

Status and Infrastructure of the Health Sector in Karnataka

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Abstract

Karnataka is closer to the average of India in case of health status and health facilities, but compared to the states like Kerala, it stands too low. The most striking problem, related to the health infrastructure and health status arises out of the regional imbalance. The study shows that the Gulbarga and Belgaum divisions of Karnataka show a poor status in health infrastructure and health status. Among these, the Gulbarga division (means Hyderabad Karnataka) lies in the lower position. It is well known that Hyderabad Karnataka is underdeveloped in most of the sectors compared to the rest of the regions. Lesser health infrastructure facilities in this region clearly indicate the neglect of the government intervention/ interest to develop basic infrastructure facilities in this region. For better health, health facilities should be improved. For better health facilities, public health expenditure is very important. At present, the Karnataka government is spending very less amount of money on health, which is about 2 per cent of the NSDP. This amount has to be increased. Increasing the public expenditure alone, cannot serve the purpose, unless it is

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properly used for delivering quality infrastructure and good service mechanization.

Keywords: Health Sector, Health Infrastructure.

Introduction

The importance of the good health of people cannot be minimized, as it has been considered as one of the most important components of the human capital. Good health is an indication of a strong mind. Due to its vital importance, the economics of health is attracting researchers and policy makers more rapidly in the recent decades. It is well said in the theory of the human capital that people should invest themselves in terms of education, health and skill development programmes. Health is a major segment of the human capital. If the quality of the human capital is not good, then the physical capital and natural resources cannot be utilized properly and the growth can neither be sustained nor be qualitative.

Life expectancy at birth, infant mortality rate, fertility rate, crude birth rate is perhaps the best measures of the human capital. These indicators of health are determined by numerous factors such as per capita income, nutrition, housing, sanitation, safe drinking water, social infrastructure, health and medical care services provided by the Government, geographical climate, employment status, incidence of poverty and so on (Dadibhavi and Bagalkoti, 1994). However, in the developing countries like India, due to poor financial accessibilities, it is very difficult for the people to spend money. Hence, the intervention of the Government is necessary for making strong human capital and sustained economic growth as they are strongly and positively inter-related.

Though India stands on par with the leading countries in terms of population concentration, its health status is far behind the satisfactory level compared to the other developing countries. It is needless to point out that, this is due to the lack of proper budgetary allocation and poor infrastructure facilities. It is disappointing to note that India's public expenditure as a share of GDP as well as a share of total budget is low compared to many other developing countries. Further, the biggest challenge for the Indian health sector is that it has to not only sustain quality but also reduce the regional disparities in health status and infrastructure, which is also observed in other sectors like economic growth, human development, and standard of living and so on. Notable studies have traced out many interesting realities with respect to the status and infrastructure in the health sector disparities in India.

Karnataka state is not an exception to this kind of disparities. Though studies on regional disparities in health sectors of Karnataka are rare to find, nevertheless some of the scholarly studies done by Panchamukhi and others have brought out the inter-district disparities in the health sector. They held that the disparities have been constantly increasing over a period of time and suggested for the higher public spending on the same. However, it is hard to find a comprehensive study which analyzes the intra-state disparities on health and Government financing in recent days. In the light of the above, in the present study, an attempt has been made to analyze the regional imbalance in the health sector in the state and public expenditure on health in Karnataka.

The study has been divided into five sections. Apart from the introduction, section II discusses the status and infrastructure with respect to health in Karnataka. Further, in section III regional disparity in health infrastructure and status have been discussed and in section IV, public expenditure on health sector is analysed. Section V concludes the present paper with appropriate findings and suggestions.

Health Status and Infrastructure: A Comparison between Karnataka and India:

Before discussing the health status in Karnataka, a quick look at the comparisons of some of the important health indicators of India, with the rest of the regions of the world would give the best picture of India's health status with the rest of the world. The data related to the indicator, shows that (Table 1), Life expectancy at birth (LEB) in India, is the lowest among the average of all regions, except the

average of the 'least developed countries', 'low human developed countries' and 'Sub-Saharan Africa'. It is disappointing to note that LEB in India is also lower than the average of SAARC (South Asia) countries. Countries with high human development have the LEB of 80 years, whereas it is only 65.4 years in India, which is 1.2 times lower than the other countries in the world. Life expectancy at birth is a commonly used indicator, as it is the proxy for overall health condition/status and availability of the health facilities for the people in a country. Another important indicator presented in the table is the 'under five mortality'. In this indicator also, the Indian pattern can be observed as it was in LEB. 'Maternal mortality ratio' of India is 230, which is 15 times higher than that of the very high human developed countries (15.5). It is pointless to mention that this is due to the lack of health facilities, which has resulted due to the government spending less on this sector. Health expenditure as a share of GDP is 4.2 per cent, which is the lowest among the average of all regions except the SAARC countries. The point to be noted here is that the health expenditure in India is not too high as compared to the average of SAARC courtiers; it is only 0.01 point per cent higher than the SAARC countries. Not surprisingly, the per capita GDP of India is much lesser than that of the developed countries. If the health expenditure as a share of GDP is concerned, it shows lower difference, whereas in per capita terms it shows a higher difference between developed and developing countries like India.

