellitus had elasticity greater than one for rural and urban all-India; heart disease and hypertension too have elasticities greater than one only for rural all-India.

Arokiasamy and Somitra (2009) present evidence on levels, differentials and patterns of morbidity prevalence in selected states of India. It examined the existing inequalities in non-fatal 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* Nimisha P., M.A., M.Phil., B.Ed. Factors Determining Morbidity in Kerala 128 health outcomes between different subsections of Indian population. The study found that gender inequality was observed in morbidity prevalence with females had lower risk of ill health than females.

**Navaneetham, Kabir and Krishna Kumar** (2009) examined determinant levels and pattern of morbidity in Kerala. According to them Kerala seems to have entered into the fourth stage of the epidemiological transition and studies have pointed out that life style related diseases are on the rise in Kerala. Therefore age pattern of morbidity seems to have undergone changes in the state. This study found that females were greater risk of morbidity than males.

The studies reviewed, therefore, indicate varied relationship between morbidity, morbidity and health status among people.

#### **Factors Determining Morbidity in Kerala**

Features like age, education, income, health care facilities, caste, religion, and socio economic status as well as environmental and community level of the individual and the households regulates the risk of morbidity in Kerala. In addition, low level of income low nutritional status and medical care also can viable to morbidity. There are many factors that determine the incidence of Morbidity in Kerala, such as life expectancy, infant mortality, per capita income, education, ageing, health care infrastructure and health expenditure. The influence of these factors can be analyzed by using following tables and multiple regressions.

Year	Morbidity <sup>3</sup>	Literacy*	IMR	Old	HE	Health care	Percapit	Life
				age*		facilities	a Income	Expectancy
1991	422	89.81	17	8.8	23180.45	976	12855	71.4
1992	450	89.92	17	9.1	23922.9	985	12933	71.8
1993	207	90.03	13	9.6	29845.13	990	13684	73.25
1994	176	90.14	16	9.8	35661.43	1007	14895	71.20

Table 2: factors determining morbidity in Kerala

<sup>3</sup> Morbidity is taking proxy value of death rate of communicable diseases from 1992 to 2010. It is the sum of eleven communicable diseases in Kerala.

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1995	163	90.25	15	10.1	41787.82	1036	16043	71.25
1996	146	90.36	14	10.3	45442.56	1051	16547	71.65
1997	210	90.47	12	10.6	53758.36	1057	17063	72.05
1998	228	90.58	16	10.8	57618.22	1064	17287	72.20
1999	442	90.69	14	11.1	73055.57	1064	18321	72.55
2000	965	90.80	21	10.8	70431.56	1048	19461	73.15
2001	616	90.90	11	10.9	75858.36	1048	19809	73.35
2002	321	91.21	10	11.1	71214.24	1048	20659	73.45
2003	452	91.52	13	11.9	80570.21	1043	21944	73.55
2004	329	91.83	12	11.3	81332.51	1039	23159	73.80
2005	278	92.14	14	11.4	87779.9	1017	25122	73.85
2006	359	92.45	15	11.5	100991.8	1016	27714	73.75
2007	253	92.77	13	11.6	113631.7	1123	30476	73.45
2008	293	93.08	12	11.7	139464.7	1173	33372	73.80
2009	233	93.39	12	11.8	150198.3	1169	35457	73.40
2010	271	93.70	11	11.9	182316.7	1174	37234	73.75

Source: Indiastat.com, Handbook of RBI, Health intelligence report various years, hand book of RBI.

IMR- Infant Mortality, HE- Health Expenditure, \*Estimated data from Census 1991, 2001 and 2011.

The table 2 shows the factors determining morbidity in Kerala. Morbidity is depending upon many factors such as old age, health care facilities, and health expenditure of the government, literacy rate, Infant mortality and total population. Using these variables the researcher has used multiple regression for analyzing the variable mostly determine in the morbidity.

Morbidity= f (Health Expenditure, Infant Mortality Rate, Literacy, Old age, Population, Health care facilities)

 $Y = \alpha + \beta 1HE + \beta 2IMR + \beta 3L + \beta 4OLD + \beta 5P + \beta 6HF + \varepsilon$  (equation 12) (t stat) (-2.42) (2.24) (-4.43) (2.23) (2.62) (-1.65) R<sup>2</sup> = 0.74 Where,

*Y*= Morbidity, *HE*= Health Expenditure, *IMR*= Infant Mortality Rate, *L*= Literacy, *OLD*= old age dependency ratio, *P*= Population, *HF*= Health Care Facilities,  $\alpha$ = intercept term  $\beta_1$ ,  $\beta_2$ ,  $\beta_3$ ,  $\beta_4$ ,  $\beta_5$ ,  $\beta_6$  are the slope of the coefficients

The estimated equation is as follows:

 $Y = 48171.28 - 0.015608 HE + 28.8687 IMR - 618.7306L + 354.5923 OLD + 0.0004P - 2.24.81 HF + \varepsilon$ 

The function fitted is good since the coefficient of determination is high at 0.74. the value of  $R^2$  shows that 74% of variation in morbidity rate is determined by the factors included, namely health expenditure, Infant Mortality Rate, Old age dependency ratio, population, and health care facilities. Further the estimated co-efficient expected signs with high significance.

The co-efficient representing expenditure as expected, is negative and significant. This implies negative relationship between health expenditure and morbidity rate. Higher the health expenditure, lower is infant mortality. This is but natural. Higher health expenditure creates health facilities, which tends to prevent appearance of diseases and helps in curing of the diseases.

The co-efficient representing infant mortality rate is also positive and significant. Higer IMR and morbidity rate possess a two way causation process. Morbidity induces in the pregnant mothers which communicate to children who become casuality in the process. Higher IMR also causes high morbidity. The co-efficient relating to literacy, as expected is negative, which implies higher the literacy lesser is the morbidity rate. Higher literacy creates greater health conciousness about diseases and concequences. Therefore, people avoid practices which contribute to disease.

The co-efficient representing old age is positive which implies that as the person becomes older and older he becomes susceptible to disease and hence high morbidity. The co-efficient of population is also positive which implies higher morbidity rate. Higher population restricts availabity of food, sanitation and health facilities, which again lead to more disease or reduction in diseases becomes difficult when the poplation is more. The co-efficient representing health

facilities is negative therfore lower the mortality rate. Health facilities tends to cure disease of the people and hence the negative relation.

The regression results are shown in the following table.

Dependent Variable: M Method: Least Squares Date: 09/28/11 Time: 08:23 Sample (adjusted): 1992 2010 Included observations: 19 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
С	48171.28	14559.33	3.308620	0.0062
HE	-0.015608	0.006447	-2.421208	0.0322
IMR	28.86874	12.84690	2.247137	0.0442
L	-618.7306	151.8782	-4.073862	0.0015
OLD	354.5923	158.8910	2.231670	0.0455
Р	0.000420	0.000160	2.622964	0.0223
HF	-2.248191	1.360254	-1.652772	0.1243
R-squared	0.744159	Mean depe	ndent var	347.5263
Adjusted R-squared	0.616238	S.D. depen	dent var	192.5220
S.E. of regression	119.2646	Akaike info	o criterion	12.67788
Sum squared resid	170688.4	Schwarz cr	iterion	13.02583
Log likelihood	-113.4398	Hannan-Qu	inn criter.	12.73676
F-statistic	5.817341	Durbin-Wa	tson stat	1.341523
Prob(F-statistic)	0.004794			

#### **Other Factors Determining Morbidity**

Morbidity is also determined by other factors such as per capita income of the people, life expectancy and health care facilities. When income of the people increases, people have high health status which leads to low morbidity. It shows that every year the income of the people is increasing and morbidity shows decreasing trend. Life expectancy and morbidity are negatively related. That is, when life expectancy of the people increases, then morbidity decreases. In 1991,

Kerala's life expectancy was 71.7 and it increased to 73.4 in 2010. The health care facilities and morbidity are negatively correlated. When health care facilities are increasing, morbidity will decrease.

The regression results are shown in the following table.

Morbidity= f (Health facilities, Life expectance, per capita Income)

Dependent Variable: M Method: Least Squares Date: 10/04/11 Time: 11:44 Sample: 1992 2010 Included observations: 19

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C HF LE P	-5294.018 0.493783 73.91979 -0.012619	7405.467 1.614416 92.41746 0.020390	-0.714880 0.305859 0.799847 -0.618890	0.4857 0.7639 0.4363 0.5453
R-squared Adjusted R-squared S.E. of regression Sum squared resid Log likelihood F-statistic Prob (F-statistic)	0.042403 -0.149117 206.3775 638875.2 -125.9786 0.221401 0.880021	Mean depen S.D. depend Akaike info Schwarz crit Hannan-Qui Durbin-Wat	dent var ent var criterion erion nn criter. son stat	347.5263 192.5220 13.68196 13.88078 13.71560 1.119068

It may be seen from the table that  $R^2$  value and co-efficient values are not significant although per capita income and high life expectancy bear positive relationship with morbidity.

The first hypothesis is that morbidity is negatively influenced by health expenditure and literacy level of the people. The multiple regression results show negative co-efficient for health expenditure and literacy level suggesting the fact that morbidity is negatively related to these factors. Therefore, the second hypothesis is also proved to be correct.

The second hypothesis is that per capita income negatively determines the morbidity is not borne out by the findings of the study. The positive coefficient representing per capita income indicates with higher per capita income the diseases also increase. This may be proved in the case of non-communicable diseases like cancer, heart diseases, blood pressure, diabetics which are in fact described as diseases of affluence.

#### Conclusion

Kerala is well known for its achievements in the field of social development like education, health, family planning etc. low birth rate, death rate always with higher life expectancy, lowest infant mortality and low levels of disability are the characteristics of Kerala achieve The morbidity trends to decrease because of improvement in prevention and treatment of illness, but trends to increase with increased perception due to better health awareness.

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## Health Insurance Companies in India – A Comparative Study

## Pranav S., Post-Graduate Student, MBA - Insurance Management

Language in India <u>www.languageinindia.com</u> ISSN 1930-2940 Vol. 13:4 April 2013

#### Abstract

My research is aimed at understanding the Health Insurance sector in India and flagging issues relating to competition in this sector. This report provides a broad direction for India's health sector in the coming years. In doing so, it describes India's achievements with regard to the three key goals of health policy - improvement in health status, financial health protection and equity.

The role of both public and private institution in provision of such services is studied in the overall context. The focus is to analyze the status of health in India, and is done by bringing together data and analysis from government documents, health economics and mainly from health insurance company websites and a host of other sources.

The study mainly focusing on the health insurance sector in India, and the comparative study on different companies who providing health insurance, based on their products and plans.

#### Introduction

The health care system in India is characterized by multiple systems of medicine, mixed ownership patterns and different kinds of delivery structures. It is interesting to note that although compared to other countries in the Asian continent, Indians are heavy users of health care services (about 5% of GDP being spent on healthcare, 80 percent of which is private expenditure). Health insurance in India is not yet that popular. In fact, health care market is almost untouched, with only 3.4 to 3.5 million members covered.

## **Health Insurance**

Heath insurance, which is being provided mainly by the general insurance companies, is a segment with great potential for growth because of greater health consciousness and increasing risk in the wake of faster phase of life, environmental pollution, etc. The increasing pollution levels are taking a toll in terms of the health of a large portion of the pollution, especially residents of metropolitan cities. These phenomena have made many people susceptible to

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respiratory diseases of one kind or the other.

## The Indian Healthcare Industry

The Indian healthcare industry is expected to reach US\$ 280 billion by 2020 on the back of increasing demand for specialized and quality healthcare facilities. Further, the hospital services market, which represents one of the most important segments of the Indian healthcare industry, is expected to be worth US\$ 81.2 billion by 2015

## Health Insurance – A Limited Market in India

Health insurance in a narrow sense would be 'an individual or group purchasing health care coverage in advance by paying a fee called premium. The health insurance market in India is very limited covering about 10% of the total population. Health insurance expenditure in India is roughly 6% of GDP, much higher than most other countries with the same level of economic development. Of that, 4.7% is private and the rest is public.

In private insurance, buyers are willing to pay premium to an insurance company that pools people with similar risks and insures them for health expenses. The key distinction is that the premiums are set at a level, which provides a profit to third party and provider institutions. Premiums are based on an assessment of the risk status of the consumer (or of the group of employees) and the level of benefits provided, rather than as a proportion of the consumer's income.

In the public sector, the General Insurance Corporation (GIC) and its four subsidiary companies (National Insurance Corporation, New India Assurance Company, Oriental Insurance Company) and United Insurance Company) and the Life Insurance Corporation (LIC) of India provide voluntary insurance schemes.

## **Health Insurance Claim Settlement**

Health insurance claim settlement has been calculated using the following formula -

Health insurance claim settlement ratio = (total claims - claims rejected) %

Insurers	Claim Settlement Ratio (%)
Apollo Munich	76*
Bajaj Allianz	84

## Table: 1 (Claim Settlement Ratio)

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Bharti AXA	65
Chola MS	62
Future Generali	79
HDFC ERGO	73
ICICI Lombard	65
IFFCO-Tokio	46
Max Bupa	65*
Oriental Insurance	92
Reliance General	73
Royal Sundaram	93
Star Health	61*
New India Assurance	89
United India Assurance	78

\*Stand alone health insurance companies

The health insurance claim settlement ratio of the insurers in 2011 is given above.

	General Insurance Companies	Life Insurance Companies	Health insurance	
1	Bajaj Allianz General Insurance Co Ltd	Life Insurance Corporation of India	Appolo DVK Insurance Co. Ltd.	
2	Bharti Axa General Insurance Co. Ltd.	Aviva Life Insurance	Max-Bupa Health Insurance Co Ltd	
3	Cholamandlam MS General Insurance Co. Ltd	Birla Sun Life Insurance	Religare Health Insurance Company Limited	
4	Future Generali Indua Insurance	Bajaj Allianz Life Insurance Co Ltd	Star Health and Allied Insurance Co. Ltd.	
5	HDFC Ergo Genral Insurance Co Ltd	Bharti AXA Life Insurance Co Ltd		
6	ICICI Lombard General Insurance Co. Ltd.	Future Generali India Life Insurance Company Limited		
7	IFFCO Tokio General Insurance Co. Ltd.	HDFC Standard Life Insurance Company Ltd.		

## **Companies Providing Health Insurance Product**

Table: 2

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8	National Insurance Co Ltd	ICICI Prudential Life	
		Insurance Co. Ltd	
9 Reliance General Insurance Co.		IDBI Fortis Life Insurance	
	Ltd.	Co, Ltd.	
10	Shriram General Insurance	Max Life Insurance Co. Ltd.	
	Company Limited		
11	Royal Sundaram Alliance	MetLife India Insurance Co.	
	Insurance Co. Ltd	Ltd.	
12	TATA AIG General Insurance Co.	Reliance Life Insurance Co.	
	Ltd.	Ltd	
13	The New India Assurance Co. Ltd.	SBI Life Insurance Co. Ltd.	
14	The Oriental Insurance Co. Ltd.	Star Union Dai-ichi Life	
		Insurance Co. Ltd.	
15	United India Insurance Co. Ltd.	TATA AIA Life Insurance	
	Super Top Up	Co. Ltd.	
16	Universal Sompo General		
	Insurance Co. Ltd.		

## **Types of Health Insurance Plans**

#### Table 3

	Individual Health Insurance Plan	Family Floater Health Insurance Plan	<u>Critical Care</u> <u>Health</u> <u>Insurance Plan</u>	Group Health Insurance Plan
<u>Bajaj Allianz</u> <u>General Insurance</u> <u>Co Ltd</u>	<ul><li>Health Guard</li><li>Hospital Cash</li></ul>	<ul> <li>Family Floater Health Guard</li> <li>Insta Insurei Family Floater Policy for Rs 1 Lacs</li> <li>Star Package</li> </ul>	Critical Illness	<ul> <li>Group Health Guard</li> <li>Group Critical Illness</li> </ul>
<u>Bharti Axa</u> <u>General Insurance</u> <u>Co. Ltd.</u>	• Smart Health Individual Policy	<ul> <li>Smart Health Essential Insurance Policy</li> <li>Smart Health High Deductibles</li> </ul>	• Smart Health	

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		Insurance Policy • Smart Health Insurance Policy.	
<u>Cholamandlam</u> <u>MS General</u> <u>Insurance Co. Ltd</u>	• Individual Health	• Family Health.	• Group Health
<u>Future Generali</u> <u>India</u> <u>Insurance Co.Ltd.</u>	• Health Suraksha		• Group Health Policy
<u>HDFC Ergo</u> <u>Genral Insurance</u> <u>Co Ltd</u>	• Health Suraksha	Health Suraksha     Critical     Illness	• Group Health Insurance
ICICI Lombard General Insurance Co. Ltd.	• Health Advantage Plus	Family Floater Health Insurance     Critical Care	Group Mediclaim Insurance Policy
IFFCO Tokio General Insurance Co. Ltd.	Individual     Medishield	Swasthya Kavach     Critical Illness Policy	
<u>National</u> <u>Insurance Co Ltd</u>	Mediclaim Policy	<ul> <li>Parivar – Mediclaim for Family</li> <li>Star National Swasthya Bima Policy</li> <li>BOI National Swasthya Bima</li> </ul>	
<u>Reliance General</u> <u>Insurance Co.</u> <u>Ltd.</u>	• Individual Mediclaim	Reliance Health Wise Policy     Reliance Critical Illness Policy	Reliance Group Mediclaim Insurance Policy
<u>Royal Sundaram</u> <u>Insurance Co.</u> <u>Ltd.</u>	• Health Shield Individual Insurance	<ul> <li>Health Insurance for Individuals and Family</li> <li>Health Shield Online</li> </ul>	

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Tata AIG General Insurance Co Ltd	• Maharaksha		Criticare	Group     Multi     Guard
The New India Assurance Co. Ltd.	• Mediclaim			
<u>The Oriental</u> <u>Insurance Co.</u> <u>Ltd.</u>	<ul> <li>Individual Mediclaim Policy</li> </ul>	Happy Family floater Health Insurance/Policy Wording		Group Mediclaim Policy
<u>United India</u> Insurance Co. Ltd.	Mediclaim     Policy	Family Medicare     Policy India		Mediclaim     Policy
<u>Universal Sompo</u> <u>General Insurance</u> <u>Co. Ltd.</u>	• Individual Health	Health Care Plus     Policy	<ul> <li>Aapat Suraksha Bima Policy</li> </ul>	Group Health Insurance Policy
<u>Life Insurance</u> <u>Corporation of</u> <u>India</u>		<ul> <li>Health Protection Plus</li> <li>Health Plus</li> </ul>		
<u>Aviva Life</u> <u>Insurance</u>		Aviva Life     Shield Plus	• Aviva Health Plus	
Bajaj Allianz Life Insurance Co Ltd		Family Care     First		
Bharti AXA Life Insurance Co Ltd		• Easy Health	• Swasthya Sanjeevani	
HDFC Standard Life Insurance Company Ltd.			<ul> <li>HDFC Critical Care Plan</li> <li>HDFC Surgicare Plan</li> </ul>	
ICICI Prudential Life Insurance Co. Ltd.		Health Saver, Medi Assure	Crisis Cover	
Max Life Insurance Co. Ltd.		Life Line Healthy Family Plan	• LifeLine Wellness Plan	

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			<ul> <li>LifeLine- Safety Net Plan</li> <li>Lifetime Wellness Plus Plan</li> </ul>	
<u>MetLife India</u> <u>Insurance Co.</u> <u>Ltd.</u>		• Met Health Care	• Met Health Care	
<u>SBI Life</u> <u>Insurance Co.</u> <u>Ltd.</u>			<ul> <li>SBI Health Product</li> <li>Group Schedule of Critical Illness</li> </ul>	
<u>TATA AIA Life</u> <u>Insurance Co.</u> <u>Ltd.</u>			<ul> <li>Life Health Investor</li> <li>Life Health Protector</li> </ul>	
Apollo Munich Insurance Co Ltd	• Easy Health Individual			• Group Health Insurance
<u>Star Health and</u> <u>Allied Insurance</u> <u>Co. Ltd.</u>	<ul> <li>Medi Classic</li> <li>Medi Premier</li> <li>True Value</li> </ul>	• Family Health Optima.	Star Criticare     Plus	

# **Individual Health Insurance Plan**

Individual Health Insurance Plan is a type of insurance coverage that pays for medical and surgical expenses that are incurred by the insured. Individual Medical Insurance Policy is a policy where each of the insured members is entitled to the entire amount separately. The Individual medical insurance Policy is great for older families and when the health risk is more. There are no age restrictions on the maximum age for the members for renewable. You can avail the benefits of Loading and Discounts until the policy lapses.

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# Family Floater Health Insurance Plan

Family floater means cover for family. It is same as insurance for family. The family could include two members or more. According to the number of family the premium amount will increase.

# **Critical Care Health Insurance Plan**

Critical Care or critical illness is an insurance product, where the insurer is contracted to typically make a lump sum cash payment if the policyholder is diagnosed with one of the critical illnesses listed in the insurance policy. The policy may also be structured to pay out regular income and the payout may also be on the policyholder undergoing a surgical procedure.

# **Group Health Insurance Plan**

Group Health Insurance Plan is an insurance plan that provides healthcare coverage to a select group of people. Group health insurance plans are one of the major benefits offered by many employers. These plans are generally uniform in nature, offering the same benefits to all employees or members of the group. Group health insurance plans usually cost less for participants than individual plans that offer the same benefits. This is because the risk is spread over the entire group, rather than one person.

# Conclusion

Everyone should be covered by some form of health insurance. People are always vulnerable to injury and illnesses from their everyday activities. Whether it is an individual plan or employeror government-sponsored coverage, having health insurance is better than not having it at all. Millions of Americans are uninsured in part due to high premium costs. Many are forced to pay these high health costs out of pocket, which can create more problems medically and financially.

Indian Health insurance or medical insurance sector has been growing, since the country's economic reforms. The reason why mediclaim insurance, has grown is that it ensures good medical care from reliable health care institutions. With numerous companies offering health insurance and with a variety of health insurance plans on the offer it's hard to decide which plan you should go for. This is the study for finding which plan fits your needs the best. This competitive market means that you will need to compare policies to find the best health insurance plans.

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# An Overview of Tourism Industry and Its Impact on the Heath **Status in Sikkim State**

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#### Abstract

The present study examines the impact of tourism industry on regional economic and health status in Sikkim state. Tourism industry is a largest contributor on the state economy and an important industry in Sikkim state. The growth and development in tourism has contributed in the socio-economic development in the state. Tourism is also resulting in the improvement in the health status of people in the region. The increase of inflow the tourists in Sikkim state resulted in the economic benefit in the regional. The percapita Gross State Domestic Product is increasing along with the growth of the tourism sector. The average annual growth rate of Gross State Domestic Product was 10.7 percent from 2004 to 2009 and the average annual growth rate of inflows of tourists was 18.4 percent. In the year 2004-05 the population below poverty line was 30.9 percent which decreased to 13.1 percent in the year 2009-10. Tourism has its indirect impact on the health status. Tourism is providing the income and employment to the people and thereby making economically sound, which results in improving the health status. Tourism is helping in reducing poverty and boasts the regional economy, which has indirectly leads to the better standard of living and improved health status of the people of Sikkim.

Keywords: Tourism, Health, Sikkim, poverty.

#### **1. Introduction and Background**

Sikkim is one of the Himalayan states lying in between 27 to 28 degrees North latitude and 88 to 89 degrees East longitude is the second smallest state of India with the total area of 7096 square kilometres and covered by the three international boundaries of Tibet Autonomous Region- china from North, Nepal from West, and Bhutan from East and

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National boundary of West Bengal from South. Natural beauties of Sikkim state make her an important tourists' destination for tourists in India. Its rapid growth and development contributed in the socio-economic development in the state. Tourism Development in any area invariably leads to economic growth of that area, which is manifested in terms of increase in income and employment opportunities, infrastructural growth, improvement in the standard of living, etc (Joshi, R & Dhyani, P.P, 2009). Tourism, in particular, has contributed in several important ways to the positive performance of the average small economy (Sr., M.V and Croes, R.R, 2003). Sikkim has become one of the popular tourist destinations in India and inevitably is susceptible to environmental unsustainability. Keeping this point in view, this tiny state has started promoting village tourism. Such type of tourism is based on peoples' participation approach where the local culture acts as the central resource of investment. Local people in this context become the sole responsible authority to maintain the natural as well as cultural sustainability and also to generate profits from tourism activities in a collective way (D. Subhajit and R. K. Priyom, 2012). It not only brings in the economic development but also improves the social aspect of the people. The development through tourism is also resulting in the improvement in the health status of the people in and around tourist's destination area. Tourism is providing the income and employment to the people and thereby solving the economic problem, which results in the improvement in health.

Tourism is a major industry in Sikkim state. It is providing employment and income to the people. The increase of inflow the tourists in Sikkim resulted in the economic advantage to the regional economy. Tourism helps in reducing poverty and boasts the regional economy, which leads to the better standard of living and improved health status of the people. In this context, the present study examines the contribution of tourism industry on economic development and health status in Sikkim state.

#### 2. Objectives

The objective of this paper is to examine the impact of tourism on the health status in Sikkim.

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#### 3. Methodology

#### 3.1. Data and Sources

The present study is conducted on the tourists' inflow and health status in Sikkim state. The study is based on secondary data which have been collected from the Tourism Department of Government of Sikkim, Department of Statistics, evaluation and monitoring, Department of Health Care, Human Services and Family welfare and various others organization.

#### 3.2. Statistical Methods Used

The increasing inflows of tourist, precapita State Gross Domestic Product and health status have been used to have a comparative study. Simple percentage and average annual growth rate of Gross State Domestic Product, Tourists' inflows and population below poverty line has been used to examine the comparative study between the inflows of tourists and health status in Sikkim state.

#### 4. Results and Discussion

#### 4.1. Discussion on Economy, Tourism and Health Status in Sikkim State

The economy of Sikkim state is largely depends on the Natural, forest and agricultural activities. Though Sikkim is a small Himalayan state, there has been remarkable growth in the regional economy. The increase in the Gross State Domestic Product shows this fact.

Sl. No	Year	Percapita GSDP
1	2000-01	394.5
2	2001-02	428.8
3	2002-03	504.1
4	2003-04	581.1
5	2004-05	621.9
6	2005-06	703.6
7	2006-07	836.8
8	2007-08	973.8

Table 1 The Per capita Gross State Domestic Product of Sikkim (US\$ million)

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9	2008-09	954.4
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Source: India Brand Equity Foundation.

Table 1 shows the percapita Gross State Domestic Product in US\$, which is increasing every year. The average annual growth rate of percapita Gross State Domestic Product in last one decade was 15.76 percent. It increased from \$ 394.5 in the year 2000-01 to \$ 954.4 in the year 2008-09. Trade, tourism, transportation and agriculture are the key drivers to the Gross State Domestic Product (India Brand Equity Foundation, 2010). Among all the three sectors, tertiary sector is the highest contributor in the state economy. It is 48 percent and it is driven by the real estate, trade, transportation, communication, hotels.

Tourism is a major industry in Sikkim state. Its natural beauty, peaceful sociophysical environment attracts more tourists from all over the world. The growth in tourism sector can be observed with the increasing inflows of tourists over a period of time in the region.

Sl.				Total number of
No.	Year	Domestic Tourist	Foreign Tourist	Tourist Arrival
1	2000	180256	8794	189050
2	2001	192354	7757	200111
3	2002	203835	8539	212374
4	2003	220824	10954	231778
5	2004	286687	13528	300215
6	2005	347650	16518	364168
7	2006	421943	18049	439992
8	2007	465204	17837	483041
9	2008	512373	21162	533535
10	2009	615628	17730	633358

Table 2 Tourist inflow trend in Sikkim (2000 - 2009)

Source: Department of Tourism, Government of Sikkim.

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Table 2 shows the inflows of tourists in Sikkim state. It is clear from the table 2 that the inflows of tourists are tremendous. It has increased from 189050 in the year 2000 to 633358 in the year 2009 at an average annual growth rate of 23.5 percent. As per types of tourists, the increase in domestic tourists was from 2000 to 2009 was 24 percent and for foreign tourists it was 10 percent. In the year 2009, the inflow of foreign tourists decreased as 17730. The reason for the fall in the inflows of foreign tourist was because of natural and social factors like landslides and rainy season. Due to global slowdown, terrorist activities, H1N1 influenza pandemic etc, there was a slight decrease in the foreign tourists during the year 2009 compared to the year 2008 (Annual Report, Department of Tourism, Government of Sikkim, 2009-2010).

Tourism industry has its wide impact on Sikkim state. The increasing inflow of tourists is providing employment to the local people and it results in the income to the people. It is found as major livelihood activities of the local community people in tourists' destinations. More the tourist more will be the economic benefit to the local community, later which the social, physical and health status of the people. It is providing both direct and indirect income and employment to the people. This results in improvement in the economic condition of the people.

As tourism has direct, indirect and induced impact on the host region. Whereas, as per the health is concerned, there is impact but indirect impact. Tourism has its indirect impact on the health of an individual. In first phase, it has direct impact on the regional economy through income and employment to the people, improving standard of living and reducing poverty in the region. In the second phase, it has its indirect impact on the health of an individual. With the results of the improved economy and financial condition through tourism sector, especially in rural area, individual results in better health. The impact of tourism on the health status in Sikkim can be estimated from the table 3 and table 4, with the help of improved Percapita Gross State Domestic Product and Poverty line in the state.

			Total number of Tourist
Sl. No	Year	GSDP*	Arrival**
1	2004	581.1	300215
2	2005	621.9	364168
3	2006	703.6	439992
4	2007	836.8	483041
5	2008	973.8	533535
6	2009	954.4	633358

Table 3 Per capita Gross State Domestic Product (US \$) and inflows of tourists

Sources: \* India Brand Equity Foundation \*\* Department of Tourism, Government of Sikkim

Table 3 shows the percapita Gross State Domestic Product and inflows of tourists from the year 2004 to 2009. It is clear from the table that the Percapita Gross State Domestic Product is increasing along with the increasing in the tourism sector. The average annual growth rate of Gross State Domestic Product was 10.7 percent and the average annual growth rate of inflows of tourists from 2004 to 2009 was 18.4 percent. The growth of tourism sector is with the increasing inflows of tourists. The tourists' inflow in Sikkim is increasing continuously which shows it growth in tourism sector.

Table 4 Population below Poverty Line in Sikkim (%)

		Below poverty line (%)			
Sl. No	Year	Urban	Rural	Total	
1	2004-05	25.9%	31.8%	30.9%	
2	2009-10	5%	15.5%	13.1%	

Source: Sikkim NOW.

Table 4 shows the percentage of population below poverty line in Sikkim state. There was a fall in the poverty line in Sikkim state from 2004-05 to 2009-10. In the year 2004-05 the population below poverty line was 30.9 percent which decreased to 13.1 percent in the year 2009-10. As compared to the increasing inflows of tourists and Gross state Domestic product, the percentage of population below poverty line is opposite. It is decreasing when the tourism and economy of the state is improving, which shows a positive report.

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Sl.				Infant Mortality
No.	Year	Birth Rate	Death Rate	Rate
5	2004	19.5	4.9	32
6	2005	19.9	5.1	30
7	2006	19.2	5.6	33
8	2007	18.1	5.3	34
9	2008	18.4	5.2	19

Table 5 Estimated Birth Rate, Death Rate and Infant Mortality Rate- 2004-08 (per thousand)

Source: Health Information Bulletin- 2010, Government of Sikkim.

Table 5 shows the estimated Birth Rate, Death Rate and Infant Mortality Rate (2004-08). The birth rate was 19.5 in the year 2004 and fall to 18.4 in the year 2008. The death rate was 4.9 in the year 2004 and 5.2 in the year 2008. The infant mortality rate has decreased from 32 in the year 2004 to 19 in the year 2008.

#### 5. Conclusion

Tourism industry is a largest contributor on the state economy of Sikkim and found as an important industry in Sikkim state. Its growth and development has contributed in the socio-economic development people in the Sikkim state. Tourism is also resulting in the improvement in the health status of the people in and around tourist's destination area in the region. Tourism has its indirect impact on the health of an individual. Tourism is providing the livelihood opportunities to the people and thereby making sound economic background, which later improving the health status. The percapita Gross State Domestic Product is increasing along with the growth of the tourism sector. The increase of inflow the tourists in Sikkim resulted in the economic advantage to the regional economy. With the increasing in tourism and regional economy, the percentage of population below poverty line has come down tremendously. The improved financial condition of people through tourism, it results in better health. Tourism is helping in reducing poverty and boasts the regional economy, which

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has indirectly leads to the better standard of living and improved health status of the people of Sikkim.

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# A Study on Health Indicators and Their Determination with Reference to India

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#### Introduction

Health is defined as a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity" (The World Health Organisation). It is an essential objective of development and the capacity to develop depends on health, i.e., health and development are interdependent and health status cannot be traded off against economic gain. "Wealth cannot buy health, but health can buy wealth" Many factors combine together to affect the health of individuals and communities. Whether people are healthy or not, is determined by their circumstances and environment. To a large extent, factors such as where we live, the state of our environment, genetics, our income and education level, and our relationships with friends and family all have considerable impacts on health, whereas the more commonly considered factors such as access and use of health care services often have less of an impact. In this context this paper examines health indicators and their determinants with special reference to India and also the importance of vulnerability and health care. This paper is only diagnostic study and also based on secondary data.

#### The Importance of Measuring Health Status

If we want to understand the most important global health issues and what can be done to address them, then we must understand what factors have the most influence on health status, how health status measured, and what key trends in health status have occurred historically, we must, in fact, be able to answer the questions that are posed in the narratives above. If one wants to understand and address differences in health status among different groups, then how do we have to measure health status? Do we measure it by age? By gender? By socio-economic status? By level of education? By ethnicity? By location?

#### Millennium Development Goals (MDG) Related to Health Aspects

The aim of the MDGs is to encourage development by improving social and economic conditions in the world's poorest countries. They derive from earlier international development targets, and were officially established following the Millennium Summit in 2000, where all world leaders present adopted the United Nations Millennium Declaration.