Many decades have rolled out since the independence of our country. India is marching towards development in various sectors. It is observed that even though significant improvements have been made under the health sector, they are not satisfactory. Health has been categorised in the state list by the Indian constitution. For many years / decades, the Central Government has not taken any notable policy / programmes. After recognising the importance of health and the lower status of India's health sector - the Central Government has started investing a huge amount of money on the health sector, to fulfil the Millennium Development Goals of Health, especially after the reform period.

Regions	Life expectancy at	Under Five Mortality	Maternal mortality	Total expenditure on health (% of
India	65.4	66	230	42
Very high human development	80	6.2	15.5	11.2
High human development	73.1	19	51.1	6.7
Medium human development	69.7	44.2	134.9	4.5
Low human development	58.7	117.5	532.2	5.1
Arab states	70.5	48.8	191.8	5.3
East Asia and the pacific	72.4	26.1	79.4	4.3
Europe and central Asia	71.3	19.1	29.1	6.3
Latin America and the Caribbean	74.4	22.4	79.9	7.6
South Asia (SAARC)	65.9	69.3	251.9	4.1
Sub-Saharan Africa	54.4	129	618.9	6.2
Least developed countries	59.1	120.1	537.1	5.6
Small island developing states	69.6	57		7
World	69.8	58.4	175.6	6

Table 1: Comparison of India, With the Rest of the World as Far as The Health Indicators is Concerned.

Source: India Human Development Report 2011

infrastructure facilities are lower in India, when compared to many other countries. In the below mentioned table, selected Health status and infrastructure of Karnataka has been compared with that of India. Karnataka is nearer to the average of India in terms of state income and most of the developmental indicators. Similarly, with regard to the health related indicators also, Karnataka's position is above the satisfactory level. Except health expenditure by public and private, in all the selected indicators Karnataka's performance is better than the average of India.

Sl. No	Items	Karnata	India
I. Statu	JS	Ка	
1	Life Expectancy at Birth	65.3	63.5
2	Infant Mortality Rate	41	50
3	Under Five Mortality Rate	54.7	74.3
4	Percentage of persons not expected to survive beyond the Age of 40 years	14.6	17.7
5	Percentage of Women Adult Population with BMI <18.5	35.5	33
6	Percentage of Men Adult Population with BMI <18.5	33.9	34.2
7	Percentage of Women with Anemia	51.5	55.3
8	Percentage of Children (0-5 years) with Anemia	70.4	69.5
9	Death Rate	7.2	7.3
10	Public Expenditure on Health as a percentage to GSDP	0.87	2.02
11	Per capita Public Expenditure on Health	233	1014
12	Per capita Private Expenditure on Health	597	1639
13	Public Expenditure on Health as a percentage to total Health Expenditure	71.9	58.3
14	Private Expenditure on Health as a percentage to total Health Expenditure	28.1	41.7
II. Infr	astructure Facilites per 10 lakh Population	L	I
1	Public Health Centres (PHCs)	38	21
2	Sub Centres	140	129
3	Community Health Centres (CHCs)	6	4
4	Rural Hospitals	8	6
5	Urban Hospitals	8	3
6	Total Hospitals	16	10
7	Total Beds	1096	476
8	No. of Doctors at PHCs	48	21
9	No. of Health Assistants at PHCs	34	31
10	No. of Health Workers at PHCs	203	188

Table 2: Selected	Health	Indicators	in	Karnataka	and	India

Source: India Human Development Report 2011

Life expectancy at birth (LEB) in Karnataka is 65.3 years, which is comparatively very less than the states like Kerala. In Karnataka, 41 infants die before 3 weeks in every 1000 live birth. Further, 55 children per 1000 live birth, die before the age of 5. This child/infant death is due to unhealthy pregnancy, underage pregnancy, lack of institutional delivery, ignorance and so on. More than one third of the people are below 18 BMI (Body Mass Index). Female <18 BMI is 35.5 per cent and Male <18 BMI is 33.9; means the women are more undernourished than the men. After giving women an idol status in the country, it is discouraging to note that more than 55 per cent of the women have anemia, which shows the wretchedness of the women in our country. In Karnataka, the condition is equally worse with 51 percent of the female population being anemic. This female anemia affects the children when the women give birth and nourish them. Hence anemic children (0-5 years) are 70.4 per cent. The above figures clearly show the pathetic condition of the health status in India. On one side, we are talking about IT, BT, double digit growth rate, Swabhimani India, India shining and so on, whereas, in the other extreme, the undernourished child's health has not been taken care of. Lower health status of Karnataka is also due to lower public and private expenditure on health sector. Health infrastructure facilities can be improved through the public expenditure rather than the private expenditure.

Improvements in the health facilities will facilitate better health condition. Information related to health infrastructure facilities of India and Karnataka has also been presented in the table. It can be observed that Karnataka is better off with respect to all the health infrastructure facilities. But these facilities are very less compared to the present health status and the existing population. In Karnataka, there are only 38 Public Health Centres [PHCs] per 10 lakhs population, 140 sub centres and 6 community health centres per 10 lakhs population. The gap between the rural and urban hospitals is high. There are only 6 hospitals per 10 lakhs rural population and 21 hospitals for urban population. In case of beds, per 10 lakhs population, it is observed that there are 1096 beds per 10 lakhs population, which is very less. Doctors per 10 lakhs population in PHCs are only 48 and there are 34 assistants and 203

health workers for the same amount of population in the state. In our country/state, the number of infrastructure facilities are not only low but also, the services provided in these facilities are also low, which has been empirically proved by many studies. However, the present study analyses the district wise availability of health facilities and health status, and the regional imbalances in the health sector have also been considered as the major objective rather than the quality of services, which can be seen in the following sections.

Regional Imbalances in Health Infrastructure and Health Status:

Regional imbalance is a common phenomenon faced by every country/states in most of the sectors. Health sector is not an exception for this. Before analyzing the inter-district disparities of the health sector in the state, a brief discussion of inter-division disparities gives a clear picture of the distribution of health facilities and health status among the four administrative divisions. Information related to this has been presented in the below mentioned table. It is generally observed that the district hospitals possess the advanced health infrastructures and equipments when compared to the lower divisions and these results in them saving many lives. For example, during the time of severe injuries or epidemic diseases, patients need an emergency treatment in a well equipped hospital. Such facilities cannot be expected in a Primary Health Centre (PHC) or a Community Health Centre (CHC). Hence, these patients should be taken to the district hospitals (or a similar hospital). However, if these hospitals are situated in faraway places, it may be extremely difficult to save their lives. Hence, it is not only the matter of the number of hospitals but at the same time, the distance and the distribution of the hospitals in different regions/places should also be taken care of. Table 3 reveals that in Karnataka, there is only 1.1 district and other hospitals for every 10 lakhs population. Observing the distribution between North and South, it is found that there are 1.3 hospitals in South Karnataka and 1.0 hospital in North Karnataka per 10 lakhs population. Further, it is also found that the table that in both the indicators shows North Karnataka has lesser number of hospitals 22

per 10 lakhs population than the South. Mysore and Belgaum divisions stand first and the last respectively with regard to the health facilities. Looking at them area wise, there are 3.6 hospitals per every 10 thousand Sq. km. area in Karnataka. The number of hospitals in South Karnataka (4.7) is twofold higher than that of North Karnataka (2.5). In this indicator, the Bangalore division stands first with 5.4 hospitals and Gulbarga is at the last position with 2.5 hospitals.

Community Health Centres (CHCs) have comparatively less number of equipments and man power than the district hospitals. They also provide many of the health services and can be most commonly found in the taluk head quarters. Karnataka has 5.3 CHC for every 10 lakhs population. Mysore division has the highest number of CHCs (7.4 per 10 lakhs population) among the divisions and Bangalore stands at the lowest with 3.4 CHCs per 10 lakhs population. South Karnataka has both the higher and lower number of CHC's divisions, but the number of CHCs per 10 thousand Sq. Km. area is high in South Karnataka only. Totally there are 16.9 CHC's in the state per 10 thousand Sq. Km. area. Mysore and Belgaum are in the first and last positions respectively.

Primary Health Centres (PHCs) have been introduced with the objective of providing better health facilities to the rural population. However, unlike the district hospitals these centres have not been fully equipped. Nevertheless, they have a crucial role in making the people in the rural community aware of their health and to take care of the minor diseases. At the state level, there are 169 PHCs per 10 lakhs population with the distribution of 184 and 149 PHCs in the South and North Karnataka. Mysore division stands first and Bangalore stands last with regard to the same. Looking at the number of hospitals per 10 thousand Sq. Km. area it is found that there are 539 PHCs in the state. Further, North Karnataka has only 394 PHCs and South Karnataka has 693 PHCs for the same amount of the area, which is 1.8 times higher. The Mysore division has 783 PHCs and the Gulbarga division has 365 PHCs per 10 lakhs Sq. Km. area. PHCs are the major source for the rural health care, hence less number of PHCs in an under

developed division like Gulbarga demands immediate concern from the Government.

	Item	Belgaum	Gulbarga	Bangalore	Mysore	North	South	Karnataka	
				Facilities					
	District and	0.9	1	1.2	1.4	1	1.2	1 1	
	otner Hospitals	-4	-3	-2	-1	1	1.5	1.1	
Ч с	Community	5.5	6.5	3.4	7.4	5.0	4.0	5.3	
Lak	Centres	-3	-2	-4	-1	5.9	4.8		
er 10 opul	PHCs and	154	142	135	271	140	194	169	
Pe P	Centres	-2	-3	-4	-1	149	184		
Т	T-4-1 D - 1-	764	789	737	1196	775	901	847	
	Total Beds	-3	-2	-4	-1	115			
	District and	2.6	2.5	5.4	3.9	2.5	4.7	3.6	
	otner Hospitals	-3	-4	-1	-2	2.5			
and	Community	14.9	16.6	15.5	21.4	15.0	18.2	16.9	
ious: s are	Centres	-4	-2	-3	-1	15.6			
10 th KM	PHCs and	418	365	614	783	20.4	(0)2	520	
Per sq	Centres	-3	-4	-2	-1	394	693	539	
	T 1 D 1	2070	2019	3337	3455	20.47	2202	0701	
	Total Beds	-3	-4	-2	-1	2047	3392	2701	
				Status					
Infa	ant mortality	47.6	47.3	38.4	42.7	17.5	40.4	13.3	
	rate	-1	-2	-4	-3	47.3	40.4	43.3	
Life	e expectancy	65.6	66.6	68.6	67.4	66	68 1	67.2	
	at birth	-4	-3	-1	-2	00	00.1	07.2	

Table 3: Divisionwise Selected Health Infrastructure Facilities in Karnataka, 2010