### **Goal 4: Reduce Child Mortality Rates**

- Target 4A: Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate
  - Under-five mortality rate
  - Infant (under 1) mortality rate
  - Proportion of 1-year-old children immunized against measles

# **Goal 5: Improve Maternal Health**

- Target 5A: Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio
  - Maternal mortality ratio
  - Proportion of births attended by skilled health personnel
- Target 5B: Achieve, by 2015, universal access to reproductive health
  - Contraceptive prevalence rate
  - Adolescent birth rate
  - Antenatal care coverage
  - Unmet need for family planning

# Goal 6: Combat HIV/AIDS, Malaria, and Other Diseases

• Target 6A: Have halted by 2015 and begun to reverse the spread of HIV/AIDS

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- HIV prevalence among population aged 15–24 years
- Condom use at last high-risk sex
- Proportion of population aged 15–24 years with comprehensive correct knowledge of HIV/AIDS
- Target 6B: Achieve, by 2010, universal access to treatment for HIV/AIDS for all those who need it
  - Proportion of population with advanced HIV infection with access to antiretroviral drugs
- Target 6C: Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases
  - Prevalence and death rates associated with malaria
  - Proportion of children under 5 sleeping under insecticide-treated bednets
  - Proportion of children under 5 with fever who are treated with appropriate anti-malarial drugs
  - o Incidence, prevalence and death rates associated with tuberculosis
  - Proportion of tuberculosis cases detected and cured under DOTS (Directly Observed Treatment Short Course)

# **Importance of Health Status and Vulnerable Groups**

The capacity for survival in the prevailing socio-economic conditions is accompanied by adaptation to a poorer quality of life and increasing under-nourishment is all age groups, particularly mothers, infants and children. The technology and health care available appears to be able to sustain and prolong life in conditions of great deprivation. The proportion of babies with a low birth weight in a poor country with a relatively very high life expectancy is an alarming evidence of this phenomenon.

Vulnerability groups have nevertheless for survival in conditions of extreme deprivation. This capacity indicates their potential for greater productivity, given adequate access to resources. The development strategy can transform vulnerable communities and lift

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them to act simultaneously on all the conditions responsible for their vulnerability. The continuing impact that such a strategy has on the well-being of the household and the community will be the measure of its success. In it improvement of health status plays a vital role and becomes a critical indicator for the other inputs required for the process of transformation.

#### **Meaning of Vulnerability**

Vulnerability refers to a condition to which the physical and mental well-being required for a normal productive live is impaired and at constant risks. In general it refers to any conditions of exposure to hazards, risks, and stress and the poor health provides an initial entry to this condition. The pattern of morbidity, mortality and reproduction reflects the health-related vulnerability of individuals and communities, and are the products of various forms of social and economic deprivation acting simultaneously. The concept of vulnerability is implicit in the concept of health risk, which has always been part of public health. Vulnerability depends on the level of development and the health transition stage of the concerned country at any given point of time. Each society has its typical patterns for ill health and within these general patterns certain population groups and sections of society are exposed to the highest health hazards and have the lower chances for survival and the poorest quality of life. They form the most vulnerable groups, which consist of women in rural areas, unemployed youths, migrant workers and teenage mothers.

# The Various Indicators Used for Defining Health Status in all its Various Characteristics can be Grouped into Four Clusters

i. The first cluster consists of the following - the types of diseases, their incidence, and the rates morbidity. It helps in defining the prevailing patterns of morbidity and identifying the disease that causes the major health problems. It is also useful for reflecting the quality of the health care available, the infrastructure of the curative, preventive and rehabilitation services, and the quality of the physical environment, including water, housing and sanitation.

- ii. The second cluster relates the conditions immediately antecedent disease, such as malnutrition or under nutrition in its various forms, obesity, low birth weight; reproductive health status such as birth spacing and fertility rates; level of immunization, smoking, alcohol and drug abuse; frequently referred to as risk factors.
- iii. The third cluster relates to the mortality indicators.
- iv. The fourth cluster relates to the process of indicators and it included those which relate to the processes that contribute to health status outcomes and human development.

The above mentioned four clusters include not only the quality of health services and the extent to which they are utilized, but also the inputs of education, the immediate health environment of housing, water, and sanitation, the work environment, and the income and purchasing power. The indicators used to define health contain the main elements of the primary health care strategy which emphasizes the importance of water and sanitation, information, agricultural extension, and other services designed to protect and improve health status.

#### **Key Health Indicators**

**Life Expectancy at Birth -** The average number of years a newborn baby could expect to life if current mortality.

**Maternal Mortality ratio** - The number of women who die as a result of pregnancy and child birth complications per 100,000 live births in a given year.

**Infant Mortality Rate** - The number of deaths of infants under age 1 per 1000 live births in a given year.

**Neo-natal Mortality Rate** - The number of deaths to infants under 28 days of age in a given year per 1000 live births in that year.

**Under 5 Mortality Rate** (child mortality rate) - The probability that a newborn baby will die before reaching age 5, expressed as a number per 1000 live births.

#### Table-1

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Sl.No	Parameters	1951	1981	1991	2001	<b>Current Levels</b>
1	Crude Birth Rate per 1000 population	40.8	33.9	29.5	25.4	22.1 SRS (2010)
2	Crude Death Rate (Per 1000 population)	25.1	12.5	9.8	8.4	7.2 SRS (2010)
3	<b>Total Fertility Rate</b>	6.0	4.5	3.6	3.1	2.6 (2009)
4	Maternal mortality Ratio	NA	NA	398 <b>SRS</b> (1997-98)	301 (2001-03)	212 SRS (2007-09)
5	Infant Mortality Rate (Per 1000 live births)	146 (1951-61)	110	80	66	47 SRS (2010)
6	Child Mortality Rate (0-4 Years) Per 1000 children	57.3 (1972)	41.2	26.5	19.3	14.1(2009)
7.	Neo Natal Mortality Rate					35 SRS (2009)
8	Couple Protection Rate (%)	10.4 (1971)	22.8	44.1	45.6	40.4(2011)
9	Expectation of life at Birth					
	( in Years)		54.1			62.6
	Male	37.1	54.7	60.6	61.8	64.2
	Female	36.1 (1951)		61.7 (1991-96)	63.5 (1999-03)	

# Health Status Indicators in India-2011

**Source**: httpmohfw.nic.inNRHMDocumentsExecutive\_Summary\_september\_2011.pdf

The table-1 reveals that major health indicators in India as on 30<sup>th</sup> September 2011. Still the progress of health status in India has not impressive after getting 60 years of republic. It is not easy task to achieve MDG's Goals in India before 2015.

# What Influences Health

There are many factors that influence people's health and they are known as the determinants of health. These factors are often interactive and outside an individual's control. The below diagram summarises the main determinants of health according to their spheres of influence. Starting from those at the individual level and moving through to those in the wider society.

# **Figure-A**

# Main Determinants of Health



Source: Whitehead M. & Dahlgren G. (1991)

# The Determinants of Health Include

- the social and economic environment,
- the physical environment, and
- the person's individual characteristics and behaviours.

The context of people's lives determines their health, and so blaming individuals for having poor health or crediting them for good health is inappropriate. Individuals are unlikely to be able to directly control many of the determinants of health. These determinants—or things that make people healthy or not—include the above factors, and many others:

- **Income and Social status** higher income and social status are linked to better health. The greater the gap between the richest and poorest people, the greater the differences in health.
- Education low education levels are linked with poor health, more stress and lower self-confidence.
- **Physical Environment** safe water and clean air, healthy workplaces, safe houses, communities and roads all contribute to good health. Employment and working

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conditions – people in employment are healthier, particularly those who have more control over their working conditions

- Social Support Networks greater support from families, friends and communities is linked to better health. Culture customs and traditions, and the beliefs of the family and community all affect health.
- **Genetics** inheritance plays a part in determining lifespan, healthiness and the likelihood of developing certain illnesses. Personal behaviour and coping skills balanced eating, keeping active, smoking, drinking, and how we deal with life's stresses and challenges all affect health.
- Health Services access and use of services that prevent and treat disease influences health
- Gender Men and women suffer from different types of diseases at different ages.

### **Evidence Base of Health Determinants**

An evidence base about the impact that projects, programmes and policies have had on health is required to carry out **Health Impact Assessment (HIA)**. The best available evidence is used within the appraisal stage of HIA to determine what impacts may occur (both positive and negative), the size of the impact (if possible) and the distribution of that impact in different population groups. It is generally assumed that the evidence for health impacts exists, and that searching and collating will provide the necessary evidence. Unfortunately this is not often the case, and the evidence of health impacts is often not available. This is because of the long causal pathway between the implementation of a project/programme/policy and any potential impact on population health, and the many confounding factors that make the determination of a link difficult. Within the HIA it is important therefore to be explicit about sources of evidence and to identify missing or incomplete information.

Providing a comprehensive review of the evidence base is not simple. It needs to draw on the best available evidence – that from reviews and research papers, and including qualitative and quantitative evidence. This information must be supplemented with local and expert knowledge, policy information, and proposal specific information. However, there are examples where the best available evidence has been documented, and in some cases summarized. These are presented below:

- Transport
- Food and Agriculture
- Housing
- Waste
- Energy
- Industry
- Urbanization
- Water
- Radiation
- Nutrition and health

# Transport

Evidence of health impact focus on:

- Accidents between motor vehicles, bicycles and pedestrians (particularly children and young people).
- Pollution from burning fossil fuels such as particulates and ozone.
- Noise from transportation.
- Psychosocial effects such as severance of communities by large roads and the restriction of children's movement.
- Climate change due to CO2 emission
- Loss of land
- Improved physical activity from cycling or walking
- Increased access to employment, shops and support services
- Recreational uses of road spaces
- Contributes to economic development
- Vector borne diseases

# Food and Agriculture

# **Agricultural Production Issues and Manufacturing**

- Tobacco farming and its impact on heart disease, stroke, certain cancers and chronic respiratory disease. Including passive smoking and impact of foetal development. Pesticide policies on tobacco crops require consideration.
- Changes in land use, soil quality, choice of crop, use of agricultural labour and occupational health.
- Mechanisation of work previously done by hand, and plantation agriculture.
- Fisheries biotoxins, pollution, chemical use, wastewater, processing, and occupational health
- Forestry vector borne diseases, occupational health, and food security.

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- Livestock use vector borne diseases, drug residues, animal feed, waste, and food security.
- Sustainable farming including chemical and energy use, biodiversity, organic production methods, and diversity of foods produced.
- Fertiliser use nitrate levels in food, pollution of waterways, re-use of agricultural waste.
- Water irrigation use and its impact on river/water-table levels and production outputs.
- Pesticide usage and veterinary drugs- legal requirements, best practice, consumer issues.
- Food packaging, preservation and safety, and avoidance of long storage and travel.

# Access to and Distribution of Food

- Household food security appropriate food being available, with adequate access and being affordable (location of markets, supermarkets and closure of small suppliers creating food deserts in cities).
- Food supplies, including national and regional food security, and regional production.
- National food security able to provide adequate nutrition within a country without relying heavily on imported products
- Cold-chain reliability the safety of transporting products that deteriorate microbiologically in the heat.

# Dietary Patterns, Diversity of Food Available and Home Production, Particularly:

- Fruit and vegetable consumption on reduced stroke, heart disease and risk of certain cancers,
- Total, saturated and polyunsaturated fat, carbohydrates and sugars consumption on obesity, heart disease, stroke and other vascular diseases.
- Alcohol consumption and impact on social effects related to behaviour (traffic accidents, work/home accidents, violence, social relations, unwanted pregnancy and STDs), and toxic effects (all-cause mortality, alcoholism, certain cancers, liver cirrhosis, psychosis, poisoning, gastritis, stroke, foetal alcohol syndrome and others).
- Micronutrients such as iron, vitamin A, zinc and iodine and their impact on deficiency syndromes.

# Food Safety and Food Borne Illness Hazards

Food and water are the major sources of exposure to both chemical and biological hazards. They impose a substantial health risk to consumers and economic burdens on individuals, communities and nations.

- Microorganisms such as salmonella, campylobacter, E. coli O157, listeria, cholera.
- Viruses such as hepatitis A, and parasites such as trichomonosis in pigs and cattle.
- Naturally occuring toxins such as mycotoxins, marine biotoxins and glycosides.
- Unconventional agents such as the agent causing bovine spongiform encephalopathy (BSE, or "mad cow disease"),

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- Persistent organic pollutants such as dioxins and PCBs. Metals such as lead and mercury.
- New foods developed from biotechnology such as crops modified to resist pests, changes in animal husbandry, antibiotic use and new food additives.

# Housing

Evidence of health impacts focus on:

- Improvements in housing and improved mental health and general health
- The possibility of improved housing leading to rent rises, impacting negatively on health.
- Movement of original tenants after housing improvement and therefore not benefiting from the improvements.
- Housing tenure, outdoor temperature, indoor air quality, dampness, housing design, rent subsidies, relocation, allergens and dust mites, home accident prevention, and fire prevention.
- Homelessness.

# Waste

Evidence of health impacts focuses on environmental and social determinants related to:

- the transmission of agents of infectious disease from human and animal excreta (sanitation, hygiene and water-related);
- exposure to toxic chemicals in human and animal excreta; and in industrial wastes discharged into the environment;
- environmental degradation, direct and indirect impacts on health;
- exposure to radioactive wastes;
- exposure to health-care wastes;
- exposure to solid wastes and involvement in informal waste recycling; and
- breeding of disease vectors.

# Energy

Evidence of health impacts focus on health hazards such as:

- Fossil fuels
- Biomass fuels
- Hydropower and their impact on vector borne diseases, and pollution
- Electricity generation and transmission
- Nuclear power
- Other energy sources
- Occupational health effects of energy workers
- Impacts on ecosystems, agriculture, forests, fisheries and building materials
- Noise
- Visual impact

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• Global warming

# Industry

Evidence of health impacts focus on industrial sectors such as:

- Asbestos and man-made fibres
- Basic chemicals
- Cement, glass and ceramics
- Electronics
- Iron and steel
- Manufacture of rubber and plastic products
- Metal products
- Mining
- Pesticides, paints and pharmaceuticals
- Petroleum products
- Pulp and pear
- Service industries
- Textiles and leather
- Wood and furniture.

# Urbanisation

Evidence of health impacts focus on topics such as:

- Urban housing problems
- City environment and non-communicable diseases
- Communicable diseases
- Road trauma
- Psychosocial disorders
- Sustainable urban development
- Urban wastes
- Health services

One of the key development challenges facing policy makers in low income country such as India is how they can speed the demographic and epidemiologic transitions at the lowest possible cost. To improve health status of Indians the government should be given the importance of the following efforts made such as:

- ✓ Focusing on investing in nutrition, health, and education, particularly poor and vulnerable groups of the people
- ✓ Improving peopl's knowledge of good hygiene

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✓ Making selected investments in health services that at low cost could have a high impact on health status, such as vaccination programs for children and TB control

#### **Social Determinants of Health**

In a rapidly globalising world, millions continue to experience profound inequities in health, living, working, and too often, dying in conditions of poverty, exclusion, and disenfranchisement. The greatest successes of health system reform- be it primary of Brazil, or abolishing out-of-pocket spending in Thailand1,2,3 -have addressed the wider determinants of health inequities as a national priority, implementing reform through both policy changes and grassroots based action.

The World Health Organisation's Commission on Social Determinants of Health (CSDH) embedded the goal of universal health care in strategies that include improving daily living conditions, tackling the inequitable distribution of money, power, and resources, as well as measuring and understanding health inequities.4,5

The Commission's 2008 report defines health inequities as "systematic differences in health" that are "avoidable by reasonable action," and are "quite simply, unfair."6 It proposes to terminate these systematic differences, i.e. close the gap in a generation, the space of 30 to 40 years, through action on the social determinants of health.7 The **CSDH** defines the **Social Determinants of Health (SDH)** as "the conditions in which people are born, grow, live, work and age, including the health system."8

It encourages countries to provide Universal Health Coverage (UHC) to address health inequity directly. The report acknowledges, moreover, that health inequities arise not only from within but also from beyond the domain of health, through other social determinants, including the "unequal distribution of power, income, goods, and services, globally and nationally, the consequent unfairness in the immediate, visible circumstances of people's lives - their access to healthcare, schools, and education, their conditions of work

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and leisure, their homes, communities, towns, or cities - and their chances of leading a flourishing life."6 It is already well established that among the most critical social determinants of health is the health system itself.9,10 In India, the movement towards Universal Health Coverage (UHC) will necessitate reform of the health system. In addition, Universal Health Coverage will only be possible if there is accompanying action on social determinants like food and nutrition security, social security, water and sanitation, work and income security as well as social inclusion and equity across gender, caste and religious categories. In addition, macroeconomic policies in the country will also have a significant bearing on Universal Health Coverage.

#### Conclusion

In a country like India, characterized by rapid industrialization and economic growth, demographic and disease transitions are vital issues which demand our attention, and challenge us when we want to achieve health equity. In addition to some of the key determinants mentioned here, additional issues will emerge, such as the complex interactions between health and climate change. The CSDH's ultimate aim is to stimulate action to reduce health inequalities within and across nations. By moving towards Universal Health Coverage with action on social determinants, India can contribute to the larger cause of equity and social justice.

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# Choice of Curative Healthcare Provider among Urban Households in Tamil Nadu

# Dr. M. Raju

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#### Abstract

The Indian economy, which has passed through various phases of growth over the last six decades, is now all set to enter an altogether different orbit: one marked by a high rate of expansion, combined with 'inclusive growth'. Access to good quality health services is one of the critical elements of the inclusiveness strategy. Individuals take efforts to improve their health status. Besides the government, NGOs and private sector also play important role in the delivery of health services. Actual consumption of healthcare depends on factors influencing the demand for healthcare such as income, cost of healthcare, education, social norms and traditions. Following a growing literature on healthcare demand, it is necessary to investigate the determinants of access to public and private healthcare provisions and of health seeking behaviour of people broadly. Under this circumstance this paper attempts to estimate the choice model of healthcare providers and systems of medicine for illness, given the relevant characteristics of the individual, the household and the community.

Key Words: Healthcare, Choice of Hospital, Demand for healthcare health seeking behaviour

#### Introduction

The Indian economy, which has passed through various phases of growth over the last six decades, is now all set to enter an altogether different orbit: one marked by a high rate of expansion, combined with 'inclusive growth'. According to Dr. Manmohan Singh (2009), the key components of the 'inclusive growth' strategy included a sharp increase in investment in rural areas, rural infrastructure and agriculture and a sharp increase in public spending on education and healthcare. India needs to spend more on basic health care and education if economic growth is to benefit all members of society, said Amartya Sen (2011). Access to good quality health services is one of the critical elements of the inclusiveness strategy.

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#### Need for the Study

Individuals take efforts to improve their health status. Governments also, from social sector point of view, take efforts to promote the health services available to the people by focusing on preventive and curative services in both rural and urban areas. Besides the government, NGOs and private sector also play important role in the delivery of health services. Actual consumption of healthcare depends on factors influencing the demand for healthcare such as income, cost of healthcare, education, social norms and traditions. Following a growing literature on healthcare demand, it is necessary to investigate the determinants of access to public and private healthcare provisions and of health seeking behaviour of people broadly. Hence a detailed study is needed to estimate the choice model of healthcare providers and systems of medicine for illness, given the relevant characteristics of the individual, the household and the community.

The selection of service provider depends also on the household healthcare expenditure due to the fact that public healthcare system is provided at subsidised rate when compared to other channels. Both preventive and curative public health services in India have been provided free of cost or at very low price. However, public healthcare is not all that 'free' after all; there are many incidental expenses that consumers have to bear on their own. If all the quality and access differentials between public and private healthcare were to be wiped out, there would still be some financial burden on the consumers. The large volume of private health expenditure in India is probably one of the largest in the world when viewed as a proportion to total health expenditure (Duggal, 1986).

#### **Objectives**

The main objective of this paper is to examine the choice of curative healthcare provider by the Urban Households.

#### Methodology

The study used the data generated by UGC Major Research Project on Health Seeking Behaviour of Urban Household of Tamil Nadu by 600 urban households of Tamil Nadu. The

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* Dr. M. Raju Choice of Curative Healthcare Provider among Urban Households in Tamil Nadu sample households were spread in the two municipal corporation areas of Tamil Nadu namely, Coimbatore and Erode. In each municipal corporation, the project covered 24 wards and in each ward 50 households were randomly selected following NSSO sample selection pattern.

In analysing the data our study made tabular analysis by using simple statistical tools. For finding factors which determine the households' choice of healthcare provider and choice of system of medicine Multi-Nominal Logit (MNL) model was used.

#### **Results and Discussion**

In the event of illness, majority of individuals seek some kind of treatment. It is revealed that in the event of health problem, very small per cent (2.5 to 5.4 per cent) of the people were not opting for any kind of care. When an attempt was made to know the reasons for avoiding healthcare, it came to light that want of money and treating the complaint not seriously emerged equally responsible.

It is common knowledge that government hospitals provide service free of cost and private hospitals charge fees. In some cases private hospitals charge exorbitant fees. Inspite of the above facts, data revealed that two third of the sample households took treatment from the private service provider and only three out of every ten of the population have sought Government sources for treatment. It sends a message worth pursuing and validates the reason for such preference.

It was found that there was no difference in seeking either government or private hospital services. However, there was a small difference between age groups in their choice. As age increases there is a gradual increase in the proportion of people (27 to 38 per cent) seeking government hospital services.

Studies often found that poorer patients depend heavily on public health services on account of higher charges levied by private healthcare providers. Also the patients with higher levels of income use more of private care, which is believed to be superior when compared to government-managed hospitals in terms of quality (Selvaraj, 2001). The result of this paper also corroborates the existing studies that as the level of income rises, the dependency on public facilities declines and there is a shift towards private facilities.

#### **Estimation of Household Choice of Curative Healthcare**

In the course of analysing the factors determining the choice of healthcare provider one comes across a situation where persons affected by illness/complaints can be categorised into two, viz., persons who do not prefer any treatment and others who take treatment. The group, which prefers treatment, faces a choice to be made between public and private sources of treatment. In this context factors influencing their preference can be estimated. This kind of categorical multiple choice dependent variable estimation can be made by using Multi-Nominal Logit (MNL) method.

The reduced form of health demand function can be specified as:

 $H_i^* = \alpha_1 + \alpha_2 P_i + \alpha_3 V_i + \alpha_4 E_i + u_i$ ,  $i = 1, 2, \dots N$  individuals

where H\* is the health status of an individual which is unobservable. When the health status of individual falls below a threshold level (Z), the person is reported to be ill. What we can observe is a health indicator, which takes the value of 1 if the person is reported to be ill during the reference period and 0 otherwise. That is

H = 1 if  $H^* < Z$  and

H = 0 otherwise

Seeking healthcare depends upon the sickness tolerance level, which varies from person to person. Similarly, the type of care demanded also depends upon the severity of the illness. The conditional demand for curative care can be specified as

 $[Mi/Hi = 1] = \beta 1 + \beta_2 P_i + \beta_3 V_i + \beta_4 B_i + e_i, \quad i. = 1,2 \dots m \text{ sick persons.}$ 

Where M = 0 if no treatment

= 1 if self treatment and other care (other than public and private)

= 2 if private health facilities are used for treatment

= 3 if public health facilities are used for treatment

The untreated cases are treated as normalised or reference category. We have used the multi-nomial Logit estimation of choice of curative healthcare and presented it in Table 2 and Table-1, presents summary statistics relating to the variables that were used for estimating the model. The socio-economic variables used were district, gender, age, educational level, occupation, religion, and the social group. The income variable gives the annual household income associated with a particular individual in the data. The district variable is used as a dummy variable. The variable on gender is a categorical variable, which takes a value of 1 if individual is a male and 0 in the case of female. Similarly, the variable educational attainments are divided into levels and valued 1 for each level and otherwise 0. Age is continuous variable.

Important findings emerging from the analysis of choice of curative care over and above the reference category at 5 per cent level are that the household income negatively influences the choice of Government hospital, the salaried category does not prefer government hospital for treatment. So the result shows that income is the main criteria to choose the hospital. As compare to government hospital, the private hospital are providing quality treatment the people want to take treatment in the private hospital and only poor are seeking treatment in the government hospital.

#### **Policy Recommendations**

In India, government hospitals provide service free of cost without discriminating between the poor and the rich. Even with sophisticated technologies, instruments and highly qualified super speciality medical and para-medical staff, the quality of treatment and efficiency of the government hospitals is not satisfactory. Private partnership in the government hospitals have strong potential for improving the efficiency of healthcare systems in India. It is better to introduce user charges with differential fees to protect the poor. The high-income group can also use government hospital facilities with nominal cost.

#### Conclusion

Despite investing billions on social sector schemes, there is still a whopping gap in income growth and health delivering in many states of India. The government is unable to

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* Dr. M. Raju Choice of Curative Healthcare Provider among Urban Households in Tamil Nadu provide high quality and efficient public services to the people both in the rural and urban areas. While private healthcare providers rendered quality services but it is inaccessible to poor people. Therefore there is a need for public-private partnerships in the health sector. The private sector should take more social responsibility and contribute towards making growth more inclusive.

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#### ANNEXURE

# Table 1 Variable Definition and their Summary Statistics

variable Demitton and their Summary Statistics				
Variable	Mean	Std. Deviation		
Coimbatore (District dummy)	0.3956	0.4893		
Erode (District dummy)	0.2551	0.4362		
Thanjavur (District dummy)	0.3492	0.4771		

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Male (= 1 else 0)	0.4434	0.4971	
Age	32.23	20.92	
Illiterate (Education dummy)	0.3738	0.4841	
Primary (Education dummy)	0.1801	0.3845	
Secondary (Education dummy)	0.1733	0.3787	
Degree (Education dummy)	0.0218	0.1462	
Labour (Occupation dummy)	0.0777	0.2680	
Self-employed (Occupation dummy)	0.1337	0.3406	
Salaried (Occupation dummy)	0.1132	0.3171	
Household size	4.14	1.51	
Household annual income	31253.94	22672.75	
Hindu (Religion dummy)	0.7954	0.4037	
Muslim (Religion dummy)	0.1542	0.3613	
Christian (Religion dummy)	0.0504	0.2191	
SC/ST (Social group dummy)	0.2567	0.4371	
BC (Social group dummy)	0.7277	0.4455	
Others (Social group dummy)	0.0156	0.1240	
Type of family (Nuclear = 1 else 0)	1.21	0.41	
Sample Size	705		

# Table- 2

### Multinomial Logit Model Maximum Likelihood Estimate for

### **Choice of Curative healthcare**

Dependent variable	Choice of Treatment
Number of observations	733
Iterations completed	15

Log likelihood function -557.7019

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Variable	Self-Treatment		Private hospital		Government hospital	
variable	Coefficient	t	Coefficient	t	Coefficient	t
Constant	2.6214	1.742	2.480321	1.678	-3.4591	1.477
Coimbatore	0.2212	0.469	0.2606421	0.563	-1.8325	2.221
Erode	0.5040	0.699	1.619635	2.316	0.44654	0.493
Male	-0.1469	0.346	-0.0380	0.092	0.30394	0.481
Age	0.00199	0.204	-0.0126	1.314	0.0196	1.310
Primary	-0.0820	0.148	-0.0207	0.038	-0.2059	0.238
Secondary	-0.0986	0.171	-0.1088	0.194	1.4561	0.001
Degree	-1.9239	1.257	-0.2206	0.185	0.9263	0.570
Labour	0.5869	0.678	0.4447	0.520	1.8555	1.642
Salaried	-0.6074	0.894	0.6808	0.109	-12.9851	1.964
HH size	13.2558	0.017	12.8612	0.017	0.1491	0.170
HH income	0.00011	0.96	0.0001	1.249	-0.00009	0.046
Hindu	-1.2306	1.113	-0.9334	0.855	0.7567	0.485
Christian	-1.4324	0.924	-0.6749	0.442	-11.8501	0.026
BC	-0.2912	0.586	-0.4067	0.325	2.4212	2.087
Others	-0.4455	0.341	0.4789	0.976	-10.5769	0.015
Type of family	-0.0135	0.021	-0.4181	0.684	-0.7618	0.909

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# Health Insurance Market in India – The Way Forward

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Language in India www.languageinindia.com ISSN 1930-2940 Vol. 13:4 April 2013

### Abstract

Health status of a population is considered as an important economic indicator of development for Indian economy. Health services have a major influence on the social security of individuals and societies, and an important part of a nation's politics and economy. Health Insurance sector has a long way in India since the opening of the market. Earlier only 2 policies were available Mediclaim and Personal Accident. However with arrival of private insurance companies and standalone health insurance companies there has been tremendous innovation in policies offered in the Indian insurance market.

This study is carried out with the objectives to study health insurance market and health finance in India, to study various health insurance products available in India and to study the growth of health insurance market the way of forward. The study has concluded that, the health insurance in India is growing stage and there is wider scope for expansion if insurers provide specialized policy and rural masses for social development.

Key Words: Health Insurance, Social Security, Mediclaim, Health Financing

#### 1. Introduction

The term *health insurance* (popularly known as Medical Insurance or Mediclaim) is a type of insurance that covers your medical expenses. The concept of health insurance is new in India but its awareness is growing fast. Health insurance comes in handy in case of severe emergencies. Life is unpredictable, insurance can make it safe and secure from bearing huge financial loss. A health insurance policy is a contract between an insurance company and an **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* Dr. S.A. Senthil Kumar, M.B.A., M.Phil., PGDCA., Ph.D. and R. Ramamoorthy, M.B.A., M.Phil. Health Insurance Market in India – The Way Forward 178

individual. Sometimes it is associated with covering disability and custodial needs. The contract is renewable annually.

The access to advanced medical treatments and doctors has become expensive and thus the need for taking insurance is very essential. Health insurance sector in India is still in its nascent stage with lot of scope for development. The overall market for health insurance is still untapped and the emergence of reputed health insurance providers is evidence about the growing potential.

So how exactly does health insurance prove to be a helpful tool to minimize the medical expenses? As in case of regular insurance schemes, health insurance is issued in order to minimize the impact of financial burden when faced with major health complications. The treatment costs and ability to pay for advanced medical facilities are made possible with the use of health insurance. With the cost of treatments heading upwards, the need for a comprehensive insurance plan that covers various expenses is the need of the hour.

Health insurance in India generally falls under the general insurance sector and covers the health risks that fall under the insurance norms. It is important to consider different propositions of health insurance policies in order to get the right kind of benefits. Although, it is essential to get a health cover, it would be sensible to choose the right policy that provides financial support for an individual during health treatments.<sup>1</sup>

### **1.1.Review of Literature**

Prasanna N & Ramajayam V. (2010) in their paper ' Prospects of health insurance in India' reported that in an environment of fiscal constraint the already low public spending on health has only marginally increased from 1.3 percent of GDP in 1990 to 2 percent in 2010. According to OECD (2009) 81 percent of healthcare is paid for through private funds rather than public, closely followed by Viet-Nam at 76.3 percent. As a consequence, lower – income groups

<sup>&</sup>lt;sup>1</sup> http://harshamaitra.blinkweb.com/3/2012/07/health-insurance-in-india-the-way-forward-6acbf/ Language in India www.languageinindia.com ISSN 1930-2940 13:4 April 2013

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have less access to health services in Indian than in 15 Asian economics (an average of 55.8 percent of private expenditure on health) or in 30 OCED countries (only 2.4 percent).

Gayathri Iyer, (2010) in her article "Evolution of health insurance in India towards healthy health insurance" explains that health insurance can play an invaluable role in improving the overall healthcare system. The insurable population in India has been assessed at 250 million and this number will increase rapidly in the coming two decades. The efforts of the government authorities should be supplemented by innovative insurance products and programs by insurers with adequate reinsurance backup.

#### **1.2.** Objectives of the Study

- > To study health insurance market and health finance in India
- > To study various health insurance products available in India
- > To study the growth of health insurance market the way of forward

#### **1.3.Research Methodology**

This paper only based on theoretical and secondary data, which was sourced from various research publications, periodicals, online journals, printed journals, magazines, books, web sites etc.

#### **1.4.Why Health Insurance?**

Health insurance provides you with an affordable way for you and the ones you love to stay healthy and get medical care when ill. It also protects you and your family from the high cost of health care. In some cases, medical bills can be financially shocking.

In a country where out-of-pocket expenditure by households is very high in comparison to other countries, and accounts for about 71% of all health expenditure in the country<sup>2</sup>, the importance of individuals taking lead in planning for their own health expenditure, especially when it comes at a cost affordable to them, needs cannot be over-emphasized.

<sup>&</sup>lt;sup>2</sup> Ministry of Health and Family welfare. National Health Accounts, India. New Delhi: Government of India, 2009. Language in India <u>www.languageinindia.com</u> ISSN 1930-2940 13:4 April 2013

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The increasing awareness of this protective role of health insurance, and with renewed focus on marketing of health insurance products on the part of insurers in the detariffed regime, the health insurance portfolio is now the fastest growing market segment for the non-life insurance industry. There is, however, tremendous potential, as even today, only about 5% of the country's population has been covered by a commercial health insurance product (excluding mass government schemes)

#### 2. Healthcare Financing

Though the healthcare industry accounts for over 6-7 of our GDP and is the largest in terms of offering employment, there is serious dearth of expertise in the sector. Over 70% of the expenditure on healthcare is still being met by consumers 'out of packet'. Less than 15% of the India's population today has some form of health insurance cover. Community health insurance schemes are slowly penetrating into the rural markets with more than 25 schemes covering over 10 million lives all over India.

#### 2.2. How Much People are Spending?

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Source: Unpublished report and NSSO 60thRound

Studies have found that every year a large percentage of population goes below poverty line because of catastrophic health expenditures. India has one of the world's lowest levels of health spending as a proportion of GDP, and there is little disagreement that the pledged increase in spending is important for improving the country's healthcare. There is cross-country evidence that shows that increased government spending on health in turn is associated with lower out-ofpocket health spending.

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### **Determinants of Health**

### Figure - 1



### 3. Types of Health Insurance in India

### **3.1.** Employees' State Insurance Scheme.

Employees' State Insurance Scheme (ESIS) that came into existence in 1952. The ESI scheme covers all employers with more than 10 employees in 'notified areas'. The employees of covered employers who earn below Rs. 15,000 per month and their dependants are covered by the insurance scheme. ESIS has grown gradually from 1955-56 when it covered only 0.12 million individuals to the current more than 55 million beneficiaries (ESIC, 2010). The growth in

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numbers can be attributed to higher wage ceilings coming in the purview of ESI and growth in the number of workers employed in the organized sector.

#### **3.2.** Central Government Health Scheme (CGHS)

The Central Government Health Scheme (CGHS) was established in 1954. The Central Government Health Scheme (CGHS) covers another section of population employed in the formal sector. It is available to all central government employees (both working and retired), and their families, and other representatives associated with the central government. As of 2009, there were 866,687 CGHS cardholders and around 3 million beneficiaries. Interestingly, 38% of total cardholders are in Delhi and they consume about 57% of CGHS budget, followed by 8% in Kolkata who consume about 4 % of overall CGHS budget.