Note: Figures in the Parenthesis are Ranks; Source: Computed from the data available from Karnataka at a Glance

Another indicator considered in the study is the number of beds available in the hospitals. Many diseases require a prolonged treatment. Thus, to have better and hygienic bed facilities also have an impact on the health of a patient. Karnataka has 169 beds per 10 lakhs population. In this indicator also, South Karnataka is in a good position than North Karnataka. In South Karnataka, there are 901 beds and in North Karnataka, there are only 775 beds per 10 lakhs population. The Mysore division, with 1196 beds per 10 lakhs population stands in the first position and the Bangalore 24 division with 737 beds for the same amount of population stands in the last position. In case of beds per 10 thousand Sq. Km. area, there are 2701 beds in the state, and the North region is in the lower position than the South. Mysore and Gulbarga are in the first and last positions respectively.

The objective of the public health expenditure is to enhance the health infrastructure facilities to improve the health condition of the people. Similar to the health infrastructure, health status is also unequally distributed among the districts. Life expectancy at birth (LEB) is an important indicator to measure the health status of the community. In fact UNDP uses this indicator for the construction of the human development index (HDI) for all countries as a proxy of the health status. However, if data on LEB is not available then the Infant Mortality Rate (IMR) is used for the measurement of the health status. LEB is 67.2 years in the Karnataka state. People of South Karnataka live 2 years more than those in North Karnataka. LEB of Bangalore division is 68.6 years, which is more than the divisions, followed by the Mysore division (67.4 years), Gulbarga division (66.6 years) and Belgaum division (65.5 years). On the other hand IMR in Karnataka is 43.3, which means, 43.3 kids die per 1000 infants. North Karnataka (47.5) has higher infant death than the South (40.4). The ranks of division of IMR are adverse to LEB. Belgaum division is in the first position followed by Gulbarga, Mysore and Bangalore divisions. In Tables 4 and 5, district-wise indicators on health infrastructure facilities and health status indicators are presented. Descriptions of these tables are given below.

Health Infrastructure Facilities Per Ten Lakhs Population

Among the districts that have higher number of district hospitals, except Kodagu and Kolar, the remaining districts viz. Gadag, Bellary, Dharwad are from North Karnataka. Except Tumkur, the remaining districts of lower order are from North Karnataka. They are Belgaum, Gulbarga, Raichur and Bagalkot.

Except Uttar Kannada, in the top order, the 4 districts in the Community Health Centres (CHCs) are from South Karnataka.

They are Kodagu, Hassan, Chitradurga and Chikkamagalur. In case of the lower order, the 4 districts, namely Bangalore rural, Bangalore urban, Davngere and Kodagu except Dharwad are from South Karnataka.

The Top 5 districts viz. Kodagu, Hassan, Chitradurga, Udupi and Chamarajanagar are from South Karnataka, which have a higher number of PHCs. Except Bangalore urban, the remaining 4 districts namely, Dharwad, Raichur, Gulbarga and Bellary are the districts which have a lower number of PHCs, and they are from North Karnataka.

Among the top 5 districts which have a higher number of beds, except Uttar Kannada, the remaining districts namely Kodagu, Davangere, Chikkaballapur and Mysore are from South Karnataka. Among the lower order 5 districts, along with Bangalore rural & urban from the South region, and the remaining three districts namely Bagalkot, Belgaum and Raichur are from the North Karnataka region.

Health Infrastructure Facilities per Ten Thousand Sq. Km. area

More number of district hospitals are placed in Dharwad and Bellary of North Karnataka followed by Davangere, Bangalore rural, Bangalore urban are from the South region. Among the 5 lower order districts, except Belgaum, Gulbarga, the remaining districts viz. Tumkur, Chitradurga and Hassan are from South Karnataka.

In case of CHCs all 5 higher order districts viz. Chikkaballapur, Bangalore rural, Bangalore urban, Hassan and Udupi are from South Karnataka. In the lower order, the 5 districts, except Bijapur and Dharwad, the remaining districts (Kolar, Chamarajanagar and Tumkur) are from South Karnataka.

More number of PHCs are situated in Bangalore rural, Bangalore urban, Chikkaballapur, Dakshina Kannada and Udupi, these all are from South Karnataka. Among the lower order districts except Kolar, the remaining districts viz. Bijapur, Koppal, Gulbarga and Uttar Kannada are from South Karnataka.

Higher number of beds (among top 5 districts) can be observed in the 4 districts of South Karnataka (Bangalore urban, Bangalore 26 rural, Chikkaballapur and Mysore), 1 district (Dharwad) in North Karnataka. Except Chamarajanagar of South Karnataka, the remaining districts namely Bagalkot, Bijapur, Gulbarga and Koppal are from North Karnataka.

Health Status

Excluding Belgaum, the remaining districts viz. Udupi, Dakshina Kannada, Shimoga, Bangalore urban are from South Karnataka in case of the top 5 districts in LEB. All the lower order 5 districts (Bagalkot, Dharwad, Haveri, Bijapur and Gadag) are from North Karnataka.

With regard to the IMR, the top five districts viz. Dharwad, Haveri, Bijapur, Gadag and Gulbarga are from North Karnataka. In the lower order, except, Belgaum, the remaining districts (Udupi, Dakshina Kannada, Shimoga, Bangalore urban and Bangalore rural) are from South Karnataka.