Health Insurance Schemes offered by the Public Sector General Insurance Companies, popularly known as "Mediclaim" Policies launched through the erstwhile General Insurance Corporation of India (GIC). A host of those available are as under:

- Mediclaim' introduced in 1986 for individuals and groups
- ▶ 'Bhavishya Arogya' introduced in 1990 a retirement plan with early entry.
- ▶ Jan Arogya' introduced in 1996 a low cost limited benefits plan.
- ➢ 'Overseas Mediclaim' Policy introduced in 1984 for people traveling abroad.
- Some special policies like Cancer Insurance, extended benefits of hospitalization under Personal Accident Policies, extended benefits for people outside the scope of Workmen's Compensation Policy etc.

Some State Governments have taken Health Insurance policies for weaker sections under various names on the pattern of Universal Health Insurance Scheme Launched by the Central Government, with limited liability upon specific critical illnesses. The Government has also launched Rastriya Swastha Bima Plan and Janshree Bima plans (peoples' Health Insurances) to cover BPL families.

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### 3.3. Rashtriya Swasthya Bima Yojana

RSBY has been launched by Ministry of Labour and Employment, Government of India to provide health insurance coverage for Below Poverty Line (BPL) families. The objective of RSBY is to provide protection to BPL households from financial liabilities arising out of health shocks that involve hospitalization. Beneficiaries under RSBY are entitled to hospitalization coverage up to Rs. 30,000/- for most of the diseases that require hospitalization. Government has even fixed the package rates for the hospitals for a large number of interventions. Pre-existing conditions are covered from day one and there is no age limit. Coverage extends to five members of the family which includes the head of household, spouse and up to three dependents. Beneficiaries need to pay only Rs. 30/- as registration fee while Central and State Government pays the premium to the insurer selected by the State Government on the basis of a competitive bidding.

Scheme	Unit of enrolment	No. of Families	No. of Beneficiaries
CGHS	Family	0.87	3.0
ESIS	Family	14.3	55.4
Rashtriya Swasthya Bima	Family	22.7	79.45
Yojana (RSBY)			
Rajiv Aarogyasri Scheme	Family	22.4	70
(AP)			
Kalaignar (TN)	Family	13.6	35
Vajapayee Arogyasri	Family	0.95	1.4
Scheme (KN)			
Yeshasvini (KN)	Individual	N/A	3.0
Total Government		N/A	247

#### 4. Health Insurance Coverage in India:

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Sponsored Schemes			
Private Health Insurance	Individual	N/A	55
Grand Total			302

Source: Scheme Annual Report, 2010

### 5. Evaluation and Growth of Health Insurance in India

The Indian health insurance (HI) market has evolved in a little over the two decades since the first HI product was launched way to back in 1986. Mediclaim insurance, as it was first known has witnessed quite a few changes. Though it may not have been comprehensive and has been modified three times, it remains the longest running HI product in India. It has been a dominant product. Most of the HI products subsequently launched carry more than 50% of its feature. Such is the brand recall that it has now almost become anonymous with HI like 'Xerox' for the copier. Any HI product in the Indian market is still identified as mediclaim.

Health insurance in India formally began with the inception of the employee's state insurance scheme introduced vide the ESI Act, 1948, shortly after the country's independence in 1947. This scheme was introduced for blue-collar workers employed in the formal private sector, and provides comprehensive health services through a network of its own dispensaries and hospitals, supplemented by services purchased from Authorized medical Attendants and private hospitals. The scheme is largely financed through a contribution from employers and employees, which is supplemented by the Central and State governments. The ESIS covers over 50 million beneficiaries as of March 2009<sup>3</sup>

The ESIS was soon followed by the Central Government Health Insurance Scheme (CGHS), which was introduced in 1954 and aims to provide comprehensive medical care to the central government employees in civilian assignments and for their families, being partly funded

<sup>&</sup>lt;sup>3</sup> Annual report (2008-09) of the Employee State Insurance Scheme.

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by the employees and large by the employer (central government). In 2010, CGHS has a membership base of over 800,000 families representing over 3 million beneficiaries.<sup>4</sup>

The evolution of the HI products introduced in India from the time the first HI product was launched by the public sector general insurance industry, its subsequent modification and up gradation in 1995. The product was sold in the same form by all the nationalized general insurance (GI) companies and the revised individual mediclaim policy sold by each of the four PSUGI companies post 2005-06.

The opening up of the insurance sector saw the entry of private insurers. The entry of two dedicated health insurers, Star health insurance Co and Apollo DKV Health Insurance Co, ( now Apollo Munich Health Insurance) in the Indian insurance market, as also the introduction of TPAs.

The commercial health insurance had been offered by non-life insurers before as well as after nationalization, through largely for groups only. The first standardized health insurance product in the Indian market which covered individuals and families for expenses incurred in hospitalization was launched all the four nationalizes non-life insurance companies in 1986. This product, mediclaim, covered hospitalization expenses up to a pre-defined annual limit of indemnity with certain exclusions like pre-existing diseases, maternity etc and undergo several rounds of revisions as the market evolved, the last being in 2007. Even private health insurance products are often generically termed by many as 'Mediclaim covers' as a product category rather than a specific product offered by the public sector insurers. Today, more than 300 health I insurance products are available in the Indian market, from more than 30 no-life, standalone

According to latest statistics released by the IRDA, gross premium underwritten by nonlife insurers in the health segment during the current financial year, grew 19 per cent to Rs133.45

<sup>&</sup>lt;sup>4</sup> Internet. http://mohfw.nic.in//cghsnew/index.asp accessed on 4th April 2010.

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billion as compared to Rs112.45 billion in the previous financial year health and life insurance companies.





#### Source: IRDA

Notes: The total health premium figure includes domestic and overseas medical insurance.

Among the Public Sector Undertakings (PSUs), United India Insurance and National Insurance registered a strong growth of 33 per cent and 27 per cent respectively. Whereas New India recorded a growth of 17 per cent and Oriental has shown a decline of 1.6 per cent as compared to the previous year. Amongst the private players, ICICI Lombard has retained its top position with a market share of 11 per cent and growth of 12 per cent. With the exception of Reliance General, IFFCO Tokio, Star Health & Allied Insurance, all the other companies recorded a growth during the period. Stand-alone Health Insurers Apollo Munich and Max Bupa have shown significant growth during the year. They registered a market share of 3 per cent and 1 per cent respectively at the end of FY2011-12.<sup>5</sup>

<sup>&</sup>lt;sup>5</sup> http://www.towerswatson.com/india/newsletters/india-market-health-insurance-update/7676 Language in India www.languageinindia.com ISSN 1930-2940 13:4 April 2013

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### 6. Growth of Health Insurance in India

In 80s most of the hospitals in Indian government owned and treatment was free of cost. The private medical care the need for health insurance was felt and various insurance companies introduced mediclaim insurance as a product. According to recent news report health insurance continues fastest growing segment with annual growth rate of 25%.health insurance premium has also increase to Rs. 13345 crores in 2011-2012.

Year	Amount	% Growth
	(Rs Crores)	
2006-2007	3210	14.45
2007-2008	5110	59.20
2008-2009	6634	29.82
2009-2010	8305	25.68
2010-2011	11480	38.22
2011-2012	13345	16.24

Table:	1
r aore.	1

Source: www.healthinsuranceindia.org

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**Source:** www.healthinsuranceindia.org

#### 7. The Way Forward

Advanced technologies like networking of operating offices of insurance companies enabled the insurance companies to offer policy services in a time bound manner. With population growing at 1.5% p.a., it is expected that real per capita income quadruples by 2020. There are changes in the socio economic life style of Indian population. With fragmentation of joint family system more number of people is leading independent family units. The income levels of young generation are also expected to increase significantly. With the development of infrastructure projects there is a migration of labour forces from rural to urban lands finding better employment avenues thereby enhancing the purchasing capacity. 93% of Indian populations are working in unorganized sector with an absolute number of 369 million While Indian demography statistics indicate a growth of 45% of working age population, there is a potentiality of generating 150 – 200 million jobs by 2020\*. Keeping in view these dynamics it is expected that non - life insurance industry designs market segment-specific insurance solutions to enhance the acceptance levels of insurance products.

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With better prospects offered in technology sector, the ability of the insurance industry to retain the customer base lays in rendering the timely and effective policy service.

- Insurers to collect correct data, develop new products price properly, improve u/w and claims management
- Explore possibilities of setting up pure health insurance company with JV partners
- Insurers TPAs Data Warehouse to have common IT framework to facilitate easy data transfer
- ★ Govt. to evolve National health scheme for common man in urban and rural area and Senior citizen and terminally ill
- Support health Insurance scheme for population below poverty line.
- **\*** Foster Public private partnership
- \* Providers to be more disciplined, bring standardization, accreditation etc
- **K** Govt. to regulate the healthcare providers
- IRDA to set up data warehouse
- Implement other recommendations of the sub group including

#### Conclusion

The government to provide universal access to free / low cost health care insurance can be an important means of mobilizing resources, providing risk protection and perhaps, improved health outcomes. This scenario , the challenge , then for Indian policy makers to find way to improve upon the existing situation in the health sector and to make equitable, affordable and quality health care accessible to the people, especially the poor and the vulnerable sections of the society. In the way inevitable that the state reforms its public health delivery system and explores other social security option like health insurance.

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# Patient Perception and Travel Behaviour Pattern in Primary Health Care Center in Haripad Block -A Micro Geo-Medical Study

### Dr. V. Saravanabavan

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Haripad Block is located on the south-western part of Alappuzha District, Kerala. Geographically it extends from  $9^014$ 'to  $9^021$ 'North latitude and  $76^024$ 'to  $76^031$ 'East longitude. The major objectives of the study are 1. To analysis the spatial distribution of primary health centers in Haripad block 2. To analysis the the patients perception and satisfaction level who avail these health care services 3. To analyses the travel pattern and movement pattern of patients from their residence to the PHC with respect to their age and sex indicators 4. To derive a conceptual frame work towards strengthening the foundation for integrated health care delivery system in Haripad block.

The present study is based on both primary and secondary data source. The field work was designed with the help of a suitable scientific frame work of sampling, namely the stratified random sampling. There were totally 300 respondents who were interviewed by direct questionnaire method. It includes mapping of the study using the GIS software of Arc GIS. Factor analysis is used to identify the statistical associations between diseases, socio-economic characteristics, and health–care and transportation variables, among the patients. The result of the factor analysis may be synthesized and brought out in the form of tables by naming the dimensions suitably on the basis of high factor loading.

Key Words: PHC- Patients perception – Travel pattern- Factor analysis

### Introduction

Primary health care is a multitude of services rendered to individuals, families and communities mainly in rural areas. Primary health care includes many characteristics. They are adequacy, availability, accessibility, affordability and facility.

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* Dr. V. Saravanabavan Patient Perception and Travel Behaviour Pattern in Primary Health Care Center in Haripad Block - A Micro Geo-Medical Study Primary health care includes, various primitive, curative and rehabilitative services provided through government. The primary health care services cover a wide range of activities, medical care, sanitation, infrastructural facilities, immunization, counseling health awareness education, social security and rehabilitation etc(Park,2009). The availability of such services is a must for attaining the goal 'Health for all'.

### **Study Area**

Haripad Block is located on the south-western part of Alappuzha District and away from Alappuzha city at about 30kms on the NH-47 connecting Kanyakumari with Salem. Geographically it extends from  $9^{0}14$ 'to  $9^{0}21$ 'North latitude and  $76^{0}24$ 'to  $76^{0}31$ 'East longitude.

#### Aims & Objectives Of The Study

The main objectives of the study are:

1. To analyze the spatial distribution of primary health centers and patients perception in Haripad block and to map out them using GIS software

2. To analyze the travel pattern and movement pattern of patients from their residence to the PHC with respect to their age and sex indicators.

3. To derive a conceptual frame work towards strengthening the foundation for integrated health care delivery system in Haripad Block.

#### Methodology and Techniques Used

The data selected for the present study was based on both primary as well as secondary sources. For the purpose of this paper two important techniques used are statistical techniques and Cartographic Interpretation. It includes mapping of the study area, Overlay analysis and Buffering using the GIS software of Arc GIS. The primary survey conducted was based on the method of stratified random sampling and a total of 300 samples were collected. Apart from this the multi variant statistical technique factor

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### **Discusssion and Analysis**

### Patients' Satisfaction Level

The factor analysis employed in the study identified 11 dimensions explaining a total variance of more than 64.81Percentage .The first six dimensions explained a total variance of more than 42% and Eigen value of above 1.57. The 29×29 correlation matrix of the present analysis has been grouped into 29×11 correlation matrix. Only 11 factors are taken for analysis of factor solution with reference to the dimensions

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The table explains the Eigen value and the percentage variance explained by each factor. The 11 factors rotated explained by varimax procedure registered more than 77 % of total variance. Among these the first dimension alone account for 9.76% of the total variance and qualified as the primary factor with an Eigen value of 2.83. This primary dimension is essentially associated with socio-economic status of patients in Haripad Block. The second dimension with an eigen value of 2.25 explained a total variance of 7.78. The third factor with an eigen value of 1.94 explained a total variance of 6.71 %.

The table shows factor loading of each dimension with their respective loadings. The percentage of variance with respect to each dimension is also shown. The contribution of last 5 dimensions altogether account for only 6.66 percent of the total variance.

	NAME OF THE	EIGEN	% <b>OF</b>	CUMULATIVE
SL.NO	DIMENSION	VALUE	VARIANCE	%
	Socio-economic status of			
Ι	patients	2.83	9.76	9.76
II	Doctors quality	2.25	7.78	17.55
III	Medical personnel	1.94	6.71	24.27
	Surrounding environment			
IV	of patients	1.83	6.34	30.61
	Quality of water and			
V	diseases	1.64	5.66	36.28
VI	Accessibility to PHC	1.58	5.47	41.75
VII	Travelling distance	1.48	5.11	46.86
VIII	Health care delivery system	1.40	4.84	51.71
IX	Religious characteristics	1.35	4.68	56.39
X	Transportation	1.27	4.39	60.78

Factor solution: The Eigen Value and the Total Percentage Variance is Explained By Each of the Variables.

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	characteristics			
XI	Patients perception	1.16	4.02	64.81

#### **Medical Services**

Medical services are meant for the people who avail these facilities. In the Haripad Block about 73% of the Respondents are satisfied with the medical services in the PHC's, remaining 27% of them were not fully satisfied with the medical services.

#### **Infrastructural Facilities**

All the PHC'S in the Haripad Block lack Infrastructural facilities like, Inpatient facilities, lab, Injection Room, Chairs for sitting. About 90% of the respondents are not satisfied with the infrastructural facilities available in the PHC's and 10% of them are satisfied with these infrastructural facilities.

#### **Sanitary Condition**

All the primary health centers in the Haripad Block do not have toilet facilities. About 97% of the respondents were not satisfied with the sanitary conditions and only 3% of them are satisfied.

### **Availability of Medicine**

Most of the PHC's itself provide all types of medicines for the patients. So 99% of the respondents are satisfied with the availability of medicines and only 1% of them are not fully satisfied.

#### **Experience after Treatment**

Most of them have an opinion that they have recovered from the disease. About 39% of the respondents have recovered and 22% of them have completely recovered. While 26% of the respondents have somewhat recovered and 7% of respondents have not at all recovered from the diseases and remaining 6% of respondents have an opinion that there is no improvement.

### Waiting Time to See the Doctor

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* Dr. V. Saravanabavan Patient Perception and Travel Behaviour Pattern in Primary Health Care Center in Haripad Block - A Micro Geo-Medical Study The time taken to see the Doctor is an important problem in the functioning of a health Centre. Most of the people wait for a long time to see the doctor because of the less number of doctors in the PHC. In the case of Haripad Block, about 48% of the respondents stated that they have to wait for less than 15 minutes to see the doctor and 33% of them stated that they took 15-30 minutes to see the doctor. Likewise, 10% of them took 30 - 1hr and 09% of the respondents took more than 1 hr to see the doctor.

#### **Perception on Treatment**

Regarding the perception on treatment, about 50% of respondents state that it was satisfactory and 24% of them state that the treatment was excellent. Likewise, 20% of them state that the treatment in the PHC's of Haripad Block was highly satisfactory and the remaining 6% state that the treatment was not so satisfactory.

The treatment in the PHC's of Haripad Block is fully free, so there is no cost for treatment. All the medicine available in the PHC's are also free of cost.

#### **Travelling Pattern of the Patients**

#### **Distance between PHC and House**

Distance is an important factor in the traveling pattern of the patient's between the health centre and their houses. This affects the spatial interaction of the patients who usually chose shorter distance (Made, 2000).

In the sample survey conducted in Haripad block about 41% of the respondents come from a distance of 1-2km and 30% of them reside near the PHC's. Likewise 21% of them are 2-3kms away from the PHC's and the remaining 8% come from more than 3kms of distance.

The time required to reach the health centre is an important factor regarding the location of the health centre (Saravanabavan, 2006). About 62% of the respondents took 10-20 minutes to reach the health centre and 15% of them opinioned that they took only <10 minutes to reach the health centre .Likewise around 11% of respondents need 20-30minutes to reach the health centre, 10% of them opinioned that they took 30-40 minutes to reach the health centre, and the remaining 2% of the respondents took >40 minutes to reach the health centre from their houses.

#### **Travel Pattern**

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* Dr. V. Saravanabavan Patient Perception and Travel Behaviour Pattern in Primary Health Care Center in Haripad Block - A Micro Geo-Medical Study 20 Haripad Block consists of 7 PHC's and one community Health centre. Among these, 5 health centres are randomly selected for the present study. They are Haripad PHC, Karthikapally PHC,Karuvatta PHC, Kumarapuram PHC and Veeyapuram PHC. The fig shows the travel pattern of male and female from each PHC. In almost all PHCs, male patients travel more distance than female patients. In the case of number, male dominates female, the example is Kumarapuram PHC Where 7 patients are females and the remaining 18 patients are males.

#### **Sex-wise Travel Behaviour of Patients**

In Veeyapuram PHC most of the patients are came from western and southern part of the PHC and some patients come from the Eastern side of the PHC. In sample survey one or two patients come from the Western side of the PHC. The reason is that the number of households is less there. The western part of the PHC is agricultural land. Likewise south-east part also consists of agricultural lands and there are no settlements.

Haripad PHC is located in the north eastern side of the Haripad town. In this PHC, some patients are from other panchayaths also. This is due to the popularity of the Doctors. More patients are from North western, Western and Southern sides of PHC. The reason for fewer patients to the PHC from Southern side is due to the presence of Taluk Hospital and Private Hospitals in the town. From Eastern side also the number of patient is less because of the agricultural land present there.

In Karuvatta PHC more patients are from Northern side, western side and eastern side. From south the patient flow is less because of the presence of Kumarapuram PHC in the Southern side as shown in the fig.

In the case of Kumarapuram PHC, female patients are less. Patients are mainly from North West, North East and South Eastern side. From North, South and East patient flow is very less.

From the Eastern side the patients flow is less because of the Taluk Hospital and from west the patient movement towards Kumarapuram PHC is controlled by the presence of the Thrikunnapuzha CHC.

In Karthikapally PHC the patients are mainly from Southern, Northern and South eastern part of the PHC. From the Eastern part of the PHC the patient flow is less because of the presence of Taluk Hospital and other private Hospitals in Haripad town.

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#### Male and Female Travel Patterns: Using Buffer Analysis

There are two buffer zones to show the travel pattern of each PHC in Haripad Block. The first Buffer zone extends from the health centre to 1.3kms. The second Buffer zone extends from 1.3kms to 2.3kms based on the mean distance . More number of patients are from the first Buffer zone. So it is more accessible than the second Buffer zone. Beyond the second buffer zone the area is inaccessible. In the second buffer zone female travelling is less compared to male travelling to the hospital.

Only few people are from Northern part of the block, because settlements are less due to paddy fields. So it is termed as un served areas for the PHC. The Eastern and Southern part of the block also falls under un served areas, because of the agricultural land and the presence of Taluk Hospital in Pallipad panchayath.

From the Western part of the block most of the people, choose to go to nearby CHC which is situated in the Thrikunnapuzha panchayath. Most of the female patients prefer short distance for travel. So only less number of them crosses the first and second buffer zone in each PHC's. In the case of Haripad PHC 3 female patients are from long distance. The reason behind that is popularity of the doctor.

#### **Travel Pattern among Different Age Groups: Using Overlay Analysis**

The figure shows the travel pattern among different age groups of Haripad block using overlay analysis. In this the four age groups are shown in an overlay mapping. Five PHC's from Haripad block are randomly selected for the present study. From the above figure it is easily understood that the age group 30 - 40 and 20 - 30 travel, more distance than < 20 age group and > 40 age group. Below20 age groups are children and above 40 age groups are old people. So they cannot travel long distance compared to the remaining age groups. They always choose short distance for travel. In the South-Eastern part of the block there is no PHC. This area falls in the Pallipad Panchayath. The authorities say that, since Taluk Hospital is situated in this panchayath there is no need of any PHC here. One sub –centre is already there, which is situated by the side of Haripad – Pallipad Road and this was recently inaugurated as a PHC. But still it is treated as a sub centre only. Karuvatta PHC and Haripad PHC are situated in

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remote areas. It is accessible only through Two-wheeler, three-wheeler and fourwheeler. Poor people cannot use these transportation facilities. So bus service should be introduced towards these centres. Construction a sub of centre in the South- Eastern part of Pallipad panchayath is essential as it is very far from nearby Health centres and accessible only through one road which is in a pathetic condition. This will reduce the travel distance of the patients.

#### **Travel Pattern among Different Age Group: Using Buffer Analysis**

There are two buffer zones. The first buffer zone extends up to 1km and second buffer zone extends up to 2km from the health centre. In almost all PHC's first buffer zone is more accessible and second buffer zone is less accessible. Only less number of people comes from the outer limit of the second buffer zone that is, un served areas. North, East and South-Eastern areas fall in Agricultural lands. It has scattered settlement and households are less in number. The Central, Western and Southern part of the Block seems to be un served by PHC's because of the presence of other PHC's and Hospitals.

#### Conclusion

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Following findings are identified in the study 1. The primary healthcare delivery system are associated with the rural back ground of the study and are efficient in creating health services to all the population in Haripad Block. 2. There exists a relationship between the incidence rates of various diseases with the level of sanitary conditions. Sanitary conditions and waste disposal are primary factors for the origin of many diseases. 3. The movement patterns of the patients is highly influenced by the severity of the diseases and their behavior factors. 4. All the primary health centers in the block are not equally spaced and there are areas unserved by PHCs. 5. In the traveling pattern of patients, males travel more distance than females.

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### An Impact of Stress Management on Employed Women

# Dr. D. Rajasekhar M.A., M.Phil., Ph.D. B. Sasikala M.A., M.Phil., Ph.D. Research Scholar

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### Abstract

Today women are in a state of transition caught between the illusory safety of traditional role on one hand and the challenge to realize their potential outside on the other hand. Women, have a lot of balancing to do between home and workplace, and balancing between social and personal requirements. The major issues are maternity, menopause, parenthood, gender roles, conditions at home and workplace, familial and social support, often blight women's lives in the long run. Stress is the reactions of people have to excessive pressures or other types of demand placed on them.

A woman is constantly under stress either at home or at work place. At work place coping with demands, time management, and completion of tasks before the deadlines are the problems which need to be handled skilfully. At home maintaining relationships, making ends to meet are factors that can cause stress. Stress is caused whenever any event, internal or external, is perceived as making demands over and above the copy resources possessed by the women's.

Stress make a person more susceptible to disease, which then aggravates any existing illness or chronic condition such as heart disease, depression, ulcers, irritable bowel disease, diabetics, the common cold, urinary tract infections. Some people seek comfort from stress by engaging in behaviours such as alcohol and drug abuse, smoking, or overeating, which have negative physical and emotional health consequences of their own.

A recent survey showed that 70-90 percent of women feel stressed at work place and outside. Depression, only one type of stress reaction, is predicted to be the leading occupational disease of the 21<sup>st</sup> century, responsible for more days lost than any other single

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* Dr. D. Rajasekhar and B. Sasikala, Ph.D. Research Scholar An Impact of Stress Management on Employed Women factor. Globally, 23 percent of women executives and professionals, say they feel "superstressed".

The aim of the field study has been to find out the cause and effects of stress on the working women. Causes of occupational stress and several specific techniques have been suggested through stress management. To conclude, the effective management of stress involves directing stress for productive purposes, preparing role occupants to understand the nature of stress helping them to understand their strength and usual styles and equipping them to develop approach strategies for coping with stress.

Key words: stress management, impact, women, disease,

### Introduction

In the traditional society, women's role was naturally limited to the family. Since she was the bearer of children, she was fully occupied with her duties as a mother and homemaker. This was no small feat, since the traditional household may be described as both a production and a consumption unit. Man's responsibility was to provide the household with raw materials, which were then converted by the woman into consumable products or conditions by means of rudimentary methods and tools.

Many factors like urbanisation, technical progress, women's education, etc., have profoundly changed these traditional conditions even in a developing country like India. Slowly starting with the metropolitan areas and going back, the women's role at home has become lighter due to technical progress. The production side of women's work at home is gradually decreasing leading to a reduction of women's role at home.

Mechanization and automation of many production processes have decreased the importance of man's physical ability over women for performing a physical job. Further, it has not been scientifically proved that a woman is incomparable to a man either in skill or mental abilities. This has enabled women to take advantage of the industrialization has lead to a consumer society, where many desirable products are readily available women perceive

Dr. D. Rajasekhar and B. Sasikala, Ph.D. Research Scholar An Impact of Stress Management on Employed Women more and more clearly that if they really born to contribute to the welfare of their family and society the most effective way are to go out of home and earn money.

Workplace stress is a very real occurrence in the modern world, with the incidence of stress related claims having risen dramatically in the last ten years. Studies have pointed to growth in non-standard work and other changing work patterns as contributing to the recent sharp increase in the stress levels in the workplace.

#### Stress

In an era characterized by accelerated technological expansion and development resulting in an overall explosion in knowledge and opportunities it is expected that the roles and functions, characteristic of traditional society would undergo a metamorphic change. This change can cause frustration, conflict, confusion (i.e.) this change can built up a pressure and this pressure in its full form is called stress.

Stress may be defined as the sum of physical and mental responses to an unacceptable disparity between real or imagined personal experience and personal exceptions. This definition may appreciate that stress is a response which includes both physical and mental components. The physical responses include a host of psycho logic changes which largely fall into acute response and chronic response. Mental responses to stress include adaptive stress, anxiety and depression.



#### **Stress Reaction Distress**

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* Dr. D. Rajasekhar and B. Sasikala, Ph.D. Research Scholar An Impact of Stress Management on Employed Women In everyday life we must distinguish between two types of stress effects, namely **eustress** (from the Greek eu or good – as in euphony, euphoria, eulogy) and **distress** (from the Latin dis or bad – as in dissonance, disease, dis satisfaction), depending upon whether stress is associated with desirable or undesirable effects.



Stress is the wear and tear our bodies experience as we adjust to our continually changing environment; it has physical and emotional effects on us and can create positive or negative feelings.

#### Women and Stress

Until the 1960s, a woman's primary role was wife and mother: normality for these women was defined as adaption to these roles. Competence and accomplishment were measured through the success of their husband and children. Social acceptance of wider roles for women began to emerge in the 1960s, and women began to professionally integrate themselves into industry. The workforce is changing with more women now employed. Women bring a unique set of dynamics to the workplace because they have to deal with inter role conflicts – attend to families as well as their jobs.

The number of working women has grown from 5.3 million in 1900 to 18.4 million in 1950 and to nearly 65 million in 2003 and is increased to 75.5 million by 2010; the paid labour force participation rate for women has grown from 34 percent in 1950 to more than 60 percent in 2003. By 2010, more than 62 percent of women will be in the paid workforce.

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Women have made progress by taking on new roles in the workplace and entering certain traditional male occupations.

"Women and stress: successfully juggling your busy life" is a brochure produced by the office of health promotion at Baylor College of Strategies on dealing with stress and preventing it from interfering with their lives. Some stress can help women perform at their peak. But too much is destructive to their physical and emotional well being. Stress can even come from good events such as planning a wedding or receiving a promotion. Unfortunately, your body doesn't know the difference between "good stress" and "bad stress".

Some common physical and emotional symptoms of stress are: Fatigue; Head, back, neck and shoulder aches; Stomach problems; Eating too much or not enough or interrupted sleep; Colds; Change in menstrual cycles; Feeling anxious; Feeling isolated; Frustration; Irritability and

Difficulty concentrating

Stress affects women health in many ways. Choosing the right way to relieve stress and making the right choice for a healthy lifestyle is very important for women.

### Women's Stress in Various Fields

The problem of stress in women, particularly housewives, is an important aspect of the process of social change in India. Traditionally, Indian women worked within the framework family system. Today they have joined hands with men as part of the workforce in the organisation. The consequent outcome is that modern women live in two systems and

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need to perform both familial as well as professional roles. This, in turn, leads to a number of role stresses among working women.

Sociological researches assert that family structure (working or stay- at – home mothers and other models) affects performance and employee attendance either directly or of the interactively family demands and family attitudes were found to influence the absence frequently at workplace.

The following table lists those occupations which equal or exceed the rate of 6 on a stress rating scale of (0-10).

OCCUPATION	RATING SCALE
BPO concern	8.3
Software professionals	7.7
Airline pilot	7.5
Journalist	7.5
Advertising executive	7.3
Dentist	7.3
Doctor	6.8
Broadcasting personnel	6.8
Nurse	6.5
Musician	6.3
Teacher	6.2
Social worker	6.0
Bank manager	6.0

### **OCCUPATIONS WITH HIGH STRESS LEVEL**

Source: conditions of work digest: preventing stress at work



The evidence indicates that a broad and growing range of occupation are prone to work-related stress. There is a strong relationship between social support and mental stress and trauma in women. It relates to a women's help – seeking attitude social networks, kinship networks and support networks. Besides these factors, adapting to a new workplace culture and reformations tends in job sectors, affect men and women alike.

### **Work Place Stress**

Women may suffer from mental and physical harassment at workplaces, apart from the common job stress. Sexual harassment in workplace has been a major source of worry for women, since long women may suffer from tremendous stress such as 'hostile work environment harassment', which is defines in legal terms as 'offensive or intimidating behaviour in the workplace'. This can consist of unwelcome verbal or physical conduct. These can be constant source of tension for women in job sectors. Also, subtle discriminations at workplaces, family pressures and societal demands add to these stress factors.

### **Job Insecurity**

Organised workplaces are going through metamorphic changes under intense economic transformations and consequent pressures. Reorganisations, takeovers, mergers, downsizing and other changes have major stressors for employees, as companies try to live up to the competition to survive.

### **High Demand and Performance**

Unrealistic expectations, especially in the time of corporate reorganisations, which sometimes puts unhealthy and unreasonable pressures on the employee, can be a tremendous source of stress and suffering. Increased workload extremely long work hours and intense pressures to perform at peak levels all the time for the same pay, can actually leave an employee physically and emotionally drained. Excessive travel and too much time away from family also contribute to an employee's stressors.

### Technology

The expansion of technology – computers, pagers, cell phones, fax machines and the internet has resulted in heightened expectations for productivity speed and efficiency, increasing pressures on the individual worker to constantly operate at peak performance levels. Workers working with heavy machinery are under constant stress to remain alert. In this case both the worker and their family members live under constant mental stress. There is also the constant pressure to keep up with technological breakthroughs' and improvisations, forcing employees to learn new software all the times.

### **Workplace Culture**

Adjusting to the workplace culture, whether in a new company or not, can be intensely stressful. Making oneself adapt to the various aspects of workplace culture such as communication patterns of the boss as well as the co-workers, can be lesson of life. Maladjustments to workplace cultures may lead to subtle conflicts with colleagues or even with superiors. In many cases office politics or gossips can be major stress inducers.

### **Personal or Family Problems**

Employees going through personal or family problems tend to carry their worries and anxieties to the workplace. When one is in a depressed mood, his unfocused attention or lack of motivation affects his ability to carry out job responsibilities.

Quantity and quality of leisure time distribution between the genders is an interesting index of how women get burdened with stress for either natural or social obligations. Multinational time budget data archive and the Australian time use survey suggest that women are now bearing a "dual burden" as both family providers and family careers. Absence of reciprocal and joint emotion management within family is a nagging stressor for women. This can be physically both and psychologically draining.

### Family Responsibilities as Source of Stress

The convention, which had been ratified by 31 countries as of 30 June 2000, calls for measures to be adopted which into account the needs of workers with family responsibilities in their terms and conditions of employment and in social security. The recommendation also covers a number of arrears in which measures can taken to facilitate the lives, and therefore reduced the levels of stress encountered by workers with family responsibilities. These include:

The provision of child-care facilities;

The reduction of hours of work, the reduction of overtime and the introduction of more flexible arrangement in relation to working schedules, rest periods and holidays;

Adequate regulation and supervision of the terms and conditions of part-time workers, temporary workers and home workers, many of whom have family responsibilities;

The possibility for either parent to take parental leave, during the period immediately following maternity leave, without loss of job employed rights; The availability of leave of absence for a sick or family member.

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### **Impact of Stress Management on Working Women**

Stress is both additive and cumulative in the negative effects on individuals, organisations and societies. The national institute for occupational safety and health are dedicated to studying stress.

Stress is linked to physical and mental health, as well as decreased willingness to take on new and creative endeavours.

Job burnout experienced by 25 to 40 percent of U.S workers is blamed on stress. More than ever before, women stress is being recognised as a major drain on corporate productivity and competitiveness.

Depression, only one type of stress reaction, is predicted to be the leading occupational disease of the 21<sup>st</sup> century, responsible for more days lost than any other single factor.

Women who work full-time and have children under the age of 13 report the greatest stress worldwide.

Nearly one in four mothers who work full-time and have children under 13 feel stress almost everyday.

Globally, 23 percent of women executives and professionals, say they feel "superstressed".

70 percent of the working women at the age group of (25-35 yrs) experience a higher level of stress.

Women in call centres suffer from high stress level at a percentage of 51.

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Almost 20 percent of women physicians have a history of depression, with an estimated 1.5 percent reporting a suicide attempt.

Sleep disorder is the major stress related symptoms of working women.

Stress seems to be one of the most important factors in the development of chronically high blood pressure.

Sudden stress increases the pumping action and rate of the heart and causes the arteries to constrict, thereby posing a risk for blocking blood flow to the heart.