The analysis clearly shows that with respect to all the health infrastructure facilities, North Karnataka districts have remained lower, which has resulted in their poor health status. Different health indicators show different status of health condition. Hence considering all the indicators and constructing the index is a widely used method to analyse the overall condition/status of the health sector. Among the indicators, the Principle Composite Index (PCI) Weighted Indexing (WI), Relativity Index (RI) methods and many others have been used by the analysts. In the present study, the relativity index method and weighted index method have been used to construct the indices. They are presented below,

HII
$$=\frac{Xd}{Xs}$$
 Where, 'd' stands for district, 's' state, 'X' variable
Actual Value – Minimum Value

				Per	: 10 Lak	h Popula	ation	-				Per 10	thousand	sq KM	Area		
Region	Name	Distri otl Hosp	ct and her pitals	Community Health Centres		PHCs a Cent	PHCs and Sub Centres		Beds	Distri otl Hosp	ct and her pitals	Com Health	nunity Centres	PHCs and Sub Centres		Total Beds	
		Actual	Rank	Actual	Rank	Actual	Rank	Actual	Rank	Actual	Rank	Actual	Rank	Actual	Rank	Actual	Rank
	Bagalkot	0.5	25	6.3	11	143	23	586	28	2	24	18	14	411	23	1680	27
	Belgaum	0.2	29	5	21	144	22	602	27	1	28	18	15	511	17	2144	17
	Bellary	2.4	4	5.1	20	135	25	1065	9	7	5	15	18	407	24	3202	10
	Bidar	0.6	23	5.9	14	168	19	724	21	2	21	18	13	523	16	2258	14
	Bijapur	0.9	19	5.5	19	160	21	678	23	2	20	11	26	333	25	1407	28
-	Dharwad	2.2	5	1.6	28	114	28	1030	10	9	3	7	29	499	18	4496	5
Vort	Gadag	2.8	3	5.6	17	196	15	805	16	6	6	13	23	449	20	1842	24
~	Gulbarga	0.3	28	8	7	135	26	765	18	1	29	18	12	311	27	1763	26
	Haveri	0.6	21	7	9	227	11	716	22	2	18	23	7	738	10	2331	13
	Koppal	1.4	10	7.9	8	165	20	644	24	2	16	13	21	271	28	1059	29
	Raichur	0.5	26	4.7	24	129	27	637	25	2	22	16	17	448	21	2205	16
	Uttara																
	Kannada	1.4	11	9	3	138	24	1350	3	2	19	13	24	193	29	1885	22
	Bangalore	1.3	13	0.6	29	27	29	518	29	55	1	27	5	1178	3	22685	1
	Bangalore Bural	1	16	3	27	241	0	621	26	11	2	37	2	2542	1	6540	3
	Chamarajan	1	10	5	21	241	0	021	20	11	2	32	2	2343	1	0,049	5
	agar	1	17	5.9	15	297	5	1019	12	2	23	11	27	533	15	1829	25
	Chikkaballa																
	pura Chilencerte	0.8	20	5.6	18	191	16	756	19	8	4	53	1	1813	2	7160	2
	r r	1.8	6	8.8	5	372	2	1299	4	3	15	14	20	587	12	2052	20
	Chitradurga	0.6	22	9	4	216	13	941	14	1	26	18	16	428	22	1862	23
	Dakshina	0.0				210	15	711			20	10	10	.20		1002	23
uth	Kannada	1.4	9	4.8	23	239	9	964	13	6	8	21	9	1028	4	4148	6
So	Davanagere	1.5	8	4.6	25	202	14	1077	7	5	11	15	19	655	11	3483	9
	Hassan	0.6	24	11.8	2	307	4	1572	2	1	25	31	3	800	9	4097	7
	Kodagu	3.6	1	14.4	1	397	1	2176	1	5	12	20	11	536	14	2942	11
	Kolar	3.2	2	3.9	26	170	18	1112	6	6	9	7	28	319	26	2082	19
	M andy a	1.1	15	6.1	13	267	7	1067	8	4	13	22	8	974	6	3890	8
	Mysore	1.3	12	5.7	16	190	17	1186	5	6	7	27	6	908	7	5668	4
	Ramanagara	0.9	18	6.5	10	272	6	738	20	3	14	20	10	827	8	2248	15
	Shimoga	1.1	14	6.3	12	226	12	1029	11	2	17	13	22	468	19	2135	18
	Tumkur	0.4	27	4.8	22	228	10	776	17	1	27	12	25	577	13	1965	21
	Udupi	1.7	7	8.5	6	310	3	861	15	6	10	28	4	1014	5	2818	12
	North	1		5.9		149		775		2.5		15.6		395		2048	ĺ
IV	South	1.3		4.8		184		902		4.7		18.2		693		3393	
	Karnataka	1.1		5.3		169		847		4		17		540		2701	
	North	76		32		20		29		91		27		33		41	
C	South	63		50		34	l	37	l	171		50		62		109	
	Karnataka	67		3		80		349		10		9		489		3972	

source: Karnataka at a Glance

Status and Infrastructure of Health Sector

Maximum and minimum Values

Using the method mentioned above, the HII and HSI have been calculated and presented in the below mentioned table. The averages of HII and HSI show that North Karnataka stands lower than the average of the state and that of South Karnataka. The value of HII is 1.14 in South Karnataka whereas it is only 0.86 in North Karnataka. On the other side, the value of HSI in South is 1.02 and in North Karnataka it is 0.96. It is observed that there is a huge gap in HII between the Southern and the Northern districts, while in HSI, it is low.

Regional disparity is measured through coefficient of variation, which has been presented in the table. CV is high in HII (9%) than HSI (47%). Regional imbalances within the regions (North or South) show that South Karnataka has higher district disparities than the North Karnataka. Regional disparity is measured through coefficient of variation, which has been presented in the table. CV is high in HII (9%) than HSI (47%). Regional imbalances within the regions (North or South) show that South Karnataka has higher district disparities than the North Karnataka has higher district disparities than the North Karnataka.

Based on the Ranks of HII and HIS, the following three conclusions can be drawn: one, Bangalore Urban tops in HII and Dakshina Kannada district tops in HSI. Both these districts are from South Karnataka; two, Dharwad and Bagalkot stand last in positions, respectively with regard to the HII and HSI respectively. All the top 5 districts in HII are from South Karnataka viz. Bangalore Urban, Bangalore rural, Chikkaballapur, Kodagu and Udupi, whereas, all the bottom 5 districts are from North Karnataka viz. Bagalkot, Belgaum, Bijapur, Gulbarga and Raichur; and three, among the top 5 districts in HSI, except Belgaum, the remaining districts viz. Dakshina Kannada, Udupi, Shimoga and Bangalore urban are from South Karnataka.

		Н	II	HSI	
Region	District	Value	Rank	Value	Rank
	Bagalkot	0.76	25	0.89	25
	Belgaum	0.71	29	1.13	3
	Bellary	1.24	11	1.02	10
	Bidar	0.86	22	0.9	23
	Bijapur	0.74	27	0.89	28
rth	Dharwad	1.22	12	0.87	29
No	Gadag	1.22	13	0.89	24
	Gulbarga	0.74	28	0.89	27
	Haveri	1.03	17	0.89	26
	Koppal	0.85	23	0.91	22
	Raichur	0.75	26	0.95	17
	Uttara Kannada	0.96	20	0.94	18
	Bangalore	3.68	1	1.12	5
	Bangalore Rural	1.95	2	1.08	7
	Chamarajanagar	0.96	19	0.96	14
	Chikkaballapura	1.88	4	1.09	6
	Chikmagalur	1.3	10	0.92	20
	Chitradurga	0.94	21	1	12
	Dakshina				
	Kannada	1.39	8	1.14	1
uth	Davanagere	1.18	14	1.03	9
So	Hassan	1.45	7	0.96	15
	Kodagu	1.93	3	0.92	19
	Kolar	1.18	15	0.95	16
	Mandya	1.33	9	0.92	21
	Mysore	1.49	6	0.98	13
	Ramanagara	1.1	16	1.05	8
	Shimoga	0.98	18	1.12	4
	Tumkur	0.79	24	1.02	11
	Udupi	1.51	5	1.13	2
	North	0.86		0.92	
All	South	1.14		1.02	
	Karnataka	1		1	
	North	22.3		8	
C	South	45.2		7.6	
-	Karnataka	47.2		9	

Table 5: Districtwise Selected Health Status in Karnataka, 2010;

Source: Karnataka at a Glance

In addition to the construction of indices, another exercise has also been made to present the averages of HII and HSI through scatter diagram. For the analytical purpose the districts have been categorised into 4 groups namely,

I Best	High HIS and High HII
II Good (Lopsided HIS)	High HIS and Low HII
III Low Lopside HII	High HIS and High HII
IV Bad	High HIS and Low HII

Fig.1

In fig 1, it is observed that Bangalore urban, Bangalore rural, Chikkaballapur, Udupi, Bellary, Davangere Ramanagar and Dakshina Kannada are considered as the best, because, values of HII and HSI in these districts are higher than the average of state value.

Tumkur, Shimoga, Belgaum and Davangere are those districts whose performances are considered good because, even though they have lower health infrastructure, the health status of these districts is above the average of the state HSI value.

Mysore, Kodagu, Hassan, Dharwad, Gadag Mandya, Haveri and Kolar are in the lower (third) category, whereas, HII is above the state average but their HSI is lower than the state average. In such situation, planners and policy makers have to think what the problems are with service delivery, in the health sector.

In the last category, there are 8 districts. In this category, the districts are below the state average in both HII and HSI. Districts in this category are Gulbarga, Bagalkot, Koppal, Uttar Kannada, Raichur, Bidar, Bijapur and Chamarajanagar. Except Chamarajanagar, all are from North Karnataka.

The district categories especially in North Karnataka show the ignorance of the Government in providing the health facilities to the people.