Peptic ulcers – stress may predispose one to ulcers and sustain existing ulcers. It is estimated by some experts that social and psychological factors play some contributing role in 30 to 60 percent of peptic ulcer cases.

It has been established beyond doubt that stress is inevitable, many its harmful effects can be successfully allayed. Stress come in many forms including predictable challenges and sudden unpredictable crises.

### Conclusion

Today there are many young women who do not want to just stay at home and do house work but want to have their careers. "Women alleviating stress by altering their life style includes building greater stress tolerance, changing their pace of life, controlling distressful thoughts, acquiring problem solving skills, and seeking social support.

To conclude, effective management of stress involves directing stress of for productive purposes, preparing role occupants to understand the nature of stress helping them

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to understand their strength and usual styles and equipping them to develop approach strategies for coping with stress.

Occupational stress is a growing problem in workplaces and a problem of particular magnitude for working women. A number of stresses – reaction strategies have been made useful for working women, ranging from the more common individuals stress management techniques to higher level intervention focused on removing the sources of occupational stress as it affects working women and present an approach for reducing the effects of job stress.

Work place stress is a very real occurrence in the modern world. Stress has farreaching consequence and has percolated into all aspects of our modern world. Stress is responsible for restlessness, sleep difficulties, depression, headache, apart from a series of psychosomatic ailments and a psychiatric problem. Hence to reduce the work place stress the following are some stress management techniques

One method of counteracting the harmful effects of the psychological stress is the possibility of regular elicitation of the relaxation response.

The practice of yoga gives the tool and techniques by which we can expand our conscious awareness into the unconscious parts of the mind in order to become aware of the patterns and habits which lead to stress.

Meditation is recognised for its myriad health benefits, and is widely practiced as a way to counteract stress.

A proper balance diet is clearly essential, both to avoid direct physical stress, causes via brain and nervous system, and to reduce stress susceptibility from poor health and condition.

Physical exercises in necessary in order to keep the body healthy, both physically and mentally and is the best antidote for stress. It provides recreation and mental relaxation.

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Walking is the most efficient form of exercise and the only one and individual can safely follow all his life. Stress and strain can be counteracting an even prevented by regular vigorous walking.

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# **Economic Reforms and Health Sector: Implications for Indian Pharmaceutical Industry**

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### Abstract

One of the important achievements of economic development in post-independent period in India has been our ability to ensure availability of life saving drugs at affordable prices. This was a result of various policies followed since late 1960s with the objective of providing affordable drugs. These strategic initiatives involved various incentives for development of domestic healthcare industry. It also included building a national innovation system for developing process innovation capability in the country and providing an intellectual property protection (IPR) framework designed to facilitate indigenous process development of known compounds.

The paper highlights the difference between product and process patents. Over the past two decades, there have been a number of changes in the policy framework developed since the late 1960s. The paper highlights the various changes that took place from time to time since independence to strengthen the Indian healthcare industry. The IPR framework has undergone important changes as per India's obligations under the TRIPs Agreement of WTO. In this context this paper briefly reviews different elements of economic reforms in the Indian healthcare sector. It highlights the important implications for the healthcare industry in light of economic reforms in our country. It also highlights trends taking place since 1991 that tend to alter the policy framework evolved thus far that are likely to affect the availability of drugs and their prices in the coming years. It also discusses issues such as liberalization of trade, investment and pricing policies and strengthening IPR regime under TRIPs Agreement, among other policies.

Key Words: Economic Reforms, Healthcare Industry, Intellectual Property Rights, WTO

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* Satyanarayana Rentala and Dr. Byram Anand Economic Reforms and Health Sector: Implications for Indian Pharmaceutical Industry

### Introduction

One of the important successes of economic development in post-Independent period has been ability to ensure availability of life saving drugs at affordable prices. Since many life saving and other drugs are available in India at a fraction of prices prevailing internationally, it has attracted widespread attention from other countries. Competitive prices have also resulted in rising exports of pharmaceuticals from India. This success is a result of a combination of policies consciously followed since late 1960s with the specific objective of providing affordable drugs for the masses. These strategic interventions included incentives for development of indigenous pharmaceutical industry, giving incentives for localization of production right from bulk drugs and intermediates and not just formulations, encouraging generics over branded products, and regulation of prices through the Drug Prices Control Order (DPCO).

Finally and more importantly, it included building a national innovation system for developing process innovation capability in the country, through incentives for R&D activity to enterprises and providing an intellectual property protection (IPR) framework designed to facilitate indigenous process development of known compounds. This integrated framework has led to the development of a strong indigenous pharmaceutical industry which presently produces bulk of the country's requirement right from the raw material stage using indigenous and cost effective processes.

Over the past decade, however, there have been a number of changes in the policy framework developed since the late 1960s. Besides import liberalization and removal of restrictions on foreign firms, DPCO has been diluted as a part of economic reforms. The IPR framework is undergoing important changes as per India's obligations under the TRIPs Agreement of WTO covering adoption of product patents by 2005 and provision of pipeline protection through EMRs (exclusive marketing rights) in the transition period. All these trends of the past decade viz. liberalization of trade, investment and price regulations, and emerging changes in the IPRs are likely to have implications for the availability and prices of pharmaceutical products in India.

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In this context, this paper briefly reviews different elements of integrated drug policy framework as evolved between 1960s and 1990 and their effectiveness in bringing down drug prices. Then it discusses trends taking place since 1990 that tend to alter the policy framework evolved thus far that are likely to affect the availability of drugs and their prices in the coming years such as liberalization of trade, investment and pricing policies, strengthening IPR regime under TRIPs Agreement, among other policies.

### **Literature Review**

The Economic Reforms Process was set in motion in India since 1991. In a widely circulated document from the Ministry of Finance, Bhagwati and Srinivasan (1993) summarized the rationale for such a reforms process for the benefit of the public. Some excerpts are important to note. 'The economic reforms initiated by the government in June 1991 have an excellent rationale. The 'macroeconomic' situation, both external (the balance of payments) and internal (the fiscal deficit), was unsustainable......The cutting of developmental expenditure appears to us to be little beyond what appears prudent: growth later may be compromised by this, so the government needs to examine this question carefully. On the other hand, the Finance Minister has been accused of cutting 'Social Expenditure'', thus stabilizing the economy at the expense of budgetary cuts in spending on the poor' (pp. (ii) of the report).

While arguing for the much needed economic reforms, Bhagavati and Srinivasan have cautioned on the need for maintaining long term development expenditures. This was followed by a major study by Joshi and Little (1996). After arguing in favour of what all went in during 1991 to 1996 in terms of reforms in India, they seem to agree that something must be done for the poor. To quote their own words: 'However, the major reforms we have applauded or advocated may have serious differing effects on different social and economic classes. These, especially the effects on the poor, cannot be ignored. Indeed the objective of any reform must be to benefit society, and this surely precludes reforms which harm many poor people belonging to that society.' (pp.219) 'In the long run, expenditure on primary **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* Satyanarayana Rentala and Dr. Byram Anand 223 Economic Reforms and Health Sector: Implications for Indian Pharmaceutical Industry

education and primary health care may be more poverty-reducing than other more immediate measures-provided always that the economic, social, and legal systems are not biased against employment.' (pp. 243)

Talking about macro-economic links and activities, 'Health and Medical' is treated as a social sector, just as several others like Education, Real estate and housing. According to Central Statistical Organisation (CSO) it includes all medical and health services, as deliverable to people. The sector is made up of activities emanating from professional and research institutions, hospitals, and clinical services rendered by the medical professionals for the better health care of people of the country. Drug and Pharmaceuticals is another sector, which is very closely linked to the Health sector. It is defined as manufacture of drugs and medicines-including allopathic, ayurvedic, unani, homoeopathic and others. Basically this sector deals with production of drug intermediates, formulations, medicines and medical accessories. Both these sectors (leaving away the retailing) are very closely linked to several other macro-economic sectors.

### **Evolution of the Policy Regime**

The government has adopted a number of policies over the past four decades to ensure the availability of life saving medicines at affordable prices for the health system of country catering to the needs of the poor masses. The government policy towards pharmaceutical industry can be broadly classified into two categories- (i) industrial policy including policies relating to foreign investment and technology and (ii) pricing policy. The evolution of both these policies is discussed below. Although foundation of indigenous pharmaceutical industry were laid in 1901 when Prof. P.C. Ray established the Bengal Chemicals and Pharmaceutical Works (BCPW), the country was largely dependent on imports for most of her requirements of drugs and pharmaceuticals at the time of Independence. However, since the Independence, the pharmaceutical industry has received due policy attention given its importance for the health security of the poor.

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* Satyanarayana Rentala and Dr. Byram Anand Economic Reforms and Health Sector: Implications for Indian Pharmaceutical Industry In the first Industrial Policy Resolution 1948 (IPR, 1948) itself, the pharmaceutical industry was included in the list of 'basic industries' and its growth was subjected to plan targets and monitoring. However, the industry had little domestic technological base to start local production of modern drugs at that time. Whatever little growth impetus the industry had during the World War II was over by then. New therapeutic developments in the West with consequent replacement of many older drugs by newer drugs like sulpha, antibiotics, vitamins, hormones, antihistamine, tranquilizers, and psycho pharmacological substances had forced the nascent industry to stop production of many items that it was manufacturing before.

The status of the industry was increasingly dependent on imports of bulk drugs and its processing into formulations.

The Industrial Policy Statement, 1956, grouped the pharmaceutical industry in the schedule 'B' where both state and private sector could operate. Although FDI was welcomed and given national treatment in the industry, government was finding it difficult to push MNEs to start domestic manufacture of bulk drugs and reduce the dependence on imports. Since MNEs were reluctant to start production of important bulk drugs such as antibiotics in the country, the government set up Hindustan Antibiotics Ltd. in 1954 and Indian Drugs and Pharmaceuticals Ltd (IDPL) in 1961.

These two enterprises have played an important role in not only starting domestic production of key bulk drugs but have had substantial spillovers in the form of generation of a new breed of entrepreneurs. One survey has shown that founders of one third of the 200 domestic enterprises surveyed had initially worked at IDPL including the founder of immensely successful Dr Reddy's Laboratories Ltd. (DRL) [Felker et al 1997]. The high tariffs also encouraged MNEs to set up local subsidiaries and indigenize the domestic processing of imported bulk drugs and other raw materials.

The Drugs and Pharmaceutical industry was included the Appendix I of the Industrial Licensing Policy (1973). This priority status meant that under the Foreign Exchange Regulation Act (FERA) 1973, MNEs could retain up to 74 per cent ownership in their 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* Satyanarayana Rentala and Dr. Byram Anand 225 Economic Reforms and Health Sector: Implications for Indian Pharmaceutical Industry

affiliates in India against a general limit of 40 per cent on maximum foreign shareholding permissible. However, keeping in mind the critical importance of building a self-reliant pharmaceutical industry, the government appointed a Committee to examine the status of the industry and make recommendations in the early 1970s. The Committee popularly called as the Hathi Committee, after its chairman Mr Jaisukhlal Hathi made extensive investigations into the factors that were preventing achievement of greater extent of self-reliance in the pharmaceutical industry in the country and made a number of recommendations in its Report published in 1975 (Hathi Committee 1975; also see Kumar and Chenoy 1982 for a discussion).

A New Drug Policy 1978 was announced to implement some of the recommendations of the Hathi Committee. The Policy had three stated objectives, namely, self-sufficiency in drugs production, self-reliance in drugs technology and accessibility of quality drugs at reasonable prices. In order to achieve these objectives, the pressure was built on MNE affiliates to indigenize the production of bulk drugs from the basic stage. Thus the higher level of 74 per cent foreign equity was made applicable only to those MNE affiliates producing high technology drugs and others producing low technology drugs or processing imported/domestically purchased bulk drugs were required to reduce their foreign equity holding to 40 per cent.

Foreign companies producing finished formulations from imported bulk drugs or from penultimate stage were required to start production from the basic stage within a two year period. Further, licenses to foreign companies were to be given only if the production involves high technology bulk drugs and formulations based thereon. In 1981 the government took the decision of abolishing brand names for five categories of drugs as mentioned under Drug Policy, 1978, which includes analgin, aspirin, chlorpromazine, ferrous sulphate, and piperazine along with its salt. However, the move was blocked by MNEs with a court injunction.

Another aspect of the government policies concerning the drugs and pharmaceutical industry was canalization of imports of bulk drugs. After the detection of a number of cases 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* Satyanarayana Rentala and Dr. Byram Anand 226 Economic Reforms and Health Sector: Implications for Indian Pharmaceutical Industry

highlighting the substantial overpricing in imports of bulk drugs by MNEs from their parents or affiliated sources, the government started canalizing the imports of these bulk drugs through IDPL and State Chemicals and Pharmaceuticals Trading Corporation, (a subsidiary of the State Trading Corporation) and MNE affiliates were required to lift their requirements from them.

The drug policy has been revised in 1986, however, broad objective of strengthening the indigenous production capability of drugs for ensuring their abundant availability at reasonable prices continued to remain intact. Price Controls on prices has been an important feature of the Indian pharmaceutical industry right from the 1960s to ensure affordability of drugs to poor masses. The drug price controls have gradually evolved with Drugs (Display of Prices) Order, 1962, Drugs (Control of Prices) Order, 1963 and Drugs (Display and Control) Order, 1966. The attempt to control prices by the government met with resistance from the industry that argued that the controls will hamper the growth of the industry and in the long run limit its ability to meet rising demands for drugs.

In view of the above criticisms, the government requested the Tariff Commission to examine the prices of 18 basic drugs and their single ingredient formulations in August 1966. Following the submission of the Tariff Commission report in August 1968, the first Drugs (Prices Control) Order was issued in May 1970. The Order had the prime objective of balancing the welfare of consumer and that of producers i.e. reducing the prices of essential drugs and at the same time ensuring reasonable profits for the growth of the industry by taking account of the prices of materials, conversion cost, packing charges, mark-up, excise duty and sales tax in the calculation of the retail price of a formulation. The government has acquired both the rights to fix the maximum selling prices of essential bulk drugs (those included in the Schedule I of the appendix of the Order) and to change its composition. These 18 essential bulk drugs brought under the purview of DPCO 1970, accounted for less than 9 percent of total value of drugs marketed. The sale prices of other bulk drugs were frozen at the level prevailing immediately before the issue of the Order.

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* Satyanarayana Rentala and Dr. Byram Anand Economic Reforms and Health Sector: Implications for Indian Pharmaceutical Industry The DPCO 1970 was revised in 1979 following the promulgation of the Drug Policy of 1978 based on the Hathi Committee recommendations. The revised DPCO categorized drugs into four categories: Life-saving, Essential, Less Essential, and Non-Essential/Simple Remedies. Of these the first three categories came under the ambit of price controls with mark-up (profits allowed) of 40 per cent, 55 Per cent and 100 per cent respectively. In all, 347 drugs came under the purview of DPCO accounting for 90 per cent of the industry.

The tighter price controls on the first two categories of drugs led MNEs to increase their focus on the production on the less essential and non-essential formulations. Growing resistance of the industry to the DPCO 1979 led the government to issue a modified DPCO in August 1987 that reduced the scope of DPCO to 166 drugs from 347 besides enhancing the stipulated mark-up for the included formulations.

### IPR Regime and Incentives to Domestic R&D Activity Amendment of the Patent Act

India had inherited The Patents and Designs Act 1911 from the colonial times that provided for protection of all inventions except those relating to atomic energy and a patent term of 16 years from the date of application. However, a few domestic chemical and pharmaceutical enterprises that tried to develop their own technology in the 1960s ran into trouble with foreign patent owners.

A number of cases highlighted that foreign patent owners were neither using their patents for domestic manufacture nor allowing them to be used by local firms. That led to a build-up of pressure in the late 1960s for a new patent law.

Desai (1980) in a questionnaire survey of 53 firms conducted in 1969 found that by and large foreign firms were against any liberalization of patent laws, Indian firms were not against patents but wanted greater access to patented know-how especially when patent owners not allowing their patents to be used. The conflict of views was sharper in chemicals and pharmaceuticals where patents had been used to prevent entry of Indian firms.

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* Satyanarayana Rentala and Dr. Byram Anand Economic Reforms and Health Sector: Implications for Indian Pharmaceutical Industry Therefore, a new Patents Act was adopted in 1970 that reduced the scope of patentability in food, chemicals and pharmaceuticals to only processes and not products. Since virtually any chemical compound can be made by a variety of processes, the scope of patent protection was greatly reduced.

The term of process patents was reduced to 7 years in food, drugs and chemicals and to 14 years for other products. The compulsory licenses could be issued after three years. It is by now widely recognized that the abolition of product patents in chemicals and pharmaceuticals has facilitated the development of local technological capability in chemicals and pharmaceutical industry by enabling the domestic firms in their process innovative activity.

A number of quantitative studies have shown that the innovative activity of Indian domestic enterprises was facilitated by the softer patent regime under the 1970 Act (see Fikkert 1993, Haksar 1995, Kumar and Saqib 1996).

### **Reforms and Implementation of WTO Commitments**

The industrial, trade and technology policy framework evolved over the 1950-90 has considerably changed in the 1990s as a part of the economic reforms undertaken by the government and also the implementation of the commitments undertaken by the country under the WTO Agreements. The important changes have been brought about in the industrial policy and FDI policy, trade policy, regime governing the exchange rates and capital markets, patent protection and price controls. In what follows we summarize the changes that have been brought about particularly those relevant for the pharmaceutical industry. The New Industrial Policy (NIP) announced on 24th July 1991 and subsequent amendments brought far-reaching changes in the policy regime governing the industrial investments.

Although the NIP dismantled the industrial licensing (or approval) system by abolishing the requirement of obtaining an industrial license from the government, drugs and 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* Satyanarayana Rentala and Dr. Byram Anand 229 Economic Reforms and Health Sector: Implications for Indian Pharmaceutical Industry pharmaceuticals industry is included among the 14 specified industries that continue to remain under the ambit of licensing given the social well-being consideration. NIP accords a much more liberal attitude to foreign direct investments (FDI) than ever in the post Independence India. The Policy allows automatic approval system for priority industries by the Reserve Bank of India within two weeks subject to their fulfilling specified equity norms. As one of the select priority industries specified in Annexure III-C of NIP, foreign ownership up to 51 per cent was to be allowed on automatic basis for pharmaceutical industry for manufacture of bulk drugs and formulations thereof. Later on, the pharmaceuticals industry was included in the list for automatic approval up to 74 per cent in March 2000 and to 100 per cent in December 2001.

In September 1994, government announced a revision of the Drug Policy 1986 which includes measures like abolishing industrial licensing requirements for majority of drugs barring few; removing restriction on the imported bulk drugs, scraping the linkage requirement (where a stipulated percentage of bulk drug production need to be supply to non associated formulators), and limiting the scope of price control and providing for establishment of the National Drug Authority to monitor quality and the National Pharmaceutical Pricing Authority to fix prices of both bulk drugs and formulations. On 15 February 2002, the government unveiled the Pharmaceutical Policy 2002 to take into account the emerging challenges in the wake of WTO Agreements and hence the need for new initiatives 'towards promoting accelerated growth of pharmaceutical industry and towards making it more internationally competitive'.

This covered implementation of the recommendations of two committees that the Government had appointed in 1999. These include the Pharmaceutical Research and Development Committee (PRDC) under the Chairmanship of Dr R.A. Mashelkar, DG, CSIR, and the other Drugs Price Control Review Committee (DPCRC) headed by the Secretary, Department of Chemicals and Petrochemicals. The 2002 Policy has abolished the industrial licensing requirements for all bulk drugs cleared by Drugs Controller General (India), all intermediates and formulations except for those produced by recombinant DNA technology, that requiring in-vivo use of nucleic acids as the active principles, and specific cell/ tissue 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* Satyanarayana Rentala and Dr. Byram Anand 230

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targeted formulations. Automatic approval for foreign ownership up to 100 per cent and foreign technology agreements will also be available for all the cases except those included in the industrial licensing requirements.

The TRIPs Agreement of WTO accommodates the demands of the industrialized countries for higher international standards of protection by mandating the extension of patentability to virtually all fields of technology recognized in developed country patent systems, by prolonging the patent protection for a uniform term of twenty years, and by providing legal recognition of the patentee's exclusive rights to import the patented products. The patent rights are enjoyable without discrimination as to the place of invention, the field of technology and whether products are imported or locally produced. All the signatories to the trade negotiations are, therefore, obliged to harmonize their IPR regime and to provide product patents for pharmaceuticals and chemicals.

The coverage of the patent protection has also been expanded by the provision for patents on micro-organisms and protection of plant varieties either by patents or by an effective sui generis system or by any combination thereof. The TRIPs Agreement of WTO is likely to have major implications for the drugs and pharmaceutical industry. India will have to extend the scope of patenting to chemical and pharmaceuticals and increase the term of patents to 20 years from the present 7 and 14 years. However, developing countries not providing product patents are given a 10 years transition to evolve product patents. However, in the interim period a mailbox mechanism must be set up to provide exclusive marketing rights (EMR) to applicants for product patents. In order to comply with the India's commitments under the TRIPs Agreement, amendments have been brought in the Indian Patents Act 1970. A 1999 Amendment has been brought to provide for exclusive marketing rights (EMRs) a pipeline mechanism during the transition period to adopt product patents. India has a ten years transition to provide product patents viz. till the end of 2004. A Bill for Second Amendment to the Indian Patents Act 1970 to extend the term of patents to 20 years is in the Parliament. India has also joined the Paris Convention and the Patent Cooperation Treaty in 1998. These changes in the IPR regime are likely to have important implications for the pharmaceutical industry.

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### Conclusions

The above discussion has shown that the integrated policy framework that the government evolved over the 1970-90 has been successful in developing a highly vibrant and self-reliant industry that not only meets the local demand of nearly all critical medicines at affordable prices but also generates increasing amount of net exports by exporting pharmaceutical products to over 60 countries.

The ability of Indian enterprises to develop cost effective processes has attracted the attention of leading MNEs to the country for entering into strategic alliances with local companies for process development. This remarkable success was achieved within two decades and was facilitated in large measure by the soft patent regime that the country adopted in 1970. The liberalization of the industrial, trade and price policies in the 1990s has started to affect the prices of medicines. Even trade liberalization and reduction of tariffs actually lead to higher rather than lower prices of medicines due to peculiar nature of the industry.

The adoption of product patents by the end of 2004 as a part of the implementation of the commitments of India under WTO's TRIPs Agreement is likely to have a major impact on the prices of medicines according to a number of simulation exercises available. It is also likely to adversely affect the technological activity of Indian companies, curb exports, lead to income transfers from the country. On the other hand the favourable effects of stronger IPR regime that are claimed namely higher innovative activity and greater inflows of FDI may not materialize.

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# Sexual Behaviour in India with High Risk of HIV/AIDS

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### Abstract

The term 'sex worker' refers to a wide array of people who sell sex and money who work in a variety of environments. They include women men and transgender people and people who many work either full time or part time, in brothels or bars, on the street or from. Sex workers usually have a high number of sexual partners. This means that if they do become infected that if they do become infected with HIV, they can potentially pass it on to multiple clients. According to the Commission on AIDS in Asia 'men who buy sex are the single-most powerful driving force in Asia's HIV epidemics'. There are an estimated 10 million sex workers in Asia, and 75 million male clients.

It is estimated that more than 90% of HIV transmission in India is related to unprotected sexual intercourse or sharing of injecting equipment between an infected and an uninfected individual. The government estimates that 5% of sex workers nationally are infected with HIV, which is fifteen times higher than the overall HIV prevalence.

Factors that heighten sex workers' HIV vulnerability include limited access to health, social and legal services; sexual exploitation and trafficking; harmful, or a lack of, protective legislation and policies; gender-related differences and inequalities; limited access to information and prevention means; stigmatization and marginalization; exposure to lifestyle-associated risks such as violence, mobility and substance abuse. So these people need access to affordable sexually transmitted infection prevention and care, voluntary counselling and testing and other

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T. Kavitha, Ph.D. Research Scholar and Dr. K. Suriyan, Associate Professor Sexual Behaviour in India with High Risk of HIV/AIDS medical services and the role of GOs and NGOs that work with the community to play in providing culturally relevant HIV prevention programmes for Sex workers.

**Key words** – Transgender, Sexual Partners, Brothels, Uninfected, Sexual Exploitation, Trafficking, Harmful, Affordable.

### Introduction

Historically, the AIDS epidemic in India was first identified amongst sex workers and their clients, before other sections of society became affected. High HIV infection rates among sex workers continue to be detected in India. The government estimates that 5% of sex workers nationally are infected with HIV, which is fifteen times higher than the overall HIV prevalence. What is more, sex workers in some areas have a much higher HIV prevalence, such as 18% in the state of Maharashtra, and 13% in Manipur. High HIV rates were also first identified amongst sex workers in Thailand, although the Thai governments were faster to act on this problem. According to the Commission on AIDS in Asia 'men who buy sex are the single-most powerful driving force in Asia's HIV epidemics'. There are an estimated 10 million sex workers in Asia, and 75 million male clients.

Although HIV prevalence among female sex workers in Thailand has dropped to 2.8%, male sex workers are a traditionally overlooked group with a much higher HIV prevalence (14%). Sex workers who work outside of formal commercial sex establishments like brothels or karaoke bars in Thailand are not reached by the '100%' condom programme and there are concerns that HIV prevalence among this group is rising. The overlap between sex work and injecting drug use is of increasing concern in Asia, in particular in southern India, Pakistan, Indonesia and Vietnam. In Vietnam, more than a third of injecting drug users surveyed said they had bought sex in the previous 12 months, but only about a fifth said they consistently used condoms with their sexual partners.

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### Sexual and Premarital Relationship in India

It is estimated that in India about three-fourths of HIV transmission occurs through heterosexual relations and the rest occurs mainly through transfusion of infected blood and sharing of infected equipment. The role of male heterosexual relations in HIV transmission in India cannot, however, be ruled out, although evidence of such transmission so far is rare. The risk of transmission of HIV and other sexually transmitted diseases is higher in sexual relationships with multiple partners and without the use of condoms. Premarital sex often involves multiple partners, and extramarital sex, by definition, implies multi-partner relationships. The following categories of people are likely participants, voluntary or non-voluntary, in multi-partner sexual relationships: female prostitutes and their customers, male homosexuals, *hijras* and male prostitutes. Avoidance of multi-partner sexual relationships, use of condoms and sexual abstinence are usually advocated for prevention of spread of HIV and other sexually transmitted diseases.

This paper provides salient findings from the empirical studies made so far in India along with the historical contexts of the topics mentioned above.

There is very little information on the female sexual partners of unmarried male students. Neighbours, relatives, prostitutes, friends and fiancées have been mentioned as partners in a few studies. There is an indication that the premarital sexual partner of a male student is often a married woman who may be a relative or neighbour. For example, one-half of all the first sexual partners of 72 college students in Hyderabad were married women older than themselves and a large majority of the partners were relatives. This is somewhat expected because of the higher value placed on the premarital chastity of Indian women than that of men and because most Indian girls are still married at an early age. Some findings indicate that a sizable proportion of unmarried students visit prostitutes.

### **HIV Prevalence among Sex Workers in India**

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Women often get involved in sex work as a result of poverty, marital break-up, or because they are forced into it. Although sex work is not strictly illegal in India, associated activities - such as running a brothel – are. This means that police hostility and brothel raids can be justified by the authorities. Stigma and discrimination against sex workers also means that they can find it difficult to access healthcare, even if they actively seek it.

HIV prevalence among sex workers varies widely between districts and states: one study found prevalence ranged between 2 percent and 38 percent (averaging at 14.5 percent) among districts in the four high prevalence south Indian states Andhra Pradesh, Maharashtra, Tamil Nadu and Karnataka. In the city of Mysore, southern India, around a quarter of sex workers are infected with HIV.

This situation is not surprising given that in one study only 20 percent of sex workers had always used condoms with commercial clients in the past month. India's National AIDS Control Organisation's (NACO) 2008-2009 report showed that female sex worker sites in the three large cities Mumbai, Pune and Thane had an HIV prevalence of more than 30 percent and that while there had been a decline in the southern states, this was contrasted by an increase in the north east.

### Sonagachi Project

One of the most successful initiatives among sex workers in India has been the Sonagachi project, named after the district of central Kolkata (Calcutta) where it is based. This project was started in 1992 and its approach is based around three R's: Respect, Reliance and Recognition – respecting sex workers, relying on them to run the program, and recognising their professional and human rights. Sex workers are trained to act as peer-educators, and sent to brothels to teach others about HIV and AIDS, and the importance of using condoms with clients. The campaign also addresses the social and practical barriers that prevent sex workers from using a condom. Madams and pimps are educated about the economic benefits of enforcing condom use in their

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brothels, and police have been persuaded to stop raiding brothels, because such raids often resulted in sex workers losing income, making them less likely to insist on condom use.

### How to Deal with Affected HIV/AIDS and STD Sex Workers

### 1. Truck drivers

India has one of the largest road networks in the world, involving millions of drivers and helpers. Truck drivers spend long periods of time away from home, and it is common practice for them to have relations with sex workers while on the road. A 2008 study showed that nearly a third of the long-distance truckers had paid for sex in the past twelve months. "There is no entertainment. It is day-in-day-out driving... When they stop, they drink, dine and have sex with women. Then they transfer HIV from urban to rural settings". Sometimes, relations with sex workers occur at roadside 'dhabas', which act as both brothels and hotels for truck drivers. In other cases, drivers stop to pick up women by the side of the road, and transport them to another area after they have had sex with them. Both truck drivers and sex workers move from area to area, often unaware that they are infected with HIV. There have been a number of major HIV/STI prevention projects aimed at truckers, many of which have aimed to promote condom use. Some of these projects include not just truckers, but also other stakeholders such as gas station owners and employees.

A specific example from Mumbai is the AIDS Workplace Awareness campaign, which is mandatory and which targets the drivers at the regional transport authority, where the drivers get their licenses renewed annually. As part of the third phase of the National AIDS control programme (2007-2013) 60 truckers interventions have been set up at major trans-shipment locations tasked with providing behavioural change education, condom and STI services to truckers. So far these interventions reach about 1.4 million out of an estimated 3 million truck drivers. There are signs that some efforts to prevent HIV among truck drivers have been successful. For example, a recent survey of truck drivers in Tamil Nadu - carried out after an HIV prevention program - found that the proportion of drivers who reported engaging in

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T. Kavitha, Ph.D. Research Scholar and Dr. K. Suriyan, Associate Professor Sexual Behaviour in India with High Risk of HIV/AIDS commercial sex declined from 14 percent in 1996 to 2 percent in 2003. Of those who did report having commercial sex, the proportion that had not used a condom the last time they did so fell from 45 percent to 9 percent.

### 2. Injecting drug users

Nationally, HIV prevalence among injecting users (IDUs) declined slightly to 7 percent in 2006 but has since risen to 9.2 percent. Transmission through injecting drug use is a major driving factor in the spread of HIV in India, particularly in north-eastern areas, such as Manipur and Nagaland. One study found HIV prevalence ranged from 23 percent to 32 percent in different areas of Manipur. In 2006 new sites of high HIV prevalence among IDUs were identified in Punjab, Tamil Nadu, West Bengal, Kerala and Maharashtra.

The alarming levels of infection occurring through needle-sharing have implications that extend beyond networks of drug users. Some of those who inject drugs are also sex workers or truck drivers, and many are sexually active, which can result in infection being passed on to their partners. NACO has linked an increase in HIV prevalence among sex workers in the North East, for example, with the high HIV prevalence among injecting drug users in the region. The Indian government's approach to drug use has traditionally been based around law-enforcement and prosecution.

Until 2008 harm reduction – a method of HIV prevention which acknowledges that drug use occurs and seeks ways to reduce HIV transmission in this context – was not part of the government's drug policies. However, the Indian government adopted a harm reduction strategy as part of the third phase of its National AIDS Control Programme (NACP III). NACO's harm reduction strategy contains five components including substitution therapy, otherwise known as maintenance therapy. Maintenance therapy involves the provision of a drug such as buprenorphine in pill or liquid form to injecting drug users as a way of minimising the risks associated with injecting. In order to allow for buprenorphine to reach 10,000 IDUs by March

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2009 and 40,000 by 2012, \$30 million has been committed to this part of India's harm reduction strategy. In February 2009, the World Bank reported that maintenance therapy was in fact reaching 6,000 out of the 10,000 targeted.

In 2008 a maintenance therapy programme was set up by the UNODC in partnership with the All India Institute of Medical Sciences in the largest prison complex in South Asia, Tihar prisons. The programme was the the first of its kind in the region. As of June 2009, 60 clients had been recruited and 25 had been released with follow up treatment carried out by NGOs. According to the UNDOC, 'the OST centre in Tihar is being viewed as a model by other countries in South Asia.' In the majority of Indian states, though, tough regulations on drug users make it hard to reach this group with HIV messages, and to survey how they are being affected by the epidemic.

### 3. Men who have sex with men

Sex between men is highly stigmatised in India and is not openly talked about, making it easy for people to underestimate how commonly it occurs. The estimated HIV prevalence among MSM (men who have sex with men) in India is 7.3 percent, but difficulties in surveying this stigmatized group mean prevalence could be much higher. In India, many men who have sex with men (MSM) do not consider themselves homosexual, and many have female partners. A large study in Andhra Pradesh found that 42 percent of MSM in the sample were married, that 50 percent had sexual relations with a woman within the past three months and that just under half had not used a condom.

As such, unprotected sex between men can also present a risk to any women that they may subsequently have sex with. The stigma surrounding MSM makes it hard for both the government and NGOs to reach them with information about HIV. Outreach workers and peer educators working with MSM have frequently been harassed by police, and in some cases arrested. Since conditions are so restrictive, there is little information available to MSM in India. Because so many MSM also have heterosexual relationships, there is a high chance that rising

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T. Kavitha, Ph.D. Research Scholar and Dr. K. Suriyan, Associate Professor Sexual Behaviour in India with High Risk of HIV/AIDS levels of infection among MSM in India will aggravate the epidemic among the general population. It is hoped that since the law that criminalises homosexuality was abolished in July 2009, MSM will be easier to reach with HIV prevention, treatment and care services.

### 4. Migrant workers

A large number of people move around India for work; it is estimated that 258 million adults in India are migrants; the majority are men migrating for employment. The Studies from across the world have linked migration to multiple sexual partners and increased HIV transmission. It has been said that migrants and other mobile individuals are bridge populations for HIV transmission from urban to rural areas and between high-risk and low-risk groups. Long working hours, isolation from their family and movement between areas may increase the likelihood that an individual will become involved in casual sexual relationships, which in turn may increase the risk of HIV transmission. In many cases, migration does not change an individual's sexual behaviour, but leads them to take their established sexual behaviour to areas where there is a higher prevalence of HIV.