		HII		HSI		
Region	District	Value	Rank	Value	Rank	
	Bagalkot	0.76	25	0.89	25	
	Belgaum	0.71	29	1.13	3	
	Bellary	1.24	11	1.02	10	
	Bidar	0.86	22	0.9	23	
	Bijapur	0.74	27	0.89	28	
	Dharwad	1.22	12	0.87	29	
	Gadag	1.22	13	0.89	24	
	Gulbarga	0.74	28	0.89	27	
	Haveri	1.03	17	0.89	26	
	Koppal	0.85	23	0.91	22	
rth	Raichur	0.75	26	0.95	17	
No	Uttara Kannada	0.96	20	0.94	18	
	Bangalore	3.68	1	1.12	5	
	Bangalore Rural	1.95	2	1.08	7	
	Chamarajanagar	0.96	19	0.96	14	
	Chikkaballapura	1.88	4	1.09	6	
	Chikmagalur	1.3	10	0.92	20	
	Chitradurga	0.94	21	1	12	
	Dakshina					
	Kannada	1.39	8	1.14	1	
	Davanagere	1.18	14	1.03	9	
	Hassan	1.45	7	0.96	15	
	Kodagu	1.93	3	0.92	19	
	Kolar	1.18	15	0.95	16	
	Mandya	1.33	9	0.92	21	
	Mysore	1.49	6	0.98	13	
	Ramanagara	1.1	16	1.05	8	
	Shimoga	0.98	18	1.12	4	
uth	Tumkur	0.79	24	1.02	11	
Sol	Udupi	1.51	5	1.13	2	
	North	0.86		0.92		
	South	1.14		1.02		
All	Karnataka	1		1		
	North	22.3		8		
	South	45.2		7.6		
CC	Karnataka	47.2		9		

Table 6: Districtwise Health Infrastructure (HII) and Health Status (HSI) Indices of Karnataka, 2010

Source: Karnataka at a Glance

Status and Infrastructure of Health Sector

Role of Government

In India, due to poor financial conditions, it is difficult to expect the people to spend a lot from their pockets on health. People with sound financial background can spend good amount of money on health. But the poor cannot spend much on health. Most of the poor people in India are from the village and they are daily wage labourers. Their employment is seasonal and due to disguised unemployment, they are underpaid. Hence most of their income is spent on food, clothes and other basic amenities. And many a times, they face acute scarcity for these things. Therefore, the Government expenditure is not only necessary but also indispensable or sine qua non. The Karnataka state Government has been implementing various policy/programmes to improve the health condition of the people. It has been allocating a huge amount of money through budget over a period of time. Information related to health expenditure in Karnataka has been presented in Table. 7 It shows total health expenditure and per capita health expenditure at current and constant prices (2004-05 prices), along with this, health expenditure as a share of total budgetary expenditure and as a share of NSDP (Net State Domestic Product).





Source: Computed from the data available from Karnataka at a Glance

Health expenditure of the state during 1990-91 at current prices is Rs 38,729 lakhs, which, increased to Rs 598058 lakhs, it means that there is a 15 times increase in the 20 years of time period, which is 12 times in per capita term. This impressive picture gets offset when we see these data in per capita real (2004-05 prices) prices. In per capita real term, health expenditure has increased only 3.6 times, i.e. per capita health expenditure at constant prices has increased from Rs. 215 in 1990-91 to Rs. 777 in 2009-10.

Observing the present health condition of Karnataka, this expenditure is significantly lower. On the other hand, health expenditure as a share of total expenditure is also lower. In the reference period, the health expenditure as a share of total expenditure is between 6 per cent and 11 per cent. In 1990-91 it was 7.8 per cent, which increased to 10.7 percent. In the following years, it started decreasing and reached 6.1 per cent during 2004-05, which is the lowest among the 20 years of the selected time period.

Further, in the latter years, it started increasing and reached 10.5 per cent in 2009-10. Health Expenditure as a share of NSDP is presented in the above mentioned table. It is also observed from the table that the health expenditure as a share of NSDP was 1.5 per cent, which increased to 1.9 per cent in 1990-00. (But it has not been maintained and decreased to 1.3 per cent in 2004-05). Further, it has shown an increasing trend and reached to 2 per cent.

Government expenditure has been categorised in capital and revenue accounts. It is a known fact that both the capital and revenue expenditure are important for the development of the sector. Capital expenditure plays a very important role because revenue expenditure is mostly devoted on the salary of the staff and the maintenance expenses, whereas, the capital expenditure is spent on creation of new assets like building equipments and so on. The Composition of capital and revenue health expenditure of the Karnataka state has been presented in Figure 2.

Vaar	Curre	nt Prices	Const	ant Prices	As share	As share of	
rear	Actual	Per Capita	Actual	Per capita	of NSDP	Total Expns	
1990-91	38729	87	96241	215	1.5	7.8	
1991-92	46484	102	100066	220	1.4	7.4	
1992-93	50062	109	101100	219	1.4	7.1	
1993-94	55578	118	103674	220	1.3	6.9	
1994-95	69793	145	117651	245	1.4	7.9	
1995-96	80914	165	123619	252	1.4	7.8	
1996-97	87668	176	125984	253	1.3	7.3	
1997-98	118544	235	162259	321	1.6	9.4	
1998-99	158574	310	202673	396	1.7	10.7	
1999-00	187354	362	233317	450	1.9	10.5	
2000-01	174872	333	205992	392	1.7	8.9	
2001-02	171827	326	200763	381	1.6	7.8	
2002-03	152100	285	174872	328	1.3	6.3	
2003-04	172591	320	187535	347	1.4	6.4	
2004-05	192637	352	192637	352	1.3	6.1	
2005-06	289755	530	272777	499	1.7	8.2	
2006-07	301532	544	267677	483	1.5	7.3	
2007-08	456758	817	383830	686	1.9	10	
2008-09	541233	959	422471	749	2	10.6	
2009-10	598058	1050	442130	777	2	10.5	
Growth Rate	14.36	12.94	7.97	6.63	1.45		

 Table 7: Health Expenditure in Karnataka from 1990-91 to 2009-10

Source: Various Issues of -Study on State Finances, RBI

It is observed that the revenue expenditure is very high compared to that of capital expenditure, which is a very common phenomenon because, in the health sector, creation of assets is important in general and maintenance in particular. It is also seen that the State's capital expenditure was very less i.e. Rs. 657 lakhss during 1990-91 (1.7 per cent) as against Rs. 37415 lakhss of revenue expenditure (98.3 per cent) during 1998-99.