According to the Indian government, "clients of sex workers are the single most powerful driving force in India's HIV epidemic" and long distance truckers and male migrants both make up a significant proportion of the clients of sex workers. Despite this risk, migrants have the lowest perception of risk in all high prevalence states. For example, in Andhra Pradesh, 60 percent of female sex workers believe they are at risk of HIV infection, compared with only 5 percent of male migrants. A study in 2008 identified a notable proportion of contractual workers who had used alcohol and engaged in paid and unpaid sex with women. The study also showed a significant number of the men had not used condoms, highlighting the need for increased prevention efforts among this group. NACO recommend targeted HIV prevention programmers primarily for men who are both migrants and part of high risk sex networks, due to the extremely large size of the migrant population in India.

### 5. Non-use of Condom by Sex Workers

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Male sex workers (MSW) are a particularly neglected group in India. One study in suburban Mumbai reported an HIV prevalence of 33 percent among the study group (17 percent in men and 41 percent in transgenders). All of the individuals in the study had reported anal sex and 13 percent had never used a condom, highlighting the need for increased attention and prevention efforts among this group. Targeted interventions and focus on sex workers by civil society organisations and the Indian government in Southern India have yielded results, including increased condom use by sex workers with their clients. However, NACO has acknowledged that continuing the interventions and ensuring consistency of condom supplies and use will be necessary to sustain this success. Elsewhere, increasing HIV prevalence among injecting drug users and sex workers in the North East provides a new challenge to halting the HIV/AIDS epidemic in India.

### Recommendations

- Targeted interventions to reduce transmission of HIV in sex workers, their clients and partners are a feasible and efficient use of resources in all stages of the HIV epidemic.
- A combination in one package of information and behavior change messages, condoms and other barrier methods and sexual health services will result in more effective HIV prevention.
- New approaches are needed to increase condom use with repeat clients and regular partners.
- Offering female sex workers additional choices of preventive methods will result in better protection.
- Condom social marketing and free distribution of condoms should complement one another.
- Specialized services for sex workers could provide them with additional safe and confidential options for sexual health services and behavior change education.
- Income-generating projects often have unrealistic goals.

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### **Controlling and Challenges**

Making prevention interventions among sex workers, their clients and partners work successfully is in itself a major challenge in HIV prevention. But some specific challenges for the future can be identified:

### Access to the most difficult-to-reachgroups

Adolescents, young girls living with their parents, unregistered sex workers and part-time sex workers are some of the most difficult groups to reach. Many of them have a hidden life as a sex worker, which complicates their access to prevention activities. Efforts should be made to reach these women since they are highly vulnerable to HIV/STD infection.

### Female-initiated mMethods

Effective methods under the control of women that allow them to protect themselves or reduce risks are urgently needed for female sex workers. Existing, effective methods—such as male and female condoms—should be made available and promoted among female sex workers. New methods, such as vaginal microbicides, should be tested for efficiency, feasibility and acceptability.

### Designing prevention projects for partners of sex workers.

Many projects report low levels of condom use between sex workers and their nonpaying partners. Because these relationships are of unknown stability and fidelity, they may also constitute a considerable HIV risk. The challenge is twofold: to reach the partners of sex workers and design an adapted prevention intervention for them.

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### **Income-generating Projects**

Operations research is needed to assess the effectiveness of income-generating projects. At present very little is known about the extent to which other part-time work might affect the sexual behaviour of sex workers.

### Care and Support for Sex Workers with HIV/AIDS

In the future, more and more projects will be confronted with the growing problem of sex workers with HIV/AIDS. Experience from small-scale pilot projects should be disseminated and guidelines developed for the care and support of sex workers with HIV/AIDS.

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## An Economic Analysis of Health Status on Madurai District, Tamilnadu: A Case study of Thirumangalum Taluk

### S. Sridhar, M. Anandan and S. Ramaswamy

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### Abstract

The quality of healthcare in India in both the private and public health sector is unsatisfactory. The problems include non-availability of staff and medicines as well as the rude behaviour of the staff. Studies in the private sector have shown that practitioners tend to recommend unnecessary and even harmful medicines. Recent policy documents also acknowledge the lack of quality in the Indian health services. In this context rural health is identified as a major indicator in the rural development and an attempt is made in this study to trace the trend in health status, present and future health challenges and "felt need" of the people in health care services in rural Tamil Nadu by taking a few revenue villages in Madurai district. There is inequality in health status among different socio-economic groups defined in terms of income, education, land ownership, and housing. Therefore research studies are needed not only to examine the nexus between health and development but also the question of differentials in health status and health care utilization across socio-economic groups in rural areas. The present study will also focus intensively to find out reasons behind the health seeking behavior of people at micro level in rural Tamil Nadu by taking a few villages in Madurai District.

#### Introduction

The progress of a nation depends on a large extent to the development of rural society. The development is consistent and effective only when there is a balanced growth regionally. In India still the development is lop-sided. In our country, there is mismatch between objectives and resources, which leads to both inadequacies and inequalities in rural development. To minimize this problem, the people in the rural areas particularly the weaker section to be properly identified and to assess how far the developments are addressed to their needs. To day, it is widely felt that development of social infrastructure is the pre-requisite for the

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overall development of any economy. In this context rural health is identified as a major indicator in the rural development and an attempt is made in this study to trace the trend in health status, present and future health challenges and "felt need" of the people in health care services in rural Tamil Nadu by taking a few revenue villages in Madurai district.

### **Statement of the Research Problem**

Tamil Nadu has performed well in health sector when compared with other states in India. Tamil Nadu is the leading state in implementing various government health programmes as per the observations made by UNICEF and WHO. But it is widely observed that today the public health system does not deliver services adequately to those who need them; and the private sector has grown to be the main provider of curative health care. The studies on health status in Tamil Nadu show the rosy picture of the health status in the state are based on aggregates and they conceal rather than reveal the inequalities that exist in the health conditions in the state. There is inequality in health status among different socio-economic groups defined in terms of income, education, land ownership, and housing. Therefore research studies are needed not only to examine the nexus between health and development but also the question of differentials in health status and health care utilization across socioeconomic groups in rural areas. Moreover it is necessary to analyze how far the health care services supply by the Government of Tamil Nadu are perceived by people in rural areas and what are the "felt need" of the people in health services. The present study will also focus intensively to find out reasons behind the health seeking behavior of people at micro level in rural Tamil Nadu by taking a few villages in Madurai District.

### Specific objectives of the Study

The specific objectives are:

- 1. To analyze the health status in the Villages in Madurai District in terms of
  - (i) Morbidity due to communicable and non-communicable diseases and
  - (ii) Mortality
- 2. To examine
  - (iii) Health care expenditure
  - (iv) Choice of medical system

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among different socio-economic groups in the selected villages of the Madurai district

3. To give suggestions to enhance the efficiency equity and sustainability of health care system in the state.

### Methodology of the Study

Madurai district consists of 7 taluks: 13 community development blocks and 664 revenue villages. There are 42 primary health centres of which 13 are main PHCs and 29 are Additional PHCs. According to 2011 Census enumerated population there were 30.41 lakhs of people in the district of which 11.96 lakhs were in rural areas and 18.44 lakhs were in urban areas.

### Selection of the Study Area

Thirumangalam Taluk in Madurai District has been selected as the study area for several specific reasons. Thirumangalam Taluk is considered to be one of the most backward taluks in the Madurai District. This Taluk is the largest taluk in the state covers 814.18 sq.km area in Madurai District. As per 2003 VHN (Village Health Nurse) Records, this Taluk has the highest death rate (8.4 per 1000 population) in the District. Moreover this Taluk consists of 108 revenue villages of the total 670 revenue villages of Madurai District. Thus this Taluk is the largest Taluk in Madurai District. This Taluk consists of 13.5 percent of rural population of Madurai District. This Taluk is Covering more rural areas and poor health status (death rate) in the district. Therefore this Taluk has been chosen as the study area

Thirumangalam	Taluk
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S. No	Study Area	Number of Households
1	A.Kokkulam	30
2	Sathangudi	30
3	T.Pudupatti	30
4	Nallamanayakkanpatti	30
5	Chinna Ulagani	30

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Total Households	150

### **Collection of Primary Data**

**Primary Data:** Primary data collected for this Thirumangalam Taluk has been chosen. This block consists of two main PHCs and three Additional PHCs. Of this one revenue village covers under each PHC has been chosen and thus number of sample revenue villages are five in this study. A complete household survey has been undertaken in all the selected five villages. Simple random sampling method is adopted to collect primary data in the present study to get an in-depth view about the rural health status in the district. Thus primary data are collected from the selected five villages of the Thiumangalam Taluk of Madurai District.

**Analysis of the Study:** Percentage analysis, Correlation and chi-square test are used in primary data. Study area from Thirumangalam Taluk, Madurai District. 150 total households are selected from five revenue villages. Each 30 households are used simple random sampling.

S. No	Community	Total Households	Percentage
1	BC	56	37.33
2	MBC	82	54.67
3	SC	11	7.33
4	ST	1	0.67
	Total	150	100

 Table 2

 Community of the Total Households

Source: survey data

150 households from five revenue villages and 54.67 percentage of the majority of the community are Most Backward Class. 37.33 percentage of the population are Backward Class.

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### Table 3Education Status of the Total Households

S. No	Education	Total Households	Percentage
1	Literate	98	65.33
2	Illiterate	52	34.67
3	Total	150	100

Source: survey data

65.33 percent of the total households are literate and 34.67 percent of the total households are illiterate.

### Table 4

### Size of the Family and Total Households

S. No	Family Size	<b>Total Households</b>	Percentage
1	1-3	49	32.67
2	4-6	90	60.00
3	7-9	11	7.33
Т	otal	150	100

Source: survey data

60 percent of the total households are 4-6 family size in study area and 32.67 percent of the total households are 1-3 family size.

### Table: 5

### **Occupational Status of the Total Households**

S. No	Occupational Status	No.of.Total Households	Percentage
1	Farmer	09	6
2	Agricultural Worker	65	43.33
3	Government Employee	12	8
4	Private Employee	13	8.67
5	Self Employee	21	14
6	Unemployed	30	20

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Total	150	100
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Source: Survey data

43.33 percent of the occupational status is agricultural worker and 20 percent of the households are unemployed.

	-		
S. No	Monthly Income (in Rs)	Total Households	Percentage
1	Below 1500	13	8.66
2	1501-3000	36	24.00
3	3001-4500	40	26.67
4	4501-6000	49	32.67
5	6001 and above	12	8
	Total	150	100

Table: 6Monthly Income of the Total Households

Source: Survey data

32.67 percentage of the number of the total households of the monthly income are 4501-6000. 8 percentage of the total households are 6001 and above.

### Table: 7

### Monthly Health Expenditure of the Total Households

S. No	Monthly Health Expenditure	Total Households	Percentage
	(in Rupees)		
1	Below 500	56	37.33
2	501-1000	37	24.67
3	1001-1500	27	18
4	1501-2000	18	12
5	2000 and above	12	8
	Total	150	100

Source: Survey data

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37.33 percent of the total households are spending below 500. 24.67 percent of the total households are spending 501- 1000. 8 percent of the households are spending 2000 and above.

### Table: 8

### Structure of the Household

S. No	Structure of household	Total Households	Percentage
1	Hut	31	20.67
2	Titled	51	34
3	RC Roofed	68	45.33
	Total	150	100

Source: survey data

45.33 percent of the total households are living Rc Roofed and 20.67 percent of the total households are living Hut.

### Table: 9

### **Electrification Facility of the Households**

S. No	Electrification	Total Households	percentage
1	Yes	138	92
2	No	12	8
	Total	150	100

Source: survey data

8 percent are not electrification in household and 92 percent are electrification in household.

### Table: 10

### **Source of Drinking Water**

S. No	Source of Drinking	<b>Total Households</b>	Percentage
	Water		
1	Public tab	126	84

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2	Bore well	12	8
3	Open well	2	1.33
4	Tank	10	6.67
ן	Total	150	100

Source: Survey data

84 percent of the households are used public tab and 1.33 percent of the households are used open well.

### Table: 11

### **Toilet Facility**

S. No	Toilet Facility	Total Households	Percentage
1	Flush out	12	8
2	Dry latrine	5	3.3
3	Open Place	133	88.7
	Total	150	100

Source: Survey data

88.7 percent of the households are used open place and 3.3 percent of the households are dry latrine.

### Table: 12

### Choice of Health System

S. No	Choice of Health System	Total Households	Percentage
1	Primary Health Centre	53	35.33
2	Government Hospital	76	50.67
3	Private Clinic	19	12.67
4	Ayurvedic/Homeopathy	2	1.33
	Total	150	100

Source: Survey data

50.67 percent of the household are going to Government hospital and 1.33 percent of

the people are going to Ayurvedic/Homeopathy.

### Table: 13

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### Mortality of the Households

S. No	Mortality	Total Households	Percentage
1	Yes	11	7.3
2	No	139	92.7
	Total	150	100

Source: Survey data

7.3 percent of the households are death and 92.7 percent of the households are not death.

### Table: 14

### **Reason for Death of Mortality**

S. No	Reasons for death	Total Households	percentage
1	Accident	5	45.45
2	Natural death	3	27.27
3	Child death	2	18.18
4	Chest pain	1	9.10
	Total	11	100

Source: Survey data

45.45 percent of the households are death in accident cases and 9.10 percent of the total households are death in chest pain.

### Table: 15

### Morbidity of the Total Households

S. No	Morbidity	Total households	percentage
1	Yes	134	89.3
2	No	16	10.7
	Total	150	100

Source: Survey data

89.3 percent of the households are affected communicable diseases and non communicable diseases. 10.7 percent of the households are not affected both diseases.

### Table: 16

### **Communicable Disease and Sex**

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S. No	Communicable	Sex		Total
	diseases	Male	Female	
1	Affected	93	152	245
		(37.96)	(62.04)	(100)
2	Not Affected	240	73	313
		(76.68)	(23.32)	(100)
	Total	333	225	558
		(59.68)	(40.32)	(100)

Source: Survey data Figures in parentheses refers to percentage

The above the table 245 of the family members is affected communicable diseases, 313 of the family members are not affected communicable diseases. 62.04 percent of the female are affected communicable diseases. 37.96 percent of the male are affected in communicable diseases. 76.68 percent of the male are not affected communicable diseases and 23.32 percent of the female are not affected communicable diseases.

S. No	Name of the	S	ex	Total
	Communicable	Male	Female	
	diseases			
1	Viral Fever	38	62	100
		(15.51)	(25.31)	(40.82)
2	Cough	12	33	45
		(4.90)	(13.47)	(18.37)
3	Small box	22	24	46
		(8.98)	(9.79)	(18.77)
4	Cholera	8	9	17
		(3.27)	(3.67)	(6.94)
5	Malaria	7	11	18
		(2.86)	(4.49)	(7.35)
6	T.B	4	6	10
		(1.63)	(2.45)	(4.08)
7	Diaherria	2	7	9
		(0.83)	(2.85)	(3.67)
	Total	93	152	245
		(37.96)	(62.04)	(100)

### Table: 17

Affected Correlation between affected Communicable Disease and Sex

Source: survey data and Figures in parentheses refer to percentage

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40.82 percent of the total respondents are affected viral fever and 25.31 percent of the female are affected viral fever and 15.51 percent of the male are affected viral fever and 18.77 percent of the total respondents are small box and 18.37 percent of the total respondents are cough.

### **Table 17.1**

### Results of the Correlation between affected Communicable Diseases and Sex

Name of the Correlation	ʻr' Value	Degree	Correlation Result
Karl pearson	0.93	High	Positive Correlation

There is high positive correlation between affected communicable diseases of the male and female.

### Table: 18

### Non Communicable Diseases and Sex

Non Communicable Digeogeg	S	Total	
Non Communicable Diseases	Male	Female	Total
Affected	250	63	313
Anected	(79.87)	(20.13)	(100)
Not Affected	83	162	245
Not Affected	(33.88)	(66.12)	(100)
Total	333	225	558
Total	(56.68)	(40.32)	(100)

Source: Survey data and Figures in parentheses refers to percentage

245 of the total respondents are affected non communicable diseases and 313 of the total respondents are not affected non communicable diseases. 33.88 percent of the male are affected non communicable diseases and 66.12 percent of the people are affected non communicable diseases.

### **Table 18.1**

**Result of the Chi-Square Test** 

Factor	Calculated Table Value		Degrees of	David
	Value	Table value	Freedom	Remarks

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Non Communicable	0.96	2.04	1	Significant at
Diseases and Sex		3.84	1	5 per cent

The chi-square test reveals that the calculated value is less than the table value and result is significant at 5 percent level. Hence the hypothesis is accepted. From the analysis, it is concluded that there is association between non communicable Diseases and Sex. For 1 degree of freedom at 5 per cent level of significance chi-square table value is 3.84. Since calculated value is 0.96 is less than table value is 3.84. There is  $H_0$  null hypothesis accepted. There is no significance difference between sex and non-communicable disease.

### Suggestions of the Study

- ✓ The central and state government should encourage the public expenditure on health in rural areas
- ✓ The central and state government may increase the main primary health centers and additional primary health centres and health sub centres in rural areas
- ✓ Government may increase health awareness programmes and environmental awareness programmes for illiterate rural people
- ✓ Infrastructure facilities and emergency facilities should increase in primary health centres.

### Conclusions

It is widely recognized that improvement in the health status of population is an important strategy to increase the productivity and economic growth of developing nations. In India, ensuring the good health of the people, particularly in rural areas is a challenging task. Many of the health targets are still remained unachieved. In the light of this, it widely felt that an in depth study of health status in rural areas like the present study could provide valuable inputs to the academics, health experts and policy makers.

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### **Evaluation of Healthcare Services** "Why Did We Choose This Hospital?"

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### 1. Introduction

Concern for the quality of health care is as old as care itself. Quality in health care is innovative as it involves explication and systematization of methods of setting, appraising and maintaining standards. Such methods involve the regular observation, review and improvement of care.

There are two main ways of defining health, the positive health where health is viewed as a capacity or an asset to be processed and the negative approach which emphasis the absence of specific illnesses, diseases or disorders.

### **1.2 The Positive Concept of Health**

The World Health Organization (WHO) has defined health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity". This definition is significant in stressing mental as well as physical aspect of health and social as well as individual well-being. This definition has criticized for being utopian though it is perhaps more appropriately viewed as an ideal towards which health care and other social actions may be orientated (Twaddle,1974)<sup>1</sup>. Illich<sup>2</sup> in his critique of medicine argues that health designates the intensity with which individuals cope with their internal states and environmental conditions.

To summarize, health in a positive sense can be seen as a feeling of general well-being on an individual and social level. More specifically it can also be seen as a process of adaptation to the environment, a capacity to function and strength to cope both with specific illness and with life in general.

### 1.2 The Negative Concept of Health

In terms of the negative concept of health, an individual is regarded as being healthy when not suffering from a particular illness or disease. The terms "illness" and "disease" often used interchangeably.

Health and illness can vary over one's lifetime with individual being more prone to particular illnesses at certain stages in their lives. There are also significant geographical variations in health and illness. There are differences in health between social classes between the sexes and between ethnic groups in the population.

### 2. Review of Literature

This research study makes an attempt to understand the observations made by many illustrious scholars in this field.

Donabedian<sup>6</sup> commented that a personal physician would be the primary care giver as well as the coordinator and counselor when care is provided by others.

According to the white paper on "Working for Patient" <sup>7</sup> and the subsequent health service reform bill confronted that one of the central proposals was that all doctors and other health professionals in hospitals primary care and community setting should be involved in some form of "Medical Audit".

Black<sup>8</sup> draws attention to grasp in provision and to average standards of care whereas monitoring and to individual episodes of care and of facility based delivery in more likely to highlight outstanding individual instances of both high and low quality of health care.

Willamson and Wrong <sup>9</sup> use Deming's analysis of industrial quality control in their discussion of health care Quality. For Deming quality control or assurance is only successful when the costs of monitoring quality are substantially less than the cost of poor quality.

Kirkup and Forster <sup>10</sup> has been suggested an approach is to compare existing service levels with those expected from the population covered to investigate their expectations are meet or exceeds or short-fall.

According to Agarwal<sup>11</sup>, hospital effectiveness which can be measured in terms of patient satisfaction does not depend on the improvement of hospital service aspect alone but on the

medical care aspect. The hospital social system is almost the measure of its organizational health, some element of democracy must be introduced in the hospitals.

Dr. C.M.K. Reddy <sup>12</sup>, Head of Tamil Nadu Medical Council (TNMC) said that" we have already started receiving about four complaints a week". But I admit medical councils in most states are largely inactive and exist only on paper.

### 3. Regional and Local Variations

The immediate local environment is regarded as a more important determinant of health then the region in which one resides. Urban areas particularly purpose-built inner city estates and deprived industrial areas are least healthy, rural and prosperous areas the most healthy. Hence in the north one can find areas where the population's health is good while some localities in the south have very poor levels of health.

### 4. Rationale behind the Study

Health care services are activities undertaken specifically to maintain or improve health or to prevent decrements of health. Health is important to every human being. Health is routinely conceptualized by different people in both negative and positive terms narrowly and broadly.

The rationale behind the study is to highlight the finding of health care services and patients satisfaction carried out in twin cities of Hyderabad and Secunderabad at public and private hospitals to assist and encourage health care providers to maintain and improve the standards of care and meet patient's needs. The study also helps the researchers to contribute and throw more light on this topic.

### 5. Objectives of the Study

- 1. To access the perceived quality of services, provided by the doctors in the hospitals.
- 2. To examine the degree of patient satisfaction with quality of health care services provided by the doctors according to their socio-economic background of the patients.

### 6. Scope of the Study

The scope of the study was confined to select public and private hospitals in the twin cities of Hyderabad and Secunderabad. Two types of hospitals were selected on the basis of their

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ownership namely public hospitals and private hospitals, besides they were qualified on the basis of their bed strength. All those hospitals which were having a minimum of 100 beds were chosen for the study. As such, seven hospitals in the private ownership and five hospitals in public ownership have been short listed.

### 7. Research Methodology

A descriptive research design is adopted in order to conduct the study. This design was found the most suitable for understanding the patients satisfaction with the services provided to them in the select hospitals of Hyderabad and Secundrabad.

### **Sources of Data**

The primary data were collected from patients (customers) of all the private and government hospital of Hyderabad and Secundrabad. Primary data formed the core of the research of the study.

The secondary data has been collected from the Medical reports, Journals, Articles, Books, Doctoral thesis, Magazines of Indian and foreign origin.

### Sampling

The sample for this study includes 600 patients (350 from private and 250 from public hospitals). The patients were selected randomly from the list generated by the front office staff of all the hospitals. All these were administered the structured questionnaire and the interview schedule.

### **Data Processing and Analysis**

The data collected from the respondents were separated according to their category and were screened for any possible errors or incompleteness. Later, these data which were in qualitative form were converted into numerical codes and entered into the computer in the excel sheet. This excel sheet data is processed with the help of SPSS package. All the percentage tables were prepared first in order to know the trends. Further to know whether the association between both the variables is statistically significant chi-square test was computed.

### Limitations of the Study

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The study is limited to the patients of Hyderabad and Secundrabad cities.

### 8. Data Analysis

The data collected through structured questionnaire was analyzed by SPSS software using statistical tools like cross tabulation and chi-square test.

### 8.1 Reasons for Choosing the Hospital

It was decided to know why the patients have chosen the hospital in which they were admitted. Therefore, data collected in this regard are cross tabulated according to the type of hospitals and results in this regard are presented in the following table.

Type of		Reasons for choosing the hospital					Total	
Hospital		Reputation	Family/Friends	Physician	Insurance	Location	Others	Total
Private	Count	21	112	133	36	46	2	350
Hospital	%	6.0	32.0	38.0	10.3	13.1	0.6	100
Public	Count	5	115	57	15	55	3	250
Hospital	%	2.0	46.0	22.8	6.0	22.0	1.2	100
Total	Count	26	227	190	51	101	5	600
	%	4.3	37.8	31.7	8.5	16.8	0.8	100

	Value	df	P=
Chi-Square	34.219	5	.000

It is evident from the table that a large number of the patients from private hospitals said that either family/friends (32.0%) or physicians (38%) have been the reason for being admitted in the hospital. Similarly, in case of public hospitals also respondents reported the same result. That is a large number of them were either recommended by family/friends (46.0%) or physicians (22.8%). Further, chi-square value also suggests that such results are statistically significant.

### **1.2 Carefulness by the doctors**

The Patients observe doctors during their handling of the patients. Especially when patient has pain he/she expects doctors to be careful in handling him/her. It was decided to know whether they are satisfied with the same. Data collected in this regard are cross tabulated and presented in the following table.

Type of		Carefulness by doctor					Total	
Hospital		Very good		Good		Ba	d	Total
Private	Count	82		252		16	<u>ó</u>	350
Hospital	%	23.4		72.2		4.0	6	100
Public	Count	5		123		12	2	250
Hospital	%	2.0		49.2		48.	.8	100
	Count	87		375		13	8	600
Total		Value		df	P=	=		
	Chi-Squar	re 182.344		2	.00	00		
	%	14.5		62.5		23.	.0	100

It is evident from the table that a large majority of patients from private hospitals (72.0%) said that carefulness of doctors while treating the patient was good. Whereas in case of public hospitals a large number (48.8%) said it was bad. Further, the chi-square value also suggests that such result is statistically significant.

### **1.2 Doctor's Friendliness and Courteous Manner**

Besides, expertise doctors are expected to be friendly and courteous with the patients. Thus it was decided to know whether they are satisfied with the friendliness and courteousness of the doctors. Data collected in this regard are cross tabulated and presented in the following table.

Type of		Responses			Total
Hospital		Very good	Good	Bad	Total
Private	Count	83	244	23	350
Hospital	%	23.7	69.7	6.6	100
Public	Count	9	78	163	250
Hospital	%	3.6	31.2	65.2	100
Total	Count	92	322	186	600
Totur	%	15.3	53.7	31.0	100

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	Value	df	P=
Chi-Square	240.489	2	.000

It is evident from the table that a large majority of patients from private hospitals (69.7%) said that friendliness and courteousness of the doctors is good. Whereas in case of public hospitals (65.2%) said it was reported to be bad. Further, the chi-square value also suggests that such result is statistically significant.

### **1.2 Feeling for Safety and Protection**

Safety and Protection of the patients in all respects when they are being taken for diagnostics and testing is very important. Patients express that they should be satisfied in all such instances. Therefore, their feeling for safety and protection was assessed. Thus it was decided to know whether they are satisfied with the safety and protection in the hospitals. Data collected in this regard are cross tabulated and presented in the following table.

Type of		Feeling for safety and Protection			
Hospital	-	Very good	Good	Bad	Total
Private	Count	53	284	13	350
Hospital	%	15.1	81.1	3.7	100
Public	Count	5	62	183	250
Hospital	%	2.0	24.8	73.2	100
Total	Count	58	346	196	600
1000	%	9.7	57.7	32.7	100

	Value	df	P=
Chi-Square	321.887	2	.000

It is evident from the table that a large majority of patients from private hospitals (81.1%) said that feelings for safety and protection in the hospital are good. Whereas in case of public hospitals (73.2%) said it was reported to be bad. Further, the chi-square value also suggests that such result is statistically significant.

### **1.2 Time Spent by the Doctor**

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It is generally understood that doctors spend less time on each patient, whereas nurses spend more time. However, patients expected doctors to spend more time since it contributes to their satisfaction. Thus, it was decided to know whether they are satisfied with the time spent by the doctors. Data collected in this regard are cross tabulated and presented in the following table.

Type of		Time spent by the Doctor			
Hospital		Very good	Good	Bad	10141
Private	Count	83	248	19	350
Hospital	%	23.7	70.9	5.4	100
Public	Count	9	98	143	250
Hospital	%	3.6	39.2	57.2	100
Total	Count	92	346	162	600
1.5141	%	15.3	57.7	27.0	100

	Value	df	P=
Chi-Square	208.592	2	.000

It is evident from the table that a large majority of patients from private hospitals (70.9%) said that the time spent by the doctors in providing correct attention towards patients in the hospitals is good. Whereas in case of public hospitals majority of them (57.2%) said it was reported to be bad, while a large number of them said it was good (39.2%). Further, the chi-square value also suggests that such result is statistically significant.

### 9. Findings and Conclusions of Patients

The important findings and conclusions of patients' satisfaction in both public and private hospitals are summed up below.

- 1. As reason for choosing the particular hospitals for their health care services, a large number of the patients from private hospitals said that family and friends (32.0%) and physician (38.0%) have been the reason for being admitted in the hospitals. Similarly, in case of public hospitals respondents reported that family and friends (46.0%) and physician (22.8%) for choosing the hospital for their healthcare need.
- 2. The patients observe doctors during their handling, especially when patient has pain he expects doctors to be careful in handling him/her. A majority of the patients from private

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hospitals (72.2%) said that carefulness of the doctors while treating the patient was good. Whereas in case of public hospitals a large number (48.8%) reported good and remaining has reported that they are bad.

- Doctors are expected to be friendly and courteous with the patients. A majority of patients from private hospitals (69.7%) said that friendliness and courteousness of the doctor is good. Whereas in case of public hospitals (65.2%) said it was reported to be bad.
- 4. Safety and Protection of the patients in all respects when they are being taken for diagnostics and testing is very important. In this regard, majority of the patients from private hospitals (81.1%) said that the feeling of safety and protection in the hospital are good. Whereas in case of public hospitals (24.8%) said that it was good.
- 5. It is generally understood that doctors spend less time on each patient. However, patients expected doctors to spend more time since it contributes to their satisfaction. Majority of the patients from private hospitals (70.9%) said that the times spent by the doctors in providing correct attention towards patients in the hospitals are good. Whereas in case of public hospitals (39.2%) said that it was reported to be good and (57.2%) reported that they are very poor.

The suggestions offered by the patients from Public and Private Hospitals as well as recommendation made would certainly bring a sea-change in the health services provided by both the sectors. It is recommended that these hospitals gain competitive advantage by being more dynamic in providing latest technology at affordable price to enhance patient's satisfaction.

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### Theoretical Insight on the Socio-Emotional State of Adolescents M. Valarselvan and Dr. K. Muralidharan

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### Abstract

There are many theoretical and empirical studies depicting that the different levels of adolescents' problems. This present paper analyzes many theoretical literatures and searching on the condition of family environment and socio-emotional adjustments among adolescents. Many literatures pointed out that "adolescence is a transition period; it is a unique moment of social identity and desire for social approval of the society" The social and family environment widens as the child enters the stage of adolescence. *During the Adolescence transition period, "parents play a significant role in the developing of their physical and psychosocial changes*" Individuals in this developmental stage undergo dramatic pubertal changes and are capable of increasingly abstract and complex reasoning.

As a result, "the parent-adolescent relationship experiences increased more emotional and social adjustment. Social scientist found that family relationships remain important throughout adolescence period" In fact, adolescents who did not exhibit high levels of socio- emotional adjustment with their parents were feared to suffer from stunted development.

Although socio-emotional adjustment is still considered to be a normal part of adolescent relationships, higher levels of intensity are associated with hostility and the limited potential for future positive interactions (Larsen.1995). Hence that inevitable parent-youth conflict gets started throughout the period of adolescence. As a result the emotional intelligence or the E.Q is not positive for them.

Key words: Emotional, Adjustment, Hostility, Vulnerability

### Introduction

In a theoretical point of view, adolescence is a transition period of change and growth that takes place into triangle instigation and it have been realized as in terms of Biological, Psychological and Social changes. Biologically, the female adolescents experienced pubertal changes, and followed by changes in brain development and sexual urges. As on the part of Psychological character, the adolescents' have cognitive experience from where they are maturing in character, knowledge and attitude. As on the getting of multiple experience, *they are moulding on the level of social understanding and establishing communication linkages with others. This is mostly sensitized in school. The other interactions alongwith role and responsibilities are endorsed with family and community.* 

Changes occur at different levels of stages that which have associated with the attainment of adult roles and responsibilities. Moreover, the adolescents perspectives are more efficiency. Their tendency between social adjustment and environmental factors are individual signs on them. "In these context the adolescent behaviour is emerged as an important role and responsibility for the family and in the society".

As a result, the stages of adolescence can be divided into three phases; the first is earlier period between the age group of 10-13, the second is middle age between 14-16 years, and the matured stage is between 17to19 years. In early adolescence, physical changes include physical and sexual maturation appeared. These changes continued through middle age adolescence and into the matured stage. During this period, they established peer relationship among their friends. This is an indicator for "behaviorism" *which means human character is learnt by adapting outside conditions and it further interprets that the character is not influenced by thought or feelings.* Social psychologist found that behaviour is an understanding part of social uniqueness among the adolescents.

As on the understanding period of cognitive character, "they create concrete thinking abilities, while in middle and matured stage of adolescence, the young person moves into thinking capacity and can develop reasoning skills" when the time, they are inconsistency and unstable emotional attitude and character taking place. When this period, the adolescents are inefficient on decision-making opportunities, However, in the middle stage, they begin to develop a sense of identity, established more relationship between others. During this middle age, "adolescents become more effective influence on sharing and expressing sexuality with same age groups".

In the middle stage of adolescence, understanding of friendship, holding interaction with others are highly influenced. During this period, the relationship between parents have more

emotional in nature and it continued through environmental perceptions. And in the middle stage, adolescents begin to experiment with new ways of behaving, while in the middle adolescence is considered a time of risk-taking, In the matured stages, the adolescence have own risk and emotional adjustment in terms of social, psychological aspects.

### **Socio-emotional Development**

The transition of Adolescent period is critical movement on the complement of socioemotional growth. it is established by peers involvement and organizing friendships, Fromwhich they could promote good relationships towards others. As adolescents make the transition to primary then to high school which make peer interaction increases. "*The understanding of social adjustment among adolescents becomes an important approach within the peer relations*" *It also grown-up during a close friendship and it begin to social support and contribute in important ways to adolescents' self-concept and well-being*. In fact, there is no one scientific identification of adolescence or set age boundary. There are key development changes that nearly all adolescents experience during their transition from childhood to adulthood.

However many researchers and developmental specialists have identified that the age span between 10 to 24 years as a working definition of adolescence. This age span can be further divided into sub stages. Further it describes the developmental characteristics of adolescents into specific stages of physical, cognitive, and social-emotional development. These sub-stages of adolescent development is one of the most dynamic stages of human growth. In accordance with the above view, the present paper has aimed to define the theoretical concept of social emotional problems among the adolescents.

### **Family Environment**

Parents are expecting with certain level of confidence on their children that may have set into a well-adjusted adults because their children may become confident about their impulses. Parents express their emotions adequately and appropriately and it may be a reliable and trustworthy among adolescents. This could be parents obligations, duties, and responsibilities. *In a general view of the psychologist impressed that, parents wants their children to be able to restrain rebellious and destructive desire and adjust to social norms to live happy and healthy lives, and, in most cases, they do their best to help their children to achieve this goal.* If parental efforts affect children directly, then the ways in which they try to manage their children's behavior should have an immediate impact on children's adjustment, especially among young adolescents.

Number of psychological studies found that on parental supporting of adolescents. For example, giving encouragement during the indecision process, and promote self-control on their children's behavior.

Hence one of the famous psychologist argued that "parenting behaviours are directly related to children's emotional and behavioural aspects". Alternatively, parents encouraged the development of certain aspects of their children's character that are conducive to successful psychosocial adjustment in adulthood. In this perspective, rather than preventing their children from becoming depressed or delinquent, adaptive parenting behaviour would provide children with the capacities to help themselves and to prevent them from developing psychosocial problems.

Self-control is apparently defined in terms of capacity that may be umpire between parental activities and adolescent behaviour. The essential indeed of self-control is the modern expression for what was once called "positive sign and personality improvement". In everyday terms, self-control describes the self-discipline and moral behaviour that are believed to be at the core of becoming a well-adjusted adult.

The understanding of the adolescent girls expand from the family decision making process and the future adjustment within society. Their peer group which ultimately reflect the social maturity of adolescent girls. Family environment continues to be of crucial importance throughout adolescence and young adulthood. Because of the important role of psychological functioning for youngsters' daily lives and their further social adaptation, it is apparently relevant to study the effect of the family environment on the emotional adjustment of adolescents.

Family adjustment and encouragement relationships between family members are associated with adolescent psychological adaptation and decreasing the depression. Research studies regarding level of family conflict suggests that a conflict-prone family environment is associated with adolescents' insecurity and psychological distress, as well as aggressive behaviour and conduct disorder.

### **Identity of Socio-emotional Status**

Adolescents with socio-emotional state of problems are more risk taking process. As a result, the unconstructive outcomes are emerging in later period of life. As consequences, the difficulties and increased conflict with parents is one of outburst that are often ignored. These developments of socio-emotional difficulties among adolescent is perplex and intricate possessions. A direct relationship between childhood is prevailing unprotected condition, though

it may be abuse or neglect and or exposure to violence in the home and or community. it has been identified as one of the risk factors that can lead to failure of inner assessment of life. However, there are many adolescents who tolerate such adverse circumstances and are still able to fare well and have emerged greater capacity for setting goals. Schools can play a consistent role in children's lives and meet their social-emotional needs, through professional co-operation between educators and mental health specialists. *Some of the psychological research studies found that Schools are important pathway on the reduction of socio-emotional state of adolescents or improving academic quality of the adolescents.* 

### **Theoretical Impact of Socio-emotional Status**

### 1) Social Anxiety

A large number of studies relating on to psychological and public health research pointed out that the importance of adolescents "social anxiety" "depression" and "social adjustment. One of the study indicated that the young adolescents fear of social anxiety that can affect the individual perceptions and events, that may be more risk and decreasing the social function. Further it could lead impair of social support among the adolescents. Further several studies found that "adolescents girls who are poor social adjustment from their parents and peers or whose social relationships are troubled and they have in a greater risk for suicidal thoughts". This above indicators analyzing the information among adolescents and found out that having a friend who committed suicide significantly increased the likelihood of suicidal thoughts and attempts for both boys and girls. Most of the social psychologist pointed out that adolescent with Social Anxiety between 17% and 28% by the age of 18 years. *life-time prevalence of* Furthermore, adolescents Social anxiety and disorder moods are associated with decreased levels of functioning in various areas. Symptoms of social anxiety are even more common. It is also related to various maladaptive outcomes. Specifically, low peer contact and peer rejection, social problem-solving deficits, a negative self-image, low perceived quality of social support, substance abuse, behavioral problems, poor parent-child relationships, and learning disabilities, to name a few, are all reported to be associated with symptoms anxiety.

Social anxiety dysfunctions also tend to have their first onset in adolescence and often show a chronic course with a high risk of relapse, which makes it important to prevent or postpone the onset of these psychosocial problems. Reflecting these important changes in social relations, a growing number of psychosocial problems have examined linkages between adolescents' peer relations and internalizing aspects of mental health, such as feelings of anguish and social anxiety. Symptoms of social anxiety have particularly important to study during adolescence, as both are common and may be risk factors for impairment in adulthood. A better understanding of risk and protective factors can contribute to theory development and to the development of preventive interventions for internalizing disorders. Thus, this study builds on and extends prior

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Theoretical Insight on the Socio-Emotional State of Adolescents

research by examining aspects of adolescents' general peer relations, best friendships, and romantic relationships, in an effort to comprehensively examine the role of peer and social relations in the development of adolescents' feelings and social anxiety.

### 2) Depression

The presence of the socio-emotional symptoms among the adolescents may be reasoning for the negative consequences of feelings, which impaired one's involvement and interaction of their social environment. Psychologist frequently told that young adolescents are higher level of depression. Some of the psychological scientist found that depression is an illness that involves the body, mood, and thoughts and that affects the way a person eats, sleeps, feels about himself or herself, and thinks about things. Depression is not the same as a passing blue mood. It is not a sign of personal weakness or a condition that can be wished away. The signs and symptoms of depression include loss of interest in activities that were once interesting or enjoyable, including sex; loss of appetite, with weight loss, or overeating, with weight gain; loss of emotional expression; a persistently sad, anxious, or empty mood; feelings of hopelessness, pessimism, guilt, worthlessness, or helplessness; social withdrawal; unusual fatigue, low energy level, a feeling of being slowed down; sleep disturbance and insomnia, early-morning awakening or oversleeping; trouble concentrating, remembering, or making decisions; unusual restlessness or irritability; persistent physical problems such as headaches, digestive disorders, or chronic pain that do not respond to treatment, and thoughts of death or suicide or suicide attempts.

According to Goebel (1999) reported that a depressive episode among the youngsters tend to withdraw socially, feel insecure in relationships, elicit rejection from others and experience high levels of interpersonal conflict and stress. Romantic, family and peer relationships all suffer. Given their level of suffering, impairment and hopelessness, it is hardly surprising that depression is one of the biggest risk factors for suicide among the younger generation.

Symptoms of Depression can vary greatly and include: crying, loss of interest or pleasure in previously enjoyable activities, loss of appetite, change in appetite, and change in sleep patterns. When these symptoms become persistent and interfere with a person's daily functioning, and have a negative effect on the person and those around them, the person may be diagnosed with depressive disorder. In the 21st century, depression has become so widespread that it has been called "common-cold" of mental illness. It involves the feeling of extreme sadness and dejection.

### 3) Social Adjustment

The social adjustment and its environment has a great impact on health and well-being of adolescents. Social relationships typically include both social support, sometimes it may be positive aspects of social relations and social maladjustment which means the restrain relationship between parents and children, it may causes on the negative aspects of social relationships. "Social adjustment among adolescents could shape physical and psychological well-being". And it promotes positive health behaviours among adolescents. while social maladjustment negatively affects health and well-being. In a national study of young adolescents participating in the first wave of data collection for the study of Social Adjustment of adolescents and Development in the United States found that younger people are reported better social adjustment and relationships than the older people. Adjustment is a popular expression used by people in day to day life. For example the relationship between employee and employer and the sharing views between friends. Though we have some problems while making some adjustment among parents or public in the society. However maintaining the relationship is major social adjustment towards anybody or anything.

Cairns, R. B., (1983) interpreted that adjustment maintains peace and harmony in home, school, society and in the country. Social adjustment can be defined as a psychological process. It frequently involves coping with new standards and values. "In the technical language of psychology connoting on getting or sharing a common understanding along with the members of the society as best as one can is called adjustment". As social beings we live in a society, we form opinions about others and others have opinions about us.

Bloom M.,(1989) Everybody wants acceptance and recognition from and within society. We try to behave according to the norms of the society so that we can adjust with others. But it is not an easy task as the personality of each individual is a unique organisation. This organisation has to make special efforts to adjust with others unique organisations, which we call society.

### **Suggestions on Theoretical Insights**

This present study analyzed socio-emotional levels at a theoretical point of view among adolescents and found that transition period of growth by which "individual identity" is appeared. This can be confined into the limitation of family role and responsibility among the young adolescents. Although theoretical research shown that ongoing positive family connections are protective factors against adolescents' health risk behaviours. And the nature of relationships is changing, the continuity of family connections and a secure socio- emotional base is crucial for the positive development of young people.

### 1) Family is still important

For young people family is still important social institution and now it changed traditional to modern family system. The style of social change in the family that enhance the life into shaping of character and personality moulding among adolescents. These changes may mean times of anger and frustration that is leveled at the family, but in the majority of circumstances these feelings are likely to be temporary or incidental, by means parents shoud maintain the supporting relationship among the adolescents within certain acceptable honour or flexibility of the situation. Although many young people who display difficulties and risk behaviour are actually doing so in an attempt to have someone set some boundaries and limits. A great deal of emphasis is placed on the importance of peer groups, and how they become more influential than parents at this age. Whilst peers do become significant, the quality of the relationship is different, with peers providing intimacy based on equality, and parents providing a relationship still based on a power imbalance. Peer relationships, therefore, have a purpose, but do not usually become more important to young people.

### 2) Significant role of Socio-emotional development

Most of the psychologist endorsed that on the comprehensive psychological health interventions that have been essential among the adolescents. further it has been extended within the family and society. *Adolescents' socio-emotional relationship contributes more important ways among family, friends and society in order to understanding of psychosocial adjustment.* This study has addressed some of the socio-emotional implications among the adolescents that have various complications in terms of their social anxiety, depression and social adjustment.

Some of the key theoretical points showed that multiple aspects of adolescents' family relations, friendship relations, societal relationship are important and unique predictors of social anxiety and depressive affect, and that there are having similarities and differences in the pattern of associations between adolescents' social functioning and internal functioning.

### Conclusion

From above the theoretical study findings, the psychological researchers conclude that adolescents are significantly associated with socio-emotional status within their families, friendship and society, in terms of understanding, management, and social conflict. On the theoretical part of socio-emotional interpretation, the researcher found that all the family environment factors, viz., anxiety, depression and social adjustment play a significant role among the adolescents. However, the researchers conclude that emotional intelligence or E.Q. may be evoked in the absence of conscious or emotional outburst of individuals. Further it may lead to such as perceptions of stress or social isolation among the adolescents.

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### **Health Insurance in Rural India**

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### Abstract

Indian Insurance market is broadly categorized into urban and rural markets. The state of affairs of rural market is dissimilar from urban one. For the majority people living in rural India, "Health Insurance" is a unheard word. As per the findings of a contemporary research report by RNCOS, mentality is one the biggest reasons behind the low penetration rate of health insurance in rural India. A majority of them are uncovered although they are exposed to risks similar to or even higher than that of urban population. But to cover the rural population, insurance companies need to spotlight on designing new products as per their needs and requirement and new persuading techniques to convince them. There are more than a few threats in health insurance at rural markets also like near to the ground literacy level and insurance awareness, low earnings of countryside people and their psychology.

### Introduction

Healthcare has emerged as one of the fastest growing sectors in India, yet there are people who are still unaware of what benefits health insurance policies can provide them. The healthcare spend in the country is expected to double and touch 2, 250 billion by 2014. And with just three per cent health insurance penetration in the country, a large part of the sum is poised to be paid out of one's pocket. India's insurance market still lags behind other countries in terms of penetration. With the penetration level at three per cent in India, it is far behind UK (12.5 per cent), Japan (10.5 per cent), Korea (10.3 per cent) and US (9.2 per cent). In terms of insurance coverage per capita, India stands at \$ 1.1 as compared to \$ 2313.6 in the US and \$ 31.1 in the UK, informs Antony Jacob, Chief Executive Officer, Apollo Munich Health Insurance , India.

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In agreement with the above statement, Dr. Pervez Ahmed, CEO & Managing Director, Max Healthcare, Delhi, says "it is estimated that only about 12 to 13 per cent of Indians are covered under any form of health insurance (private insurance coverage is approximately three to four per cent only). The Indian health insurance scenario is a mix of mandatory social health insurance (SHI), voluntary private health insurance and community-based health insurance, health insurance is, thus a minor player in the health ecosystem".<sup>1</sup>

Health insurance can be defined in very narrow sense where individual or group. Purchases health coverage in advance, by paying a fee called "premium". But it can be also defined broadly by including all financing arrangements, where consumers can avoid or reduce their expenditures at time of use of services. The health insurance existing in India covers a very wide spectrum of arrangements. Policies under this insurance, the insurer undertakes to indemnify the assured in consideration of certain payment, up to certain specified amount insured against for loss arising in respect of hospitalisation or injury sustained by the insured person. Rapid population growth, contamination of food, water and air etc., which makes to hospitalisation are more frequent. To cater to the varying and increasing needs, different forms of cover are available.

### **History of Health Insurance**

Medical Insurance was first offered in the United States in 1850 and insured injuries arising from railroad and steamboat accidents. In India the formal health insurance started with the ESIS (Employees State Insurance Scheme) under the ESIS Act 1948 and with the CGHS (Central Govt. Health Scheme) 1954.

In 1981, a limited cover was devised for individuals and families. This was structured formally in 1986 when 4 subsidiaries of GIC launched the Mediclaim policy (HDH) both for individuals and groups.

### **Necessity of Health Insurance: Mediflation**

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<sup>&</sup>lt;sup>1</sup>Dhiraj Jain, Customer awareness and willingness to pay for health insurance. The Journal of Insurance Institute of India, Oct- Dec 2012.

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- High escalation in medical costs due to advancement & high tech intervention in health, diagnostic & therapeutic procedures, prescription drugs leading to Mediflation.
- The explosion of knowledge in genetic engineering & Bio technology, Nanotechnology, Medical Informatics & Gene therapy will further escalate health care costs beyond the reach of most people in future.
- Medical Tourism: As more and more patients from Europe, the US and other affluent nations with high medicare costs look for effective options, a blend of top-class medical expertise at attractive prices is helping a growing number of Indian corporate hospitals lure foreign patients. Costs would escalate for the Indian insured.
- Expenses towards medical expenses are the second highest cause of rural indebtedness after agriculture. Major portion of the country's poor (over 45%) had to borrow / sell assets to meet costs of care.
- This huge out of pocket expenditure does not pass through any pooling mechanism and thus needs to be channeled through Health Insurance

### **Current Scenario in Health Insurance – India**

India has multiplicity of treatment regimes. These range from the allopathic system to traditional home remedies. The advantages of standardization, packing, and storage, documentation methods of dispensation have ensured that allopathic system is more acceptable.

Quality of life in relation to health can be gauged by morbidity information. NCAER's study shows that both short-term morbidity (diarrhoea, cough, unspecified fevers) and major morbidity (epilepsy, heart disease, hypertension, diabetes, mental disorders and leprosy) are disproportionately high among the vulnerable population including wage earners and those with low levels of income. About 20 per thousand children in the 0-5 age groups and 29 per thousand children in the 5-12 age groups suffer from physical disabilities such as hearing impairment, speech impairment and loco motor disability.

Almost 80% of the diseases in India are waterborne or caused by water bodies – typhoid, hepatitis A, malaria, filarial, etc. It is primarily the rural poor who are most affected.

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About half of India does not have any source of protected drinking water. Clearly, quality of health is far behind the level of satisfaction

SL.	NAME OF THE INSURER	NAME OF THE PRODUCT
NO		
1.	Apollo Munich Health Insurance	Optima Senior
	Company Limited	Optima Restore
		Easy Travel Individual Travel Health Insurance
2.	Bajaj Allianz General Insurance	Personal care Insurance Policy
	Company Limited	Tax gain
3.	Cholamandalam MS General	Chola MS Family Healthline Insurance Policy
	Insurance Company Limited	Chola MS Hospital Cash Benefit Insurance
		Chola Top Up Insurance Policy
		Chola MS Tax Plus Insurance Policy
		Chola Arogya Bima Health Insurance Policy
		CholaSwasthaParivar
4.	Future Generali India Insurance	Future Health Surplus
	Company Limited	Future Travel Suraksha – Schengen Travel
		Student Travel/Student Suraksha
5.	ICICI Lombard General Insurance	Complete Health Insurance
	Company Limited	Complete Health Insurance – Group
		Personal Protect
		Hospital Cash Plan
		Tax Gain Health Insurance
		Group Travel Insurance - Overseas
6.	L&T General Insurance Company	My:JeevikaCash@hospital Micro Insurance
	Limited	My:JeevikaMedisure Micro Insurance
		My:HealthMedisure Prime Insurance
		My:Health Personal Accident Insurance

### Health Insurance Products in India

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		My:Health Group Medisure Insurance
		My:Health Group Personal Accident Insurance
7.	Max Bupa Health Insurance	SwasthParivar Health Insurance Product
	Company Limited	Health Companion – Health Insurance Plan
		Employee First Health Insurance Plan – Addition of
		Plan (Classic)
		Heartbeat
		Health Assurance
8.	Royal Sundaram Alliance Insurance	Master Product
	Company Limited	Accident Protection Plus
9.	Religare Health Insurance	Care (Individual Health Insurance Product)
	Company Limited	
10.	Raheja QBE General Insurance	Cancer Insurance Policy
	Company Limited	
11.		Netplus (Old name HIV Care Policy)
		Medi Classic Insurance (Senior Citizen Red Carpet
	Star Health and Allied Insurance	Insurance)
	Company Limited	Family Health Optima Accident Care Policy -
		Individual
		Mediclassic Accident Care Policy - Individual
		Family Health Optima Accident Care Policy -
		Individual
12.	Shriram General Insurance	Overseas Travel Insurance
	Company Limited	
13.	SBI General Insurance Company	Critical Illness Insurance Policy
	Limited	Hospital Daily Cash
		Health Insurance Policy – Retail
		Group Personal Accident
		Micro Insurance Policy
14.	Tata AIG General Insurance	Wellsurance Executive

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	Company Limited	Wellsurance Women
		Wellsurance Family
		Wellsurance Senior
		Medi Prime
15.	United India Insurance Company	UniCriti Care Policy
	Limited	
16.	Universal Sompo General	Universal SaralSurakshaBima (Micro)
	Insurance Company Limited	Universal SampoornaSurakshaBima (Micro)
		K Bank Family Care Health Policy
		Group Personal Accident

Source: IRDA

### Structure of Health Insurance in India

The health insurance sector has not made much headway in India. Overall, only a small percentage (less than 9) of Indian population is covered by some form of health insurance. The ESIS covers only the organized industrial workforce, the General Insurance Corporation has introduced voluntary coverage for hospitalization under Mediclaim and Jan Arogya Bima Policy. Also, all Central Government employees are covered under the Central Government Health Scheme (CGHS) through a network of hospitals and dispensaries in large cities and state capitals.

### Rashtriya Bima Yojana Policy Health Insurance for the Poor

- RSBY has been launched by Ministry of Labour and Employment, Govt of India to provide health insurance coverage for Below Poverty Line (BPL) families.
- RSBY started rolling from 1st April 2008.
- The objective of RSBY is to provide protection to BPL households from financial liabilities arising out of health shocks that involve hospitalization.
- Beneficiaries under RSBY are entitled to hospitalization coverage up to Rs.
   30,000/- for most of the diseases that require hospitalization. Government has even fixed the package rates for the hospitals for a large number of interventions.
- Pre-existing conditions are covered from day one and there is no age limit. Coverage extends to five members of the family which includes the head of household, spouse and up to three dependents.
- Beneficiaries need to pay only Rs. 30/- as registration feewhile Central and State Government pays the premium to the insurer selected by the State Government on the basis of a competitive bidding.

## **Unique Features of RSBY**

- Empowering the Beneficiary Freedom of choice to BPL Policy holder to choose hospitals and be treated as a significant provider of revenue
- Business Model for all Stakeholders Insurers/Hospitals/ Intermediaries/Govt.: Incentives have been built for all stakeholders. Conducive both in terms of expansion of the scheme as well as for its sustainability.
- IT intensive Every beneficiary family is issued a biometric enabled smart card containing their photographs and fingerprints. All hospitals empanelled under RSBY are IT Enabled and connected to the server at the district level.
- Safe and Foolproof The use of the biometric cared and a key management system makes this scheme safe and foolproof.
- Portability A beneficiary will be able to use his/her smart card in any RSBY empanelled hospital across India. This is of great help to migrant workers
- Cashless and Paperless transaction No payment is to be made by the beneficiary and participating providers may send online claims to the insurer and get paid electronically.
- Robust Monitoring and Evaluation: An elaborate data management system is being put in place which can track any transaction across India and provide periodic analytical reports. This should allow for mid course improvements in the Scheme.

## **RSBY Facts**

- More than 376 districts in 29 states in India are covered under this scheme
- There are 8096 private and public hospitals empanelled as Health Care Providers

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- As of April 2011 the number of Active smart cards issued is 2,33,46,929.
- National Insurance, Oriental Insurance and United India Insurance are the 3 major non life insurance players with ICICI leading the private non life insurer group.

#### Conclusion

India has a grand opportunity to spearhead a feasible and spirited health insurance sector and encourage the development of a sound high quality health delivery system. What is required is a good understanding of the actuarial and other risks in the business, a long term vision for those entering it, simple product design, supportive regulation and sustained customer education.

It is fact that, availability of improved health services to the poor is one of the important priorities before the Government. Since government means are limited, private sector involvement in providing health services to rural areas is necessary. However, private health care is costly and in majority of the cases it is beyond the means of the average rural household. Under such circumstances, health insurance coverage of rural people can be a viable and vital means for getting health care services. In order to implement successfully health insurance coverage to the rural household, it is necessary to understand basic dynamics of consumer preferences, acceptability and pricing of health insurance products.

Finally, we can say that there is an immense need for massive propaganda to develop consciousness among the people regarding the need for financing health care in context of high out-of-pocket expenses on health. If we can successfully use insurance in covering our health hazards we might create a headway in front of the entire south-east Asia to come up with a solution to this formidable challenge to the society.

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## **Economic Growth and Public Expenditure:** A Case Study of Union Territory of Puducherry

## L. Annam & Suresh Kumar Patra

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#### Introduction

It has been widely recognized that human resource plays an important role in determining the standard of living and quality of life of the people which in turn influences the economic development of countries. One among the various factors that determine the quality of human factor is Health, as human health has its own impact on social and economic behavior of the society. Hence, the domain of health and health related issues constitute fascinating and substantive area of research for economists drawing special attention from the past two decades.

Human resources development and growth process are determined by health. A healthy community is the infrastructure upon which an economically viable society can be built upon. The people should ultimately attain a kind of social security which makes them fully secured for the rest of their life. Health is considered as an asset and plays a prime role in bringing out happiness. As the economy is advancing from lower levels of development to a higher level, government as well as the people have began to realize the relative importance of health and health care and also the various other factors that are associated with improving the overall health status of its masses.

A healthy reasonable life span which is relatively free from morbidity and illness goes a long way in ensuring the individuals' well being in general and country's development in particular as it gets reflected on the quality of life of individuals in a society.

The awareness with regard to the improvements in health also assumes considerable importance as it plays a vital role in providing the prosperity and development of the society.

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Economic Growth and Public Expenditure: A Case Study Union Territory of Puducherry

In our country this awareness among the people has started to gain importance ever since the Bhore Committee Report which has laid emphasis on planned development of a comprehensive, equitable, nationwide network of health services (Bhore Committee Report, 1946).

#### **1.1.** Problem Setting

Health is the major social input for the economic and social up lift of the society. It is a national asset; it is to be emphasized to attain sustained economic and social development. Also Health is vital for ethical, artistic, material and spiritual development of human being. Hence it is the role of Government to implement quality programmes to improve the quality of the population so on to ensure productive human asset.

Health services are given continuous importance by the Puducherry government for the improvement of socio-economic status of the society. The percentage of expenditure continues to increase every year in this regard. The compositional changes in health expenditure, the relationship between health expenditure and economic growth, the impact of public expenditure on health are the main causes that are focused by the researchers in this study. The analyses have been done with the help of the data collected from various sources of health department. Hence the present study made an attempt to study health expenditure and economic growth in the Union Territory of Puducherry.

#### **1.2.** Objectives of the Study

- To study the compositional changes in health expenditure of the Union Territory of Puducherry.
- 2) To understand the relationship between public expenditure on health and economic growth of Puducherry.

#### **1.3.** Data Source and Methodology

The health system of the Union Territory of Puducherry is taken for the study. This study is based on secondary data only. The study covers the period from 1960 to 2009. The

data have been collected from the various sources like Abstract of statistics, Hand Book of Statistics, and Annual Reports of Planning Department.

The data collected were analyzed with the help of statistical tools such as ratios and percentages. The growth rate estimated by using the simple regression model (10 years time series data in 2000-2001 to 2009-10) and multiple regression model (30 years time series data in 1980-81 to 2009-10) of following form:

- 1. Health expenditure = f (Total Government Expenditure, NSDP at current price)
- Health expenditure = f (per capita income at current price, total population, Education Expenditure)
- 3. Infant Mortality Rate = f (Primary Health centre, Education Expenditure, Subcentre Rural)
- 4. GSDP at current Price = f (Health expenditure, Educational expenditure)
- 5. PCI at current price = f (Per capita health expenditure, per capita Education expenditure)
- 6. Using the log model: Infant Mortality Rate = f (Health Expenditure)

#### **Equations:**

$$y = \alpha + \beta X + \varepsilon$$
$$y = \alpha + \beta 1X1 + \beta 2X2 + \beta 3X3 + \varepsilon$$

#### Where,

Y = Total Health Expenditure/Infant Mortality Rate/ GSDP at current price/ PCI at current price

X = Health Expenditure (using the log model)

 $X_1$  = Total Government Expenditure/ Per capita income at current price/Primary Health centre/ Health expenditure/ Per capita health expenditure

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 $X_2$  = Net State Domestic Product at Current Price/ Total Population/ Education expenditure/ Educational expenditure/ per capita Education expenditure

 $X_3$  = Education expenditure/ sub-centre Rural.

 $\beta$ 1,  $\beta$ 2,  $\beta$ 3 = Slope co-efficients

 $\alpha$  = Intercept

 $\varepsilon$  = Residuals

#### **1.4.** Limitations of the Study

The study was confined to the information pertaining to the period of 1980-81 to 2009-2010. The variables observed for the analysis are limited due to lack of time. The results cannot be generalized as they are applicable only to the selected area.

#### 1.5. Socio-Cultural and Economic Factors of Health

Poverty continues to be the greatest hurdle in ensuring good health in developing countries. Poor health makes the poor into absolutely poor, which in turn pushes them back into poor health status. Unavailability of food, malnutrition, poor sanitation, illiteracy, inadequate and ill-constructed housing, unemployment, poor working condition, etc., also target the poor and the other marginalized communities specifically.

Despite the commitment to 'Health' for all enormous health problems among Indian population especially the vulnerable population suffering form spatio-stratal deprivations, continue to exist. Though the mortality rate has shown declining trend standard of living of the poor are still worst in the world. The major obstacles for health promotion are insufficient resources, lack of integrated support, and poor diseases awareness etc. This sector needs heavy investment.

In India only less than 10 percent of population has health coverage. These sections of the people have shown higher level of mortality, malnutrition and fertility than the rich society. The National sample survey 52<sup>nd</sup> round calculates that the poor-rich risk ratio is 2.5

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infant mortality, 2.8 for under five mortality, 1.7 for underweight. The World Bank study reports that the main reason for not seeking care is cost for the poor. The trends in health indicators from 2000-2009 are shown in Table 1.1

## Table 1.1

#### Trends in Health Indicators of India: 2000 -2009.

#### (Per '000 population)

Year	Birth	Death	Infant	Maternal
	rate	rate	Mortality	Mortality
			Rate	Rate
2000	25.8	8.5	68	71
2001	25.4	8.4	66	64
2002	25.0	8.1	63	97
2003	24.8	8.0	60	45
2004	24.8	8.0	58	76
2005	24.1	7.5	58	106
2006	23.8	7.0	57	80
2007	23.1	7.4	55	75
2008	22.8	7.4	53	69
2009	22.8	7.4	53	35

## Source: "Department of Health and Family Welfare in Union Territory of Puducherry<sup>1</sup>"

It may be seen from the Table that the India birth rate during this period has declined from 25.8 to 22.8 which the death rate from 8.5 to 7.4. While the Infant Mortality Rate has declined from 68 to 53, the Maternal Mortality Rate has fallen fur 71 to 35 during the period form 2000-2009.

#### Graph1.1. Birth rate and Death rate Graph1.2. IMR and MMR

<sup>&</sup>lt;sup>1</sup> http://health.puducherry.gov.in/Health%20indicators.htm

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Graph 1.1 and graph 1.2 shows that the India birth rate, dealth rate, Infant Mortaltiy rate and Maternal Moraltyhity rate declining trend in during the period form 200-2009.

#### **1.6.** Health Policy in India

#### **Government of India Policy on Health Development**

The 1983 National Health policy (NHP) focused the health profile of India with integrated and comprehensive approach supported by medical education and research. This policy has given importance to Primary Health Centre (PHC). The VII plan targets aimed at the establishment of health infrastructure in rural area. The VIII plan (1992-97) focused on human development with increase in health status and population. The National Health policy (NHP) suggested that nutrition status is to be focused urgently. The NHP of 1993 was formulated with long term and short term strategies.

India has accepted the recommendation of the International Conference on Population and Development (ICPD) 1994 and has also ratified various international conventions for securing equal rights for women. Following this India formulated a Plan of Action for children in 1992 with actions directly and indirectly affecting child health.

Despite the commitment to 'Health for All', enormous health problems still need to be addressed. While overall mortality has declined considerably, living standards are still among the poorest in the world. The major constraints facing the health sector are lack of resources, lack of an integrated support, poor involvement of NGOS, inadequate laboratory services, poor disease surveillance and response systems, and the heavy investments needed in dealing with non-communicable diseases.

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There has been an increase in mortality through 'lifestyle disease' – diabetes, cancer and cardiovascular diseases. The increase in life expectancy has increased the requirement for geriatric care. In 1983 the government wanted to change the circumstances relating to the health sector of the country to formulate a new policy framework as the national health policy, in 2001. The NHP, 2001 attempts to set out a new policy framework for the accelerated achievement of public health goals in the socio-economic circumstances currently prevailing in the country.<sup>2</sup>

#### 1.7. Determinants of Health Status

The health status is usually determined by three sets of factors namely, promotive, preventive and curative factors. Promotive factors are those which promote good health, namely, nutrition, better hygiene, good sanitation, and water supply. Preventive factors such as vaccination help to prevent the spread of diseases, while the curative factors tend to cure the diseases. The availability of medical infrastructure in the form of hospitals, doctors, nurses, medicines, beds and equipments belong to this group to cure the diseases.

The availability of medical infrastructure in the form of hospital, doctors, nurses, medicines, beds and equipments belong to this group. An analysis of these factors helps to assess the health status of a nation. The health status of the population is but a reflection of the socio-economic development of the country. Economic and social development breaks the vicious circle of poverty and ill-health. As generally acknowledged, the agricultural and industrial revolution, followed by public health revolution and finally medical revolution in the sequential order, let to the improvement in the health status of the population in the present day advanced countries.

According WHO-ILO joint reports the health status of the people is determined by factors like housing, sanitation, nutrition, personal factors, educational status and occupational environment. Generally speaking, the determinants of health are population,

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<sup>&</sup>lt;sup>2</sup> Mohan Advani and Mohammad Akram (2007), "Health Concerns in Indian", Health Dynamics and Marginalised Communities, Rawat Publications, PP. 1-25)

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poverty, per capita income, income distribution, employment education, women education, environment, housing, sanitation, water supply, health consciousness, personal hygiene, and coverage and accessibility to medical facilities.

#### 1.8. Health Expenditure and Economic Growth

Good health is thus essential for happiness as well as for the efficient participation of people in various economic activities. Better and improved health contributes to the productivity of the people on the one hand and on the other it increases the national wealth which is considered to be an important indicator of economic growth. Hence, health is placed second to education among the various social services rendered to the people by the government for it is considered as an important tool to achieve rapid economic growth on the one hand and an integral part of welfare.

Health expenditure and economic growth are intimately linked through a positive or directional relationship. As pointed out by Grossman "Health as a good is desired to enhance wellbeing and utility and emphasizes also its function in improving individual labour productivity and production in the economy" (Grossman, 1972). High level of health expenditure on health automatically gets reflected in better health of the individual by the way of increased efficiency, reducing productivity loss, increased mobility and low rate of morbidity among the people which rises the level of capital formation that can be achieved only by the way of skilled labour force thereby contributing better towards national wealth by the way of increased income.

Similarly economic growth in turn also acts as an important factor to improving the overall health facilities of the people. With higher income there is more money to be spent in both the public and private sector by the individuals on the one hand, and on the other, there are high level of investment by the government in basic infrastructure, accesses to good and safe drinking water, better health education so that it creates awareness among the people to combat disease. This implies that there exists a causal relation between health expenditure and economic growth in either or both directions or sometimes there may also be an independent relationship between both. From the above controversial issue it is quite clear

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that there arises a need towards examining the elusive relationship between health expenditure and economic growth.

#### **1.9.** Growth in Health Expenditure

There has been considerable increase in plan and non-plan expenditure on health in Union Territory of Puducherry as seen in Table 1.2

## Table 1.2 Growth of Health Expenditure in Union Territory of Puducherry 1980-81 to2009-10

(Rs in l	lakhs)
----------	--------

	Plan	Non-Plan	Total
Year	Expenditure on	Expenditure on	Expenditure on
	Health	health	Health
1980-81	44.56	242.73	287.29
1985-86	133.68	678.13	811.81
1990-91	326.85	1451.7	1778.55
1995-96	1311.84	2344.63	3656.47
2000-01	3096.17	4797.73	7893.9
2005-06	5665.74	6167.81	11833.55
2009-10	16934.49	9292	26226.49

## Source: Planning and Research department and Statistical department in Union Territory of Puducherry.

It may be seen that the expenditure on health which was Rs 287.29 lakhs in 1980-81, escalated to Rs 26226.49 lakhs in 2009-10. The growth in health expenditure is shown graph1.3.

Graph - 1.3

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#### **Review of Literature:**

Following articles were reviewed for the present study.

**Paul W. Newacheck et.al** (2003)<sup>9</sup>, examined the spending patterns in health care sector for U.S adolescents, aged 10 to 18 years. Based upon the National Representative Household Survey data and an out-of –pocket expenditure pattern of 4882 adolescents, study concluded with a significant benefit of further expansions of public and private health insurance coverage towards the expenditure in health care.

**Amy K. Taylor et.al** (2006)<sup>13</sup>, studied, the use and expenditure pattern of women's health care in USA in relation to their social, economic and physical attributes.. Based upon the cross sectional data from 2000, it explained a comparative care pattern of white women & black and Hispanic women. This paper concluded that to improve the quality of health care all women it is important for policymaker to make better utilization and expenditure for medical care, and the health programs are essential to help identify, understand the causes of, monitor and eventually eliminate disparities.

**Sonia Bhalotra** (2007)<sup>18</sup>, evaluated the impact of public intervention in the form of state health expenditure on infant mortality rate, with given state income during the period 1961-1999. Using the secondary data, from the sources like, National Family Health Survey of India, etc, this study was conducted through static distributed lag model. As the paper found long-run elasticity of 0.24 shows a significant impact of variation in state health expenditure on the risk of infant mortality in rural India, at a given state income over the period of analyses.

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**Paula veiga** (2008)<sup>19</sup>, envisaged the role of out-of-pocket health care expenditure in health care services in Portuguese adults on overweight and obesity. The study was based upon the individual data from two waves namely, the National Health Survey of 1995-96 and another survey on 1998-99. By using models like, probit model, ordinary Least Square (OLS) the study suggested for a scientific framed initiatives to curb the excess burden of out-of-pocket expenditure on over weighted Portuguese adults compared to normal adults.

James Bukeya (2009)<sup>23</sup>, tried to establish causal relationship between individual health care expenditure and economic prosperity measured by Gross state product in the southeast United States. Through a Multivariate time series analysis, this method using, unit root test, Agumented Dickey-fuller test, VAR analysis, attempted give a scientific shape to the relationship between economic growths to the personal health care expenditures. Whereas, the Multivariate time series analysis found a weak but positive relationship, the VAR analysis confirm with a exact positive relationship between positive personal health care expenditure to economic prosperity.

#### 4.10. Model Results

#### **Equation – 1: Determinants of Health Expenditure**

#### **Health expenditure = f (Total Government Expenditure, NSDP at current price)**

$$Y = \alpha + \beta 1X1 + \beta 2X2 + \varepsilon$$

Where,

Y = Total Health Expenditure,  $\alpha$  = Intercept, X<sub>1</sub> = Total Government Expenditure, X<sub>2</sub> = Net State Domestic Product at Current Price,  $\beta_1$ ,  $\beta_2$  = Slope of co-efficients,  $\varepsilon$  = Residuals

## Health expenditure = $412.52^{*3} + 0.0096 X_1^{***4} + 0.0174 X_2^{***5}$

<sup>&</sup>lt;sup>3</sup> 10 % level of significant

<sup>&</sup>lt;sup>4</sup> 1% level of significant

<sup>&</sup>lt;sup>5</sup> 1% level of significant

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The above function explains the influence of Government Expenditure and State Income on Health Expenditure. The co-efficient of determination, namely,  $R^2$  is very high at 0.98 which means that 98 percent variation in Health Expenditure is explained by the Government expenditure and state income.

This implies that the function fitted is very good and its explanatory power is also good. The Co-efficient representing Government expenditure is positive and highly significant. Its value of 0.0096 implies that Rs 1 increase in Government expenditure gives a variation of Rs 0.0096 in health expenditure. When government increases its expenditure, it reflected in health expenditure also. That is how the positive relationship is explained. The co-efficient representing state income is 0.0174 which is also positive and significant at 1% level of probability. This indicates that 1% increase in State Income contributes to Rs 0.0174 increase in health expenditure. State income provides the ability to Government to spend more on heath expenditure. State Income and the total government expenditure show a greater increase in health expenditure

#### **Equation: 2**

Health expenditure = f (per capita income at current price, total population, Education Expenditure)

$$Y = \alpha + \beta 1X1 + \beta 2X2 + \beta 3X3 + \varepsilon$$

Where,

Y = Total Health Expenditure,  $\alpha$  = Intercept, X<sub>1</sub> = Per capita income at current price, X<sub>2</sub> = Total Population, X<sub>3</sub> = Education Expenditure,  $\beta_1$ ,  $\beta_2$ ,  $\beta_3$  = Slope of co-efficients,  $\varepsilon$  = Residuals

## Health expenditure = $0.13 X_1 * * *^6 - 0.0008 X_2 *^7 + 0.3195 X_3 * * *^8$

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<sup>&</sup>lt;sup>6</sup> 1% level of significant

<sup>&</sup>lt;sup>7</sup> 10% level of significant

<sup>&</sup>lt;sup>8</sup>1% level of significant

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The results show the positive influence of per capita income and education  $R^2$  value suggests that 97% of variation in expenditure on the total health expenditure. health expenditure is explained by the three variables included in the function. The coefficient representing per capita income is 0.13 which means that 1 Rupee increase in per capita expenditure leads to Rs.0.13 increase in health expenditure. Per capita expenditure being an indicator of economic growth shows the power of the Government to spend on health expenditure. This explains positive and significant value of health expenditure. The co-efficient representing educational expenditure is also positive and highly significant at 0.3195 which implies that 1 Rupee increase in educational expenditure is accompanied by an increase of Rs 0.3195 in health expenditure. Because for Human Resource Development both education and health have to go together the simultaneous interaction between educational expenditure and health expenditure is seen here. But the surprising negative relationship between population growth and health expenditure is inexplicable. The coefficient value of population is 0.0008 and it is not very significant. This implies that irrespective of the growth of population or otherwise, the Government is spending on health expenditure.

#### **Equation – 3: The determinants of Infant Rate (IMR)**

The infant Mortality Rate which is an indicator of Health Status of a Region is influenced by several factors. The influence of these factors is tested with the help of the following equation and the results obtained there on:

Infant Mortality Rate = f (Primary Health centre, Education Expenditure, Sub-centre Rural)

$$Y = \alpha + \beta 1X1 + \beta 2X2 + \beta 3X3 + \varepsilon$$

Where,

Y = Infant Mortality Rate,  $\alpha$  = Intercept, X<sub>1</sub> = Primary Health Centre, X<sub>2</sub> = Education Expenditure, X<sub>3</sub> = Sub-centre Rural,  $\beta_1$ ,  $\beta_2$ ,  $\beta_3$  = Slope of co-efficients,  $\varepsilon$  = Residuals.

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## Infant Mortality Rate = $47.87^{***9} - 0.1917X1^{***10} - 0.0002X_{2}^{**11} - 0.1467X_{3}^{***12}$

The results show that three variables included in the function, namely, primary health centres, Education expenditure and the number of sub centres in rural areas account for 81% variation in Infant Mortality Rate as revealed by the Co-efficient of determination (R<sup>2</sup>) at a value of 0.81. Further, the coefficients have expected signs. The coefficient of primary health centre at value of 0.1917shows that one unit increase in primary health centre causes a decline in IMR by 0.1917 units. This result is natural because increased primary health facilitates health and acquires more health packages which induce declining IMR. The other coefficient at 0.0002 indicates that one unit increase in educational status is represented by education and literacy levels promote health awareness which is one of the critical factors in promoting health which reflects in low IMR. The coefficient representing the sub centres is also negative and highly significant. Its value of 0.1467 shows that one unit increase in sub centre is enhancement of the health status.

#### **Equation- 4: Impact of Health Expenditure on Health status**

It is presumed that the Government expenditure on health by improving the health facilities and health personnel would have a determinate influence on health status and reducing Infant Mortality Rate. This relationship is explained by the following equation and the result and the results given.

 $LOG(Y) = \alpha + \beta LOG(X) + \varepsilon$ 

Where,

<sup>12</sup>1 % level of significant

<sup>&</sup>lt;sup>9</sup> 1 % level of significant

<sup>&</sup>lt;sup>10</sup> 1 % level of significant

<sup>&</sup>lt;sup>11</sup> 5 % level of significant

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Y = Infant mortality Rate, X = Total Health Expenditure,  $\alpha =$  intercept,  $\beta =$  Slope of co-efficient.

## Log (Infant mortality Rate) = 4.4768 \*\*\*<sup>13</sup> - 0.1193LogX \*\*\*<sup>14</sup>

The regression results show that the equation fitted explains 74% variation in Infant Mortality Rate by increasing Public Health Expenditure. The co-efficient value of Public expenditure as expected is negative and significant. Its value of 0.1193 implies that 1% increase in health expenditure reduces Infant Mortality Rate by 0.1193 points. This result, as expected is natural. Growing public expenditure provides the ability to the Government to augment public health facilities and promoted good health which reduces the Infant Mortality Rate.

## 4.11 Major Findings of the Study

Health expenditure is positively related with Government expenditure, NSDP, education expenditure, per capita income and schemes wise expenditure on health in Union Territory of Puducherry.

- Economic growth (GSDP at current price, per capita income) is positively related with health expenditure, education expenditure, per capita health expenditure and per capita education expenditure in Union Territory of Puducherry.
- Infant mortality rate is negatively related with health expenditure, Primary Health Centre, Education Expenditure and Sub-Centre Rural in Union Territory of Puducherry.
- The Government expenditure and NSDP are found to be significantly and positively associated with total health expenditure Union Territory of Puducherry.

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<sup>&</sup>lt;sup>13</sup> 1 % level of significant

<sup>&</sup>lt;sup>14</sup> 1 % level of significant

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- ✤ A rise in per capita income at current price, Education Expenditure has significantly positive impact on the total health expenditure. But the Population growth has a significant but negative impact on health.
- The establishment of more Primary Health Centres, expenditure on health education and training, spending on rural health posts and Sub-centre have significantly negate the impact on the morbidity pattern and Infant Mortality Rate.

#### **Policy Implication:**

- ➤ As the study found an irregular trend in the health expenditure over the study period, there is a need to give emphasis on the spending of the Government to provide basic and minimum health needs to the people of UTP. In order to achieve the objective like "Health for all" Government should give emphasis more on the grass root level of development of health institution in the Territory.
- ➤ Since there are number of determinants to govern a good state of health, the government must not ignore all those schemes for the development in the form of environment, sanitary condition of the people and the availability of drinking water under its budgetary allocation in order to develop the health status of the people of UTP,
- ➤ With a mushrooming of private Hospitals and Nourishing Homes over UTP most of the people have their confidence with the private treatments. On the other hand, especially, people belonging to economically backward classes depend upon the Governmental health provisions. Therefore government should allocate the resources under the hospital management in such manner that maximum of its benefits channelize for the development of Government hospitals especially with the provision of skilled manpower, additional beds and drugs.
- ➤ However, a key drawback is lack of skilled manpower and quality services with most of the Government hospitals as compared to the private hospitals. Therefore

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Government must pay heed on the schemes related to the health education and training, opening of more Nourishing training institutes.

In the present scenario, where all the existing health institutes trying with cutting edge technologies to grab a major share of the market, Government must not ignore the other than allopathic system of medicine like Unani and Naturopathy.

#### **5.** Conclusion

Over the period, even after strong and active initiatives of the Government of India and the administration of the UTP on the development of the health status of the people, still there is much to achieve. The spending of the government on various social infrastructures including health, no doubt have an impact on the scaling up of the state of health over UTP with a decline in Infant Mortality Rate and Maternal Mortality over the study period. In spite of the increasing number of hospitals, more state of art technologies and considerable initiatives of the Government through its expenditures on the health provisions, still the Government has to do with the morbidity and disease pattern. Towards this end, Government should give more emphasis on the development of infrastructural facilities like establishment of Primary Health Centers, Paramedical Institutions, doctors, beds and the availability of life saving drugs.

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## National Rural Health Mission (NRHM) & Health Status of Odisha: An Economic Analysis

#### Suresh Kumar Patra, L.Annam & Prof. M. Ramadass

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#### Abstract

To improve the prevailing situation, the Government of Odisha launched the National Rural Health Mission (NRHM) programme through the state on 17<sup>th</sup> June 2005. NRHM has completed its six years of journey in Odisha. It becomes necessary to assess the impact of NRHM on the health infrastructure and on the health indicators and to analyze the determinants of health status in the health development of Odisha. The study is only based on the secondary data. The collected data are analyzed with the help of MS-WORD and Excel. The study shows that the health status of study area is very poor and is gradually increasing as a result of the implementation of NRHM and the staple reasons for this tendency are: low income, illiteracy, shortage of doctors, unwillingness doctors to go to remote areas and lack of health care facilities and lack of production of laboratory technicians and radiographers.

Key Words: Health Infrastructure, Health Indicators, Health Status & NRHM

#### 1. Introduction

From a social point of view, good health is a pre-requisite for human productivity and the development process. It is essential to economic and technological development. Individually, health is a man's greatest possession, for it lays a solid foundation for his happiness.

Improvement in health would make a positive impact on economic development. Better health can increase the number of potential man hours for production by reducing morbidity and disability as well as by reducing mortality. Better health may result in more productivity per man as well as more men available for work. Selma Muskin and Edward Devison have attempted to quantify the effects of reduction in mortality on the rate of economic growth in the United States. According to one of these estimates, decline in death rate accounted for 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* Suresh Kumar Patra, L.Annam & Prof. M. Ramadass 305 National Rural Health Mission (NRHM) & Health Status of Odisha: An Economic Analysis

roughly 10 percent of the overall 3 percent growth rate in the economy for the period 1900-1960. Thus, there can be no two opinions that health is a basic input in national progress and in terms of resources for economic development; nothing could be of greater significance than the health of the people.

Therefore, promotion of good health must be a prime objective of every country's development programmes. It is a precursor to improve the quality of life for major portion of mankind. The preamble to the WHO constitution also states that the enjoyment of highest attainable standard of health is a fundamental right of every human being and those governments are responsible for the health of their people and that they can fulfill that responsibility of taking appropriate and social welfare measure. Health has found an important place in the constitutions of all nations of the world.

Therefore, both developed and developing countries have started paying adequate attention on improving the health status of people in the last three decades or so. A considerable portion of the Gross Domestic Product (GNP) has been earmarked for health promoting activities and health care represented by the number of medical institutions, medical personnel and availability of medicines. Governments everywhere formulated and implemented a variety of policies in the sphere of health promotion.

Taking into account the above facotors, **National Rural Health Mission<sup>1</sup>** was launched by the Hon'ble Prime Minister Dr Manmohan Singh in New Delhi on 12<sup>th</sup> April 2005 in the country, with a special focus on 18 states including Odisha. It is the biggest ever health project in the health sector in the last 50 years. It recognizes the importance 0f health care in the process of economic and social development and improving the quality of lives of our citizens. It provides effective health care to rural population throughout the country with focus on 18 states which have weak public health indicators and weak infrastructures, NRHM initiative as a whole with its wide approach is a national movement than just a national health project. It seeks to provide universal access to equitable, affordable and quality health care which is accountable and responsive to the need of the people, reduction of child and maternal deaths as well as population stabilization, gender and demographic balance. It

<sup>&</sup>lt;sup>1</sup> http://www.nrhmorissa.gov.in/pdf/NRHM%20Mission%20Document.pdf

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would also help to achieve the goals set under the NRH policy and Millennium Development Goals.

#### **1.1 Statement of the Problem**

Odisha, one of the poorest states of the country, is vulnerable to repeated natural calamities like droughts, floods and cyclones. The recurring natural calamities further exacerbate distress of the people, particularly small and marginal farmers and landless laborers. The agrarian structure predominated by small and marginal farmers whose capacity to invest is limited. The poor agricultural productivity resulted in virtually stagnant agricultural growth and employment generation. That, further, has an adverse effect on the health status of the people. Deficient in infrastructure- railways, paved roads, ports and telecommunication-limits the optimal exploitation of its vast natural resources and the followed industrial growth. On the other hand poor infrastructural development in hilly terrains of western and southern Odisha, many rural communities are physically excluded from the rest of the state and denied access to essential socio-economic amenities like schools and hospitals. As a result of which birth rate, death rate, infant mortality rate, life expectancy rate, maternal mortality ratio, total fertility ratio etc. lags behind the national average. To improve the prevailing situation, the Government of Odisha launched the National Rural Health Mission (NRHM) programme through the state on 17<sup>th</sup> June 2005.

NRHM has completed its six years of journey in Odisha. It becomes necessary to assess the impact of NRHM on the health indicators, to know how the schemes under NRHM are working in Odisha and to assess the transition in the health status of Odisha. This dissertation is an attempt in this broad direction of evaluation of NRHM.

#### **1.2 Objectives of the Study**

In the light of the above problem setting, the following objectives are framed for the present study.

- 1. To analyze the impact of NRHM in terms of health infrastructure in Odisha.
- 2. To analyze the trends in the health indicators in Odisha after the implementation of **NRHM**

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#### 1.3 Methodology

The study is purely based on the secondary data. The data are analyzed through Msword and Excel. The data are obtained from Economic Survey of Odisha, Ministry of Statistics and Program Implementation and Economic Survey of India.

#### **1.4 Scope of the Study**

The study only takes into account the secondary data. Primary data are ignored for the present study.

#### 2. Review of Literature

This section provides a review of related studies and these are reviewed in the light of the objectives of the study spelt out earlier.

Rani Gopal (1987)<sup>2</sup> examined the paramount role played by human capital in a country's economic development. she emphasizes that human resource development particularly in developing countries like India, goes a long way in both accelerating the tempo of economic activity and in promoting the welfare of the people the author has attempted to access the health status and nutritional status of two important indicator of human resource development of the people in Andhra Pradesh during the study period(1961-1974) using time series data .her analysis reveals that there has been no improvement in the health status but only a decline as pointed out by a substantial status of health and nutrition.

Ramesh Bhat and Maheswari (2004)<sup>3</sup> concluded that the health facilities provided by any private company depends on its profit and its financial status. Like the private company, the facilities provided by the government also depend on its budget allocation which further depends on the financial soundness of the government. For their study, they used unstructured interview method. He interviewed the CEO, hospital head and the other senior doctors of the hospital and reached at the above stated conclusion.

<sup>&</sup>lt;sup>2</sup> Rani Gopal k:"Economics of Health and Nutrition ", Chugh publications, Allahabad, 1987.

<sup>&</sup>lt;sup>3</sup>Ramesh Bhat, Maheshwari Sunil Kumar: "Challenges in sustaining a hospital: lessons for managing healthcare institutions"; Working Paper No. 2004-02-03, February 2004.

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Purendra Prasad (2000)<sup>4</sup> made a study on the health related problems of the rural poor in Gujarat. His study suggests that most of the rural poor are facing problem in accessing healthcare services because the government fails to detect the social spaces or gaps in health care policies. He also finds from a study on the leptospirosis epidemic in Gujarat that the quick supply of drugs, increased allocation of equipment, health workers, doctors, and opening of special wards in the hospitals during the 1997-99 epidemics was less significant to save lives.

Arvind Pandey, Nandini Roy, D Sahu, Rajib Acharya(2004)<sup>5</sup> correlated the utilisation of antenatal care services and assistance received during delivery in three recently formed Indian states namely Chhattisgarh, Jharkhand and Uttaranchal., which are characterized with distinct geographical and topographical features. The study focuses on the particular features of the three states. The study concludes that, it is necessary for the reproductive and child health programme to visualize a dynamic strategy giving due consideration to the geographical and socio-economic factors.

#### 3. Impact of NRHM in terms of Health Infrastructure in Odisha

#### 3.1 Number of Sub Centers, PHCs and CHCs Functioning

## Table-1<sup>6</sup>

Years	Odisha			All India		
	Sub	PHCs	CHCs	Sub	PHCs	CHCs
	Centre			Centre		
2005	5927	1282	231	146026	23236	3346
2009	6688	1279	231	147894	23391	4510

<sup>&</sup>lt;sup>4</sup> Prasad Purendra: "Health Care Access And Marginalised Social Spaces: Leptospirosis In South Gujarat"; Economic And Political Weekly October 7, 2000

<sup>&</sup>lt;sup>5</sup> Pandey Arvind, Roy Nandini, Sahu D, Acharya Rajib:"Maternal Health Care Services: Observations From Chhattisgarh, Jharkhand And Uttaranchal", Economic And Political Weekly February 14, 2004

<sup>&</sup>lt;sup>6</sup> Source- Sample Registration System by GOI

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From the table-1, it is clear that in the year 2005 when NRHM launched, there were 5927 sub-centres, 1282 PHCs and 231 CHCs operated in Odisha. In the year 2009, the number of sub –centre and PHCs increased to 6688 and 1279 respectively and there is no increase in CHC in Odisha during the period 2005-2009. At all India level the PHCs, CHCs and Sub-centre also increased during the year 2005-2009.

#### 3.2 Sub-Centres, PHCs and CHCs in Odisha

#### Chart-1



In the above chart (chart-1) it is found

that Sub-Centres, PHCs and CHCs have been increased from the year 2005 to the year 2009 after the implementation of NRHM in Odisha.

Similarly, appointment of Doctors at PHCs, Laboratory Technicians at PHCs and CHCs, Radiographers at CHCs, Pharmacists and Health Workers (F)/ANM at SCs and PHCs after the implementation of NRHM in Odisha is shown in the following graph.

## **3.3 Doctors, MPHW (F), Laboratory Technicians, Pharmacists, Radiographers, Pharmacists and Nurse Midwife & ANM at PHCs and CHCs**

Chart-2



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Health Worker (F)/ANM, Nurse Midwife, Radiographers and pharmacists at SCs and PHCs have increased from 2005 to 2009 after the implementation of NRHM in Odisha. But, there is a reduction in the presence of lab technicians and doctors from 2005 to 2009 because of the standardization of health system in Odisha.

# **3.4 Increase in Hospital Bed Strength in Government Institutions 2005to 2009 at CHC level (PHC beds are not included):**

Table-2<sup>7</sup>

Sl.No	State/year	2005	2009
1.	Odisha	13,146	14,763
2.	India	4,69,559	5,40,328

From the table -2, it is found that Hospital Bed Strength in Government Institutions over the period 2005 to 2009 at CHC level (PHC beds are not included) has been increased from 13,146 in 2005 to 14,763 in the year 2009 in Odisha. At national level in total, the number of Hospital Bed Strength in Government Institutions over the period 2005 to 2009 at CHC level (PHC beds are not included) has also been increased from 4,69,559 in 2005 to 5,40,328 in the year 2009.

# **3.6 Released Rs in crores and Expenditure in Rs crores in Odisha over the Period 2005-2010**

Chart-3

<sup>&</sup>lt;sup>7</sup> Source: National Health Profile 2008 and 2009, Progress under NRHM (As on 31.01.2010)

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In the above chart (chart-3) it is clear that over the period 2005-2010, substantial amount of money is being released by the government and the expenditure out of the released amount is also incurred for the development of the health status of the people of Odisha.

#### 4. Indicators of Health in Odisha

SL.	Indicators	2003	2004	2005	2006	2007	2008
No	of Health						
	Progress						
1.	Crude	9.7	9.6	9.5	9.3	9.2	9.0
	Death Rate						
2.	Infant	83	77	75	73	71	69
	Mortality						
	Rate						
3.	Total	2.6	2.7	2.6	2.5	2.4	2.4
	Fertility						
	Rate						

## Table-4<sup>8</sup>

From the table-4, it is clear that the crude death rate, infant mortality rate has been reducing over the period 2003 to 2008. The CDR was 9.7 in the year 2003 which reduced to 9.6, 9.5, 9.3, 9.2 and 9.0 in the year 2004, 2005, 2006, 2007and 2008 respectively in Odisha Similarly, the IMR was 83 per 1000 live birth which reduced to 75 and further to 69 in the year 2005 and 2009 respectively in Odisha. The TFR is also reducing over the periods. In the year 2003, the TFR was 2.6 which reduced to 2.5 in the year 2005 and further reduced to 2.4 in the year 2008 in Odisha.

<sup>&</sup>lt;sup>8</sup> Source- Sample Registration System by GOI

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## 5. Major Findings of the Study

The major findings of the study are as follows:

- 1. There is acute shortage of specialists in Odisha.
- 2. Similarly, at all India level many sub centres were running in rented building and in village volunteer society building.
- 3. The appointments of Health Worker (F)/ANM, Nurse Midwife, Radiographers and pharmacists at SCs and PHCs have increased from 2005 to 2009 after the implementation of NRHM in Odisha.
- 4. Over the period 2005-2010, substantial amount are being released by the government and the expenditure out of the released amount is also incurred for the development of the health status of the people of Odisha.
- 5. The crude death rate, infant mortality rate has been reducing over the period 2003 to 2008.

## 6. Conclusion

The study shows that the health status of study area is very poor and is gradually increasing in quality as a result of the implementation of NRHM and the staple reasons for this tendency are: low income, illiteracy, shortage of doctors, unwillingness doctors to go to remote areas and lack of health care facilities and lack of production of laboratory technicians and radiographers.

## 7. Policy Recommendations

Though there has been a significant improvement in the health status of the people, some possible strategies for adoption by the state to improve the health status further have been suggested below.

- Both the government organizations and non-government organization should put their combined effort to bring reforms in the health system in the rural areas of Odisha.
- Free education up to higher secondary level should be given to SC and ST people.

- After the return of the mother and the child after delivery from the hospital, the domiciliary and clinical based follow up should be carried out by both ASHA and MPHW (F).
- More job opportunities should be initiated in the rural areas through MGNREGA programme.
- Public Private Partnership should be given due importance in order to fill up the large gap in the field.
- NGOs along with ASHAs and AWWs should spread the health awareness among the illiterate people of the region.

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## Service Quality Measurement in Healthcare Sector in India

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#### Abstract

Healthcare industry is one of the most challenging industries in India with projected revenue of US\$ 30 billion; it constitutes 5.2% of India's GDP. The Indian health industry has had a growth of over 12% p.a. in the past four years and is expected to grow at 15% per annum to US\$78.6, reaching 6.1% of GDP and employing 9 million people by 2012. The private sector plays a significant role by contributing 4.3% of GDP and 80% share of healthcare provision. However, there is deficit with respect to access, affordability, efficiency, quality and effectiveness, in spite of the high spending on overall private and public health.

In order to be comparable with the healthcare parameters of other developing countries, India's healthcare sector faces many challenges. For example, to reach a ratio of two beds per 1000 population by 2025, an additional 177 billion beds will be required which will need a total investment of US\$86 billion. There is an acute shortage of doctors, nurses, technicians and healthcare administrators and an additional 0.7 million doctors are needed to reach a doctor population ratio of 1:1000 by 2025. This paper concentrate on

- 1. To study Need and Scope of Service Quality in Healthcare sector.
- 2. To present the Role of Government in Healthcare management.
- 3. To analyze Service Quality in Hospitals.

#### Introduction

Health is one of the fundamental human rights which has been accepted in the Indian Constitution. Although Article 21 of the Constitution requires the State to ensure the health and

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nutritional well being of all people, the federal Government has a substantial technical and financial role in the sector.

Hospitals are the backbone of the healthcare delivery system. Hospital care in India until the early 1980s, were run by Government hospitals and those managed by charitable associations. In the mid 80's, the healthcare sector was recognized as an industry. In the year 1991 Government of India initiated economic reforms. However post liberalization, the sector attracted private capital and fresh investment that took place in setting-up hospitals and smaller nursing homes. Large corporate groups and charitable organizations brought private finance and these resources were invested in modern equipments and technologies and in developing health infrastructure. This helped in augmenting the availability of super-specialty services across the country. Corporate groups such as Apollo Hospitals group, Care Health Foundation, Wockhardt group of hospitals, Fortis Healthcare, Max India paved the way for corporate organization structure for hospitals and have successfully developed a chain of multi-specialty private hospitals. Private sector entry in India has opened many doors for medical and paramedical manpower, medical equipment, information technology in health services, BPO, telemedicine and medical and health tourism. There is 20% increase over the previous year with an estimated 100,000 health tourists visiting India.

Govt. of India launched the National Rural Health Mission (NRHM) in 2005. Its endeavor is to provide quality healthcare for all and increase the expenditure on healthcare from 0.9% to 2-3% of GDP by 2012. The Union budget 2010–2011 has the countervailing duty of 4% on all medical equipments, with full exemption from special additional duty and Uniform/concessional basic duty of 5% for all medical appliances. This budget focus is on rural healthcare, with the fund allocations rising to a whopping Rs.22300 crore (Rs. 223 billion/\$4.82 billion) from Rs.19534 crore during the previous fiscal year. This rise is keeping up the growing needs of the rising healthcare industry of the country. Convergence of National Rural Employment Guarantee Act with wider Health Insurance coverage for BPL families through Rashtriya Swasthya Bima Yojana.

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Commenting on the union budget 2010-2011 Rajen Padukone, CEO of Manipal Hospital, says "Relaxation of FDI norms may see more international players coming into India in the healthcare sector. Added to it, rationalization of duties on medical equipment can make imports cheaper and can significantly lower healthcare costs in the country."

Andhra Pradesh state Government has enhanced its budget for qualitative health services keeping its focus on rapid growth in health service delivery system. A budget provision of Rs.925 crore has been made for Aarogyasri Health insurance scheme run by Government of Andhra Pradesh for BPL families) and Rs.4295 crore allocated for Medical & Health department for the year 2010-11.

Table 1 Revenue expenditure on Health and Family welfare at Central level by Govt. of India and Medical, Public health and Family welfare at State level by Govt. of Andhra Pradesh.

Year wise Union Budget *		State Budget **
Health Budget		
2006-2007	Actual Rs. 10,567.85 crore	Actual Rs. 1,853.93 crore
2007-2008	Actual Rs. 13,951.00 crore	Actual Rs. 2,439.06 crore
2008-2009	Actual Rs. 16505.95 crore	Actual Rs. 2,894.79 crore
2009-2010	Actual Rs. 19,554.09 crore	Actual Rs. 3,239.43 crore
2010-2011	Revised Rs. 23,300.00 crore	Revised Rs. 4,307.75 crore
2011-2012	Budget Rs. 26,897.00 crore	Budget Rs. 5,021.75 crore

\* Revenue expenditure on Health and Family welfare

\*\*Revenue expenditure on Medical, Public health and Family welfare

#### Table 2 Sample for the study

Sl.No.	Туре	Total No.
1.	Government owned hospital having bed strength 500 and above	1
	– NTR Health University General Hospital, Vijayawada	
2.	Privately owned hospitals having bed strength 500 and above	1
	– Pinnamaneni Siddhartha Medical College Hospital,	
	Chinaoutapalli.	

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3.	Government owned hospitals having bed strength 100 and above	1
	- Government District Hospital, Machilipatnam.	
4.	Privately owned hospitals having bed strength 100 and above	1
	- Dr. Ramesh Cardiac and Multispecialty Hospital,	
	Vijayawada	
5.	Government owned Hospitals having bed strength 50 to 100	1
	- Area Hospital, Nuzvid	
6 & 7.	Privately owned hospitals having bed strength 50 to 100	2
	- Prasanth Hospital, Vijayawada	
	- M.J. Naidu Hospital, Vijayawada	
8.	Trust owned hospitals having bed strength 50 to 100	1
	- Gifford Memorial Hospital, Nuzvid	
9.	Government owned hospitals having bed strength 30 to 50	1
	- Community Health Centre (C.H.C), Jaggaiahpeta	
10.	Privately owned hospitals having bed strength 30 to 50	1
	- Latha Super Specialty Hospital, Vijayawada	

#### **Role of the Government in Healthcare Management**

Table 3 Estimated number of deaths in India from chronic diseases

Cause of Death	2005	2015
Diabetes	1,75,000	2,36,000
Chronic Respiratory Diseases	6,74,000	8,64,000
Cancer	8,26,000	10,69,000
Cardiovascular Diseases	29,89,000	34,65,000
Total (all causes)	1,03,62,000	1,09,49,000

Health services in various European countries have borrowed elements of reform from one another but have maintained their basic forms; with tax funded systems in UK, Scandinavia, Spain, Italy, Portugal and Greece, Switzerland, Austria and Benelux countries. The Countries of central and south central Europe developed hybrid solutions based on a combination of employment based insurance, tax funding and private insurance. All European health systems operate with in financial limits and control the services of health providers through cost and quality defined contracts. In both tax and social insurance systems there is a division between

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agencies commissioning and funding health and care and the providers of the services. Social insurance agencies have been subject to reform and competition as in the case of Netherlands and Germany. This has resulted in far fewer social insurance agencies competing on the basis of the quality and cost effectiveness of the services offered. Local health commissioning agencies in tax funded systems do not compete but offer services matched to local needs. This often involves partnerships with other agencies to tackle the poverty and social exclusion of local groups.

While governments delegate health commissioning and provision to local agencies, has gained the health suppliers to exhibit that the services they tender are useful and are sustained by proof based drug. With regard to the prioritization of these health services most of the nations tagged along Norway and Netherlands which are known for paying the highest priority to services that can be shown to the cost effective and cost efficient. Where patients can reasonably be the expected to bear personal responsibility for services this is further reflected in co-payments ex: to a little extent it's associated to the smoking ailments and duty enhancement healing.

Most of the European health systems have challenged to lay down client charges at a stage that will give self-assurance in the majority cost effective use of services. This promotes the users to use it for telephone triage and advisory services for self care. On the other hand it persuades patients seek early discharge based on low level co-payment.

## **Healthcare in India**

India is a Democratic Republic consisting of 28 States and 7 Union Territories (directly administered by the Central Government). According to the Constitution of India, state governments have jurisdiction over public health, sanitation and hospitals while the Central Government is responsible for medical education. State and Central Governments have concurrent jurisdiction over food and drug administration, and family welfare. Even though

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health is the responsibility of the states, under the Constitution, the Central Government has been financing the national disease control, family welfare and reproductive and also the programmes that are related to child health. Each state therefore, has developed its own system of Health care delivery, independent of the Central Government.

In India, public spending on healthcare is low compared to the developed countries, having declined from 1.3% of GDP in 1990 to 0.9% of GDP in 1999. The Government, in its National Health Policy, 2002 (NHP 2002), is targeting an increase of healthcare expenditure to 6% of GDP by 2010, with 2% of GDP being funded by public health investment. Today public spending on health is a mere 1% of GDP calculated in India Budget 2011-2012. Public spending on health care as per the World Health Organization recommends should be at least 5%. The government over the last six years has not been able to move towards its own target of 3% of GDP for health. The share of the Central government in public spending for health is a mere 0.25% of GDP when as per the UPA target it should be 40% of 3% of GDP that is 1.2% of GDP or Rs. 86,400 crore at today's prices.

The official governing bodies of the health system at the national level consist of (a) The Ministry of Health and family Welfare (b) The Directorate General of Health Services and (c) The Central Council of Health and Family welfare. At the state level the healthcare administration comprises (a) State Ministry of Health (b) State Health Directorate and District Medical and Health Officer (DMHO) at District level.

	NATIONAL LE	<b>VEL</b>
	Ministry of Health and Fa	amily Welfare
	STATE & U.I	Г. <u>S.</u>
	Department of Health Fa	mily Welfare
	Apex Hospit	al
	DISTRICT	<u>S</u>
	District Hospi	tal
<b>RURAL AREAS</b>	5	URBAN AREAS
Community Health Centre		Hospital
Primary Health Centre		Dispensary

Sub-centre	
Village Health Guides and trained Dias	

# At the Central Level

The Central responsibility consists mainly of policy making, planning, guiding, assisting, evaluating and coordinating the work of the State Health Ministers, so that health services cover every part of the country and know state lags behind for want of these services.

# At the State Level

Historically, the first mile stone in State Health Administration was the year 1919, when the states obtained autonomy, under the Montague – Chelmsford reforms from the Central government in matters of public health. The Government of India act 1935 gave further autonomy to the states. The position has largely remained the same even after the new constitution of India came into force in 1950. The state is ultimate Authority responsible for all the health services operating within its jurisdiction. At present there are 28 states in India with each state having its own health administration. In all the states the management sector comprises the State Ministry of Health and a Directorate of Health.

# At the District Level

The principal unit of administration in India is the district under a Collector. Within each district again, there are six types of administrative areas

- Sub divisions.
- Tehsils (Talukas).
- Community Developments Blocks.
- Municipalities and Corporations.
- Villages.
- Panchayats.

Most districts in India are divided into two or more sub-divisions, each in-charge of an Assistant Collector or Sub-Collector. Each division is again divided into tehsils (taluks), in-charge of a Tehsildar. A tehsil usually comprises from 200 to 600 villages. Community Development Block is a unit of rural planning and development, and comprises approximately 100 villages and about 80000 to 120000 population, in-charge of a Block Development Officer. Municipal Boards – in areas with population ranging between 10000 and 2 lakhs, Municipal chairman is the in-charge of Municipal Boards and Mayor is the in-charge of corporations with population above 2 lakhs and above. Finally there are the village panchayats, which are institutions of rural local self government.

Table 5 Out-patients' satisfactory levels towards Service Quality – Hospitals having bed strength 500 and above

s R	Daliability				
s R	Dolighility	D '			
~	Kenability	Responsiveness	Assurance	Empathy	Overall
00	63.60	66.25	64.25	64.00	65.27
50	61.40	62.25	64.25	63.60	62.95
(	00 50	00 63.60 50 61.40	00         63.60         66.25           50         61.40         62.25	00         63.60         66.25         64.25           50         61.40         62.25         64.25	00         63.60         66.25         64.25         64.00           50         61.40         62.25         64.25         63.60

The above details are also shown in the following graph.

Graph 1 Out-patients' satisfactory levels towards Service Quality – Hospitals having bed strength 500 and above



The above table and graph represent satisfactory levels of service quality of out-patients' services of NTR Health University General Hospital, Vijayawada and Private Medical College Hospital, Chinaoutapalli. Patients of NTR Health University General Hospital are more satisfied with 65.27% to 22 attributes of service quality against 62.95% in case of Private Medical College Hospital.

On observation the researchers found that NTR Health University General Hospital is creating more awareness among public by displaying placards and conducting specialized medical camps with the help of private hospitals being suggested by Government. It is also found that the NTR Health University General Hospital is offering all specialized medical services including cardiology, neurology, urology, nephrology, pulmonology, gastroenterology in OPD services supported by all diagnostic services having skilled and experienced medical and paramedical staff. On the other side, Private Medical College hospital management is not showing much interest on public awareness towards health and diseases at least by displaying statements, boards, disturbing pamphlets as it wants their premises neat, clean and good looking.

OPD services are offered only in mornings and evenings, as all the time specialized doctors are not available except OPD timings, due to the reason hospital does not stand on promises to do something by certain time and in the absence of doctors concerned staff feel free and show full of activity to patients.

ANOVA TEST							
		N	Mean	Std. Deviation	F	Sig.	
TANGIBLES	Government Hospital	20	13.8000	4.4909	0.514	0.478	
	Private Hospital	20	12.7000	5.1921			
	Total	40	13.2500	4.8238			
RELIABILITY	Government Hospital	20	15.9000	5.4086	0.087	0.769	
	Private Hospital	20	15.3500	6.3185			
	Total	40	15.6250	5.8120			
RESPONSIVENESS	Government Hospital	20	13.2500	4.7114	0.278	0.601	
	Private Hospital	20	12.4500	4.8826			
	Total	40	12.8500	4.7531			
ASSURANCE	Government Hospital	20	12.8500	4.5338	0.000	1.000	
	Private Hospital	20	12.8500	4.8043			
	Total	40	12.8500	4.6107			
EMPATHY	Government Hospital	20	16.0000	5.5630	0.004	0.952	
	Private Hospital	20	15.9000	4.8330			
	Total	40	15.9500	5.1438			
OVERALL	Government Hospital	20	71.8000	23.5810	0.107	0.745	
	Private Hospital	20	69.2500	25.6163			
	Total	40	70.5250	24.3363			

Table 6 ANOVA between Out-patients' perception towards Service Quality – Hospitals having bed strength 500 and above

F Table value (1, 38, 0.05) = 4.08. The above ANOVA Table discloses P value is >0.05 i.e. level of significance is found to be not significant at 95 percent confidence level. This shows that there is no significant difference in service quality in the mean variance among the responses given by out-patients of NTR Health University General Hospital & Private Medical College Hospital, because the overall ANOVA value of out-patients is 0.745.

ANOVA TEST							
		N	Mean	Std. Deviation	F	Sig.	
TANGIBLES	Government Hospital	20	13.7500	4.5983	0.553	0.462	
	Private Hospital	20	12.6000	5.1647			
	Total	40	13.1750	4.8616			
RELIABILITY	Government Hospital	20	15.8000	5.0325	0.145	0.705	
	Private Hospital	20	15.1000	6.4962			
	Total	40	15.4500	5.7466			
RESPONSIVENESS	Government Hospital	20	12.4000	4.2723	0.043	0.837	
	Private Hospital	20	12.1000	4.8764			
	Total	40	12.2500	4.5277			
ASSURANCE	Government Hospital	20	13.6000	4.1600	0.297	0.589	
	Private Hospital	20	12.8000	5.0845			
	Total	40	13.2000	4.6032			
EMPATHY	Government Hospital	20	16.2500	4.1533	0.238	0.629	
	Private Hospital	20	15.5000	5.4820			
	Total	40	15.8750	4.8155			
OVERALL	Government Hospital	20	71.8000	21.4663	0.232	0.633	
	Private Hospital	20	68.1000	26.8051			
	Total	40	69.9500	24.0426			

Table 7 ANOVA between In-patients' perception towards Service Quality –Hospitals having bed strength 500 and above

F Table value (1, 38, 0.05) = 4.08. The above ANOVA Table discloses P value is >0.05 i.e. level of significance is found to be not significant at 95 percent confidence level. This shows that there is no significant difference in service quality in the mean variance among the responses given by in-patients of NTR Health University General Hospital & Private Medical College Hospital because the overall ANOVA value of in-patients is 0.633.

Hospitals having bed strength 500 and above							
SATISFACTORY LEVELS	Tangibles	Reliability	Responsiveness	Assurance	Empathy	Overall	
Government Hospital	68.88	63.40	64.13	66.13	64.50	65.27	
Private Hospital	63.25	60.90	61.38	64.13	62.80	62.43	

Table 8 Out & In-Patients' satisfactory levels towards Service Quality – Hospitals having bed strength 500 and above

The above details are also shown in the following graph.

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Graph 2 Out & In-Patients' satisfactory levels towards Service Quality – Hospitals having bed strength 500 and above

The above table and graph represent satisfactory levels of service quality of overall patients (O/P & I/P) of NTR Health University General Hospital, Vijayawada and Private Medical College Hospital, Chinaoutapalli. Patients of NTR Health University General Hospital are more satisfied with 65.27% to 22 service quality attributes of SERVQUAL than Private Medical College Hospital with 62.43%.

On observation, researchers found that in NTR Health University General Hospital most of the consultants are available in the day time only to give treatment to OPD patients due to the result specialized procedures and diagnostic tests are conducting during day time. Because of this reason the staff pretends full of activity not even to respond patients' requests in the day time. In absence of administrative staff and concerned doctors during night times, nursing and other staff feel free and do not show much interest to perform regular duties. In Private Medical College hospital, the management is not showing interest towards health and diseases among

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public, OPD services are offered in morning and evening times only and the specialist doctors are not available except OPD timings, due to which the hospital is failing to fulfill its promises and to do things by time. Available few consultants have to take care of both out-patients and inpatients due to the reason individual attention is limited to nursing staff only not by the doctors.

# Conclusions

Both public and private hospitals attempt to develop their Service Quality to fulfill the needs of the patients. However, public hospitals like many public institutions suffer from low productivity and low Service Quality while the private hospitals make use of this opportunity. The present study results confirms that the demographic factors and socio economic status plays vital role in patients' satisfaction towards Service Quality.

The above philosophy was proved in the present study based on the revealed results of gaps between perceptions and expectations of service quality opined by patients of various category hospitals (i.e. Government, Private and Missionary owned hospitals) and the same philosophy was confirmed once again based on satisfactory levels of patients in respect of SERVQUAL dimensions.

The collective findings of the present study titled "A study on Service Quality measurement in Healthcare sector" highlighted the service gaps between patients' perceptions and expectations of service quality and patients satisfactory levels in different category of hospitals. This study confirms SERVQUAL scale finds short falls in the service quality being offered by the hospitals and based on the results managements may take necessary steps accordingly.

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# **Cerebral Palsy Children: An Effective Home Care** C. K. V. Bhuvaneswari

\_\_\_\_\_ Language in India www.languageinindia.com ISSN 1930-2940 Vol. 13:4 April 2013 \_\_\_\_\_

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# Abstract

Cerebral palsy is a developmental disability that results from dysfunction of the developing brain. For families and professionals involved in the care of children with cerebral palsy, the ultimate goal of intervention is to maximize functioning while minimizing any disability related disadvantage and to enhance participation in these environments, in a manner that is mutually satisfying for the individual and the community. This is accomplished by recognizing the specific abilities and needs of the individual child as they occur within the context of his or her family and community. Habilitation is an intervention strategy that is family focused and community based. Proper positioning geared to the age and orthotic devices, including braces, splints, and basic equipment needs, basic information related to feeding, and strategies for lifting and carrying children are integrated into the habilitation plans of physical and occupational therapist is an effort to maintain adequate range of motion, prevent contractures at specific joints, provide stability and control involuntary movements that interfere with function and addressing the tone and movement abnormalities associated with cerebral palsy. Efforts founded on the principles articulated in the Americans with Disabilities Act will create new opportunities for greater participation and enhanced quality of life for children with cerebral palsy. In this connection the present paper explore Cerebral Palsy Children: An Effective Home Care

## Key words: cerebral palsy children, orthotics, positioning.

## Introduction

Cerebral palsy is a disorder of movement and posture that is caused by a non-progressive abnormality of the immature brain<sup>1</sup>. Parents and professionals have an important role as educators Language in India www.languageinindia.com ISSN 1930-2940 13:4 April 2013

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of their child, especially during the early formative years. The ways in which a baby learns during the early months, with particular reference to the part that his mother plays in this early learning process while she tends to his needs throughout the day. This is a time during which a partnership develops between mother and baby. Naturally she is not alone in this task, a father's interaction is different from a mother's and that of siblings and other family members, each in their own way provide opportunities and encouragement for learning<sup>2</sup>.

When handling the child with cerebral palsy, especially in the early years, is the ability to use our hands effectively and economically, so that we become sensitive to the varying changes of tone under our hands. These could include outpatient site and community based initiatives as opposed to inpatient settings or hospital-based programs.

# Objectives

- Integration of medical care with home and community-based services that effectively link the person with visiting therapist,transportation,respitecare,housekeeping and housing services.
- Integration of child and family perspectives into care process and planning, using childcentered communication and a consumer- oriented focus to service delivery.
- Emphasis on functional status and quality of life, so that the systems are tracked to be accountable for their effectiveness.
- Improved screening and risk assessment to identify children early, when specialized services developmentally have the most effect.
- Individual and group health education targeted to improve self-care skills and appropriate use of health care services.
- Flexible gate keeping that allows children and families access to a variety of services on a limited basis without prior authorization.
- Comprehensive care management that moves beyond benefit management and achieves real care coordination.

- Coordination with public health, education and social services, including collaborative arrangements, to organize and provide services.
- An understanding of the differences between adult and childhood disability and the need for managed care models to be flexible in meeting pediatric needs.
- Access to a medical home.
- Fair reimbursement that compensates physicians for the increased time and complexity associated with care coordination.
- Viable systems of monitoring the care delivered.

# Methods

# POSITIONING

Proper positioning geared to the age and functional status of the child is often a key intervention in addressing the tone and movement abnormalities associated with cerebral palsy. A variety of adaptive devices are available to this end.

Static positioning devices, including sidelyers, prone wedges, and standers used to promote skeletal alignment, to compensate for abnormal postures. Careful attention to functional seating has long-term benefits in the prevention of contractures and joint deformities related to spasticity.

Other devices, including scooters, tricycles, and wheelchairs provide the child with the means to move independently within the environment and increase opportunities for exploratory play and social interaction.

# **Early Stages of Hand Function**

A child can achieve independent function for daily living; child needs first to use his hands for grasp, release, support and manipulation. The development of a baby's hand skills is closely linked and dependent on sensory input, postural control [stability] and gross motor of movement. The Following Ways introduce early stimulation:

- Hold the baby by his shoulders or upper arms and encourage child to look at his hands as you rub, clap and press them together. Take one hand at a time over the front and back of his forearms. Hold his wrists and shake his hands i.e. wave goodbye.
- Rub his hands over his face, top of child head and tummy. Take both his hands and rub them over your face. Blow kisses, tickle and walk over the palms, back of his hands and up the back and front of his forearms.
- Place a toy between his palms that squeaks as you press his hands together. Place his hands around familiar objects such as child bottle.
- Bent and stretch his arm, hands and fingers as you dry them. The same with his toes.
- Finger and glove puppets are simple to make and stimulate a baby to look, touch and get hold of them.

# **Abnormal Tones**

# THE CHILD WITH MODERATE SPASTICITY:

The child is slightly asymmetrical, pelvis is unstable and the weight is taken over to one side. Although child has some head control, does not have sufficient control of her flexor muscles to overcome the pull of gravity and therefore, even with help is limited in the amount of movement, can manage on her own.

The ways handle the young child with increased tone [spasticity]

- The child lies on his father, who supports his son under his armpit so that he is able to take weight on open hand as he reaches forward with the other hand to touch daddy's face.
- The child sits astride his father, his feet flat on the floor. His father guides both his hands towards his face, naming his nose, eyes, mouth, and ears as the child touches them.

# CHILD WITH FLUCTUATING TONE AND INVOLUNTARY MOVEMENTS:

The child is asymmetrical his head and trunk control is poor and unable to stabilize his shoulder and pelvic girdles. Child cannot reach forward with extended arms or maintain a sustained grasp.

The ways handle the child with fluctuating tone and involuntary movements [athetoid type of cerebral palsy].

The child have an appreciation of body awareness, these children need a stable base from which they can use their hands.

- The child grasps hands while pull them towards mother keeping arms straight, then quickly jerk him back a little. This will give him the feeling of grasping while at the same time increase the tone in his trunk [making it firm] and improve his hand control.
- The child is controlled firmly at the shoulder, the arm is turned in and kept straight by his side. He puts his hands on his knees and moves slowly forward to put his hands on his feet, in front of his feet and beside his feet, returning to the sitting position with his hands on his knees.
- By giving firm steady pressure, through the pelvis and hips the child is able to maintain the extension in his trunk. While lifting his arms up to touch his father's ears.

# Equipment for Play, Co-Ordination and Balance

# ROLLS

# Suggested uses:

A roll can be used with a child lying on his tummy or straddling it to facilitate postural alignment, trunk rotation and balance reactions. As a roll only moves in one plane, unlike a therapy ball that moves in a frontal and lateral plane. Other ways in which a roll can be used for play activities.

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# **INFLATABLE THERAPY BALLS**

# Suggested uses:

Therapy balls are used to increase movement experiences, facilitate weight shift and balance reactions in prone lying, sitting, standing and walking.

# HAMMOCKS

Both hammocks and cut-out foam wedges can be used to facilitate the development of visual awareness, mid-line play, and eye-hand coordination, and early reach and grasp.

# Handling during Routine Activities

The child with cerebral palsy feels insecure when he is bathed, dressed and undressed. It is therefore important dressing, undressing and changing a baby's diaper, to make sure that he is a position where he feels secure and is symmetrical i.e. his head, trunk and pelvis are in alignment and his weight evenly distributed.

# **ORTHOTICS: Braces and Splints**

One of the most commonly prescribed orthotics is a short leg brace that prevents permanent shortening of the heel cord.

A variety of splints used to improve hand function. In the resting hand splint, the thumb is held in an abducted position and the wrist in a neutral or slightly extended position. This helps the child keep hand open to prevent a deformity from developing.

The use of cast has become increasingly popular as an adjunct to more traditional methods of managing spasticity. Benefits of inhibitive casting include improved gait and weight bearing, increased range of motion, and improved functional hand use. 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 C. K. V.Bhuvaneswari Cerebral Palsy Children: An Effective Home Care 335

# Managed Care and Children with Special Health Care Needs

Children with special health care needs could potentially experience benefits from managed care, especially as compared with the parameters of the traditional fee for service plans.MCO<sub>S</sub> provide the following:

- Increase flexibility to design programs that will meet the children's special needs.
- Coverage of well –child care, routine immunization, and other preventive care that are often excluded in traditional plans.
- Protection of families from excessive medical cost and
- Point- of-services plans that provide families with the benefits of managed care while retaining the choice of physicians even if they are not in the standard network of providers.

# Conclusion

Habilitation is an interdisciplinary strategy that seeks to maximize function and minimize the disadvantage a person experiences as a consequence of disability or societal circumstances. Many services needed and the number of providers and professionals involved, coordinating health care services for children with special health care needs presents a challenge to the child's family and to health care provider. Efforts founded on the principles articulated in the American Disability Act create new opportunities for greater participation and enhanced quality of life for people with cerebral palsy.

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# **Trends and Patterns of Health Expenditure in India**

# J. V. Arun and Dr. D. Kumar

Language in India www.languageinindia.com ISSN 1930-2940 Vol. 13:4 April 2013 \_\_\_\_\_

# Abstract

Accessing the health system requires out-of pocket spending for many of India's poor, which leads to augmented poverty. Further, India's socio-economic status is poorly reflected in the Human Development Index (HDI) 2010, which ranked India only in 119th place in terms of human development. To propel the process of structural transformation, rejuvenation of healthcare facilities is imperative which in turn calls for increased health expenditure. Against this setting, the paper attempts to examine the trends of health expenditure in India over the last few decades.

The analysis reveals that, levels of public spending on healthcare in India are amongst the lowest in the world. Further, the paper attempts to ascertain that the state has a significant role to play in the delivery of health services in India. The purpose of this paper is to study the rationale behind promoting regulated private expenditure for the development of effective health infrastructure.

Overall, health expenditure is affected by host of structural deficiencies, most importantly the looming reliance on private sector investment and foreign donors. The paper aims to suggest relevant measures to improve the role of government in providing world class health facilities to the needy at an affordable price including health insurance schemes and increased budgetary allocation at both national and state government levels.

# Key Words: Health, public-private expenditure, development, government

# Introduction

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Health is no longer treated as a mere by-product of economic development, but as one of the several key determinants of economic development and empowerment. The role of healthcare in improving a nation's wealth and spurring economic growth is well established. Improving health expenditure of a population can be beneficial for economic outcomes at the individual and the national level. Governments have a major role to play in providing and regulating health services particularly in developing countries with large concentration of the poor because health spending is a merit good. But health expenditure in India is dominated by private spending which not only result in out-of-pocket (OOP) spending but also adversely affects the current social welfare and labour productivity.

# India's Per Capita Health Expenditure

The health sector challenges in India, like those in other developing countries, are formidable. India – together with Brazil, Russia China and South Africa – is one of the BRICS countries, which have been identified as taking on greater political and economic influence on the world stage. However, in terms of health expenditure, India's per capita health expenditure is far less than the other BRICS nations (Chart 1). Among BRICS, Brazil has recorded remarkable success in expanding its health coverage, to embark on health sector reforms. An important reason contributing to the slow progress in health sector in India is the poor access to primary and preventive health care services.

Chart 1



Source: World Health Organization, National Health Account database

# Status of Health Expenditure in India

Total health expenditure is the sum of public and private health expenditure. It covers the provision of health services (preventive and curative), family planning activities, nutrition activities, and emergency aid designated for health but does not include provision of water and sanitation (WHO 2010). Total healthcare expenditure in India was 4.2% of GDP in 2010 (Chart 2) which is more than its neighboring countries such as Pakistan and Sri Lanka, but far less than the European Union (EU) Member States expenditure on healthcare which typically accounts for about 9 % of GDP, having increased from about 7 % in 1980. Despite poor health indicators, spending on health care in India is well below what is required. The low levels of spending will have an adverse impact on the creation of a preventative health infrastructure.

Chart 2

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Source: World Health Organization, National Health Account database

# **Public Health Expenditure**

Public health expenditure by definition includes health expenditure by the Centre, States and local bodies. Public expenditure on health in India is around 1 per cent of GDP during the period 1995-2010 (Chart 3(A)) though health expenditure has increased in absolute terms, the proportionately higher growth of GDP has resulted in a moderate increase in the share of health expenditure to GDP over the years.

Chart 3(A)

Chart 3(B)



Source: WHO, National Health Account database

Source: WHO, National Health Account database

Total expenditure on health in India as a percentage of GDP was broadly in line with the level achieved in other countries at similar per capita income levels (*Planning Commission, mid-term appraisal XI plan*), but it is skewed too much in favour of private expenditure (Chart 3(B)). Despite efforts to increase public spending including the adoption of National Rural Health Mission (NRHM) in 2005 and the recent introduction of *Rashtriya Swastya Bima Yojana* (RSBY), the public health expenditure increased only marginally (Chart 4).

Chart 4	4
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Source: World Health Organization, National Health Account database

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The value for Health expenditure, public (% of total health expenditure) in India was 29.17 as of 2010. As the chart above shows, over the past 15 years this indicator reached a maximum value of 30.27 in 2009 and a minimum value of 22.51 in 2004. The inadequate level of public health provision has forced the population to seek private health providers, resulting in substantial out-of-pocket (OOP) spending.

# **Role of Private Sector**

Private sector has an important role to play in the delivery of health services in India and expenditure in the private sector contributes to 70.8% of total health expenditure in 2010. Private health expenditure in India includes OOP, health insurance and expenditure towards health by firms and NGOs. Among all these components, out-of-pocket expenditure has the single largest share in the total health expenditure of the country (Chart 5(B)). Nearly 90 percent of the private expenditure in India was in the form of OOP expenditure on health by households (Chart 5(A)), a share that is one of the highest in Asia (Van Doorslaer and others, 2007). The high OOP expenditure has put an increasing financial burden on the poorer sections of the population due to the fact that the share of visits to private health facilities has increased in recent years (Rao and Choudhury 2012). OOP spending in India is over four times higher than the public spending on health care and out-of-pocket expenses are inherently regressive and puts a dis-proportionate burden for health care (WHO 2010).

Chart 5(A)

Chart 5(B)



*Source:* WHO, National Health Account database Source: WHO, National Health Account database Increase in private spending particularly OOP indicates that even poor households are willing to spend more to ensure minimal health care and on the other hand waning preference to access the public health services are due to their worsening quality of service and increase in user charges even in the public health system. Recent initiatives by the central and state government to augment public spending on health care have met with only limited success despite various efforts taken to offset the fiscal disabilities of the poorer states.

# **Healthcare under Concurrent List Functions**

In India, the health sector falls under the concurrent list and for state government health expenditure, the financing responsibility primarily lies with that of the state government. The analysis of states health expenditure (public/private) in terms of per capita reveals low level of per capita public expenditure in most of the states except for few Union Territories and states of Arunachal Pradesh, J&K, Mizoram, Nagaland & Sikkim as their per capita private expenditure is three or four times more than the per capita public expenditure (Chart 6).

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Chart 6

Source: Adopted from National health profile 2010

## **Dominant Role of Private Health Sector**

The overall trend of Indian health expenditure points out that both at the all India and state level, private sector is dominating and therefore it has a vital role to play in the delivery of health services in India. However it is essential that there is effective monitoring of these by government as it would result in heavy economic burden on poor specially marginalized communities/sections pushing them further down the economic ladder. This calls for increased public spending but in reality, there is no direct and clear relationship that can be made between government health expenditure and health outcomes of the people. However the expenditure on public health does have a direct impact on certain health indicators such as the spread of communicable diseases and

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further, slow progress of basic health indicators such as life expectancy at birth, infant mortality and maternal mortality, can be partly traced to insufficient public expenditure and intervention Above all, World Bank estimate highlights that 2.2 % of India's population goes into poverty every year because of catastrophic health expenditure. All these warrant a slew of reforms to enhance public spending on healthcare and to channelize private expenditure.

### Key Measures to Improve Health Expenditure

- (1) To address, the problem of low public spending, evidently the total outlay for healthcare has to increase both at national and state levels. Moreover, budgetary allocation made for health insurance scheme for the poor *Rashtriya Swasthya Bima Yojana* (RSBY) should also be increased to allow for more beneficiaries to be covered.
- (2) Regulatory reforms including enhancing the limit of Foreign Direct Investment (FDI) is necessary to stimulate private sector efforts in improving financial access to healthcare.
- (3) Providing tax incentives to employers and families to take up health insurance would also aid growth of this sector.
- (4) Creating a broad framework for public private partnership (PPP) model to meet the demand supply gap in healthcare.
- (5) The government should focus to promote the profitability of the private sector by providing tax incentives particularly for modern health care technologies.
- (6) Donors should opt for result based financing/management to be accompanied by measures improving accountabilities and incentivisation.

At the outset, it is clear that the active participation of government is considered necessary to increase public spending on healthcare delivery to meet the needs of its population – particularly the poorest of the poor. At the same time, the government needs

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to work more closely with the private sector to ensure quality control to fulfill its assurance to provide healthcare to all.

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# **Trends and Patterns of Health Expenditure in India**

# J. V. Arun and Dr. D. Kumar

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# Abstract

Accessing the health system requires out-of pocket spending for many of India's poor, which leads to augmented poverty. Further, India's socio-economic status is poorly reflected in the Human Development Index (HDI) 2010, which ranked India only in 119th place in terms of human development. To propel the process of structural transformation, rejuvenation of healthcare facilities is imperative which in turn calls for increased health expenditure. Against this setting, the paper attempts to examine the trends of health expenditure in India over the last few decades.

The analysis reveals that, levels of public spending on healthcare in India are amongst the lowest in the world. Further, the paper attempts to ascertain that the state has a significant role to play in the delivery of health services in India. The purpose of this paper is to study the rationale behind promoting regulated private expenditure for the development of effective health infrastructure.

Overall, health expenditure is affected by host of structural deficiencies, most importantly the looming reliance on private sector investment and foreign donors. The paper aims to suggest relevant measures to improve the role of government in providing world class health facilities to the needy at an affordable price including health insurance schemes and increased budgetary allocation at both national and state government levels.

# Key Words: Health, public-private expenditure, development, government

# Introduction

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Health is no longer treated as a mere by-product of economic development, but as one of the several key determinants of economic development and empowerment. The role of healthcare in improving a nation's wealth and spurring economic growth is well established. Improving health expenditure of a population can be beneficial for economic outcomes at the individual and the national level. Governments have a major role to play in providing and regulating health services particularly in developing countries with large concentration of the poor because health spending is a merit good. But health expenditure in India is dominated by private spending which not only result in out-of-pocket (OOP) spending but also adversely affects the current social welfare and labour productivity.

# India's Per Capita Health Expenditure

The health sector challenges in India, like those in other developing countries, are formidable. India – together with Brazil, Russia China and South Africa – is one of the BRICS countries, which have been identified as taking on greater political and economic influence on the world stage. However, in terms of health expenditure, India's per capita health expenditure is far less than the other BRICS nations (Chart 1). Among BRICS, Brazil has recorded remarkable success in expanding its health coverage, to embark on health sector reforms. An important reason contributing to the slow progress in health sector in India is the poor access to primary and preventive health care services.

Chart 1



Source: World Health Organization, National Health Account database

# Status of Health Expenditure in India

Total health expenditure is the sum of public and private health expenditure. It covers the provision of health services (preventive and curative), family planning activities, nutrition activities, and emergency aid designated for health but does not include provision of water and sanitation (WHO 2010). Total healthcare expenditure in India was 4.2% of GDP in 2010 (Chart 2) which is more than its neighboring countries such as Pakistan and Sri Lanka, but far less than the European Union (EU) Member States expenditure on healthcare which typically accounts for about 9 % of GDP, having increased from about 7 % in 1980. Despite poor health indicators, spending on health care in India is well below what is required. The low levels of spending will have an adverse impact on the creation of a preventative health infrastructure.

Chart 2

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Source: World Health Organization, National Health Account database

# **Public Health Expenditure**

Public health expenditure by definition includes health expenditure by the Centre, States and local bodies. Public expenditure on health in India is around 1 per cent of GDP during the period 1995-2010 (Chart 3(A)) though health expenditure has increased in absolute terms, the proportionately higher growth of GDP has resulted in a moderate increase in the share of health expenditure to GDP over the years.

Chart 3(A)

Chart 3(B)



Source: WHO, National Health Account database

Source: WHO, National Health Account database

Total expenditure on health in India as a percentage of GDP was broadly in line with the level achieved in other countries at similar per capita income levels (*Planning Commission, mid-term appraisal XI plan*), but it is skewed too much in favour of private expenditure (Chart 3(B)). Despite efforts to increase public spending including the adoption of National Rural Health Mission (NRHM) in 2005 and the recent introduction of *Rashtriya Swastya Bima Yojana* (RSBY), the public health expenditure increased only marginally (Chart 4).

Chart 4	4
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Source: World Health Organization, National Health Account database

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The value for Health expenditure, public (% of total health expenditure) in India was 29.17 as of 2010. As the chart above shows, over the past 15 years this indicator reached a maximum value of 30.27 in 2009 and a minimum value of 22.51 in 2004. The inadequate level of public health provision has forced the population to seek private health providers, resulting in substantial out-of-pocket (OOP) spending.

# **Role of Private Sector**

Private sector has an important role to play in the delivery of health services in India and expenditure in the private sector contributes to 70.8% of total health expenditure in 2010. Private health expenditure in India includes OOP, health insurance and expenditure towards health by firms and NGOs. Among all these components, out-of-pocket expenditure has the single largest share in the total health expenditure of the country (Chart 5(B)). Nearly 90 percent of the private expenditure in India was in the form of OOP expenditure on health by households (Chart 5(A)), a share that is one of the highest in Asia (Van Doorslaer and others, 2007). The high OOP expenditure has put an increasing financial burden on the poorer sections of the population due to the fact that the share of visits to private health facilities has increased in recent years (Rao and Choudhury 2012). OOP spending in India is over four times higher than the public spending on health care and out-of-pocket expenses are inherently regressive and puts a dis-proportionate burden for health care (WHO 2010).

Chart 5(A)

Chart 5(B)



*Source:* WHO, National Health Account database Source: WHO, National Health Account database Increase in private spending particularly OOP indicates that even poor households are willing to spend more to ensure minimal health care and on the other hand waning preference to access the public health services are due to their worsening quality of service and increase in user charges even in the public health system. Recent initiatives by the central and state government to augment public spending on health care have met with only limited success despite various efforts taken to offset the fiscal disabilities of the poorer states.

# **Healthcare under Concurrent List Functions**

In India, the health sector falls under the concurrent list and for state government health expenditure, the financing responsibility primarily lies with that of the state government. The analysis of states health expenditure (public/private) in terms of per capita reveals low level of per capita public expenditure in most of the states except for few Union Territories and states of Arunachal Pradesh, J&K, Mizoram, Nagaland & Sikkim as their per capita private expenditure is three or four times more than the per capita public expenditure (Chart 6).

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Chart 6

Source: Adopted from National health profile 2010

## **Dominant Role of Private Health Sector**

The overall trend of Indian health expenditure points out that both at the all India and state level, private sector is dominating and therefore it has a vital role to play in the delivery of health services in India. However it is essential that there is effective monitoring of these by government as it would result in heavy economic burden on poor specially marginalized communities/sections pushing them further down the economic ladder. This calls for increased public spending but in reality, there is no direct and clear relationship that can be made between government health expenditure and health outcomes of the people. However the expenditure on public health does have a direct impact on certain health indicators such as the spread of communicable diseases and

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further, slow progress of basic health indicators such as life expectancy at birth, infant mortality and maternal mortality, can be partly traced to insufficient public expenditure and intervention Above all, World Bank estimate highlights that 2.2 % of India's population goes into poverty every year because of catastrophic health expenditure. All these warrant a slew of reforms to enhance public spending on healthcare and to channelize private expenditure.

### Key Measures to Improve Health Expenditure

- (1) To address, the problem of low public spending, evidently the total outlay for healthcare has to increase both at national and state levels. Moreover, budgetary allocation made for health insurance scheme for the poor *Rashtriya Swasthya Bima Yojana* (RSBY) should also be increased to allow for more beneficiaries to be covered.
- (2) Regulatory reforms including enhancing the limit of Foreign Direct Investment (FDI) is necessary to stimulate private sector efforts in improving financial access to healthcare.
- (3) Providing tax incentives to employers and families to take up health insurance would also aid growth of this sector.
- (4) Creating a broad framework for public private partnership (PPP) model to meet the demand supply gap in healthcare.
- (5) The government should focus to promote the profitability of the private sector by providing tax incentives particularly for modern health care technologies.
- (6) Donors should opt for result based financing/management to be accompanied by measures improving accountabilities and incentivisation.

At the outset, it is clear that the active participation of government is considered necessary to increase public spending on healthcare delivery to meet the needs of its population – particularly the poorest of the poor. At the same time, the government needs

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to work more closely with the private sector to ensure quality control to fulfill its assurance to provide healthcare to all.

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