This composition was 19.5 per cent and 79.5 per cent for capital and revenue respectively, further, capital expenditure decreased to 6.1 per cent during 2002-03, again started increasing in the later years and reached to, 35 per cent in 2009-10. It is observed that the capital expenditure in the recent years has increased significantly due to the implementation of various health programmes like National Rural Health Mission (NRHM), Health For All, Vajapayee Arogya



Shree and so on (please see figure 1 and appendix table 1 for further details).

Fig. 2: Trends of Capital and Revenue Expenditure on Health in Karnataka from 1990-91 to 2009-10 Source: Various Issues of Study on State Finances, RBI

Figure 2 shows the composition of health expenditure on different sectors. In the present study, the health expenditure includes the expenditure on 'medical and public health', 'family welfare', 'water supply and sanitation' and expenditure on 'nutrition'. Among these, the expenditure on 'medical and public health' has the highest share, which was 64 per cent in 1990-91 and decreased to 35 per cent in 2009-10. Expenditure on 'family welfare' was negligible i.e. less than 1 per cent, which increased to 12.8 per cent in 2001-02. Further, it started decreasing to reach 5 per cent of the total health expenditure to Rs. 29,696 lakhs.

Another sector in the health expenditure is 'water supply and sanitation'. Though this sector is not directly related to the health sector, it helps to improve the health condition of the people. Polluted water is the major source for most of the diseases. Availability of safe drinking water makes people stay away from illness. Clean environment is also necessary for the good health condition.



Fig. 3: Trends of Composition of Health Expenditure in Karnataka from 1990-91 to 2009-10 Source: Various Issues of Study on State Finances, RBI

Hence, spending on sanitation is also an important thing. In 1990-91, the expenditure on water supply and sanitation was Rs. 6,086 lakhs which was increased to Rs. 1,44,488 lakhs in 2009-10. The Share of this sector is between 16 and 30 per cent during the 20 years of the study period. In the year 1990-91, the share of spending on this sector was 10 per cent, which increased to 30 per cent in 2002-03 and started decreasing to reach 24 per cent in 2009-10. Further, nutrition should also be given importance, in the health sectors as it plays an important role in the development of the health condition of the community. A well nourished body would be protected from all diseases. The Expenditure on this sector was Rs. 7,684 lakhs in 1990-91, which was increased to Rs. 2,16,232 lakhs in 2009-10. The share of spending on this sector to the total health expenditure was 20 per cent in 1990-91, which was decreased to 6 per cent in 1993-94. The trend of spending on this sector started to increase afterwards and reached 35 per cent in 2009-10. Rapid spending on this sector has to be admired (please see figure 3 and appendix table 2).

Conclusions

Health is an important basic need. Healthy people are the real wealth of the nation. With regard to the health infrastructure and health status, though India has made significant improvements, it is comparatively lagging behind many developed and developing countries. Karnataka is closer to the average of India, in most of the health status and health facilities, but compared to the states like Kerala, it stands too low. The most striking problem related to the health infrastructure and health status arises out of the regional imbalance. This study shows that Gulbarga and Belgaum divisions of Karnataka show a poor status in health infrastructure and health status. Among these, the Gulbarga division (means Hyderabad Karnataka) lies in the lower position. It is well know that Hyderabad Karnataka is under developed in most of the sectors compared to the rest of the regions. Lower health infrastructure facilities in this region clearly indicate the negligence of the Government intervention/interest to develop basic infrastructure facilities in this region. For better health, health facilities should be improved. For better health facilities, public health expenditure is very important. At present, the Karnataka Government is spending very less amount of money on health that is 2 per cent of the NSDP, which has to be increased. Of this expenditure, the capital expenditure is increasing over the period of time very rapidly which is to be admired. In Karnataka, to improve the health facilities many programmes are being implemented, among them NRHM is important, which has to be implemented more meaningfully. The increasing of public expenditure alone cannot serve the purpose, unless it is properly used for delivering quality infrastructure and good service mechanisation.

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Government of Karnataka. Various issues of Karnataka at a glance

Appendix	Table	1:	Districtwise	Health	Number	of	Different	Health	Infrastructure	Facilities,
Population	and Ar	ea S	Sq. KMs, 2010).						

District	District	Community	PHCs	Total	Population	Area (Sq.	
	and other	Health	and Sub	Beds		Kms.)	
Pagalleot	Hospitals	Centres 12	Centres	1108	1800826	6504	
Balaaum	1	24	2/1	2976	1090020	12415	
Belgaum	1	24	080	28/0	4//8439	13415	
Bellary	6	13	343	2696	2532383	8419	
Bidar	1	10	285	1230	1700018	5448	
Bijapur	2	12	349	1474	2175102	10475	
Dharwad	4	3	211	1902	1846993	4230	
Gadag	3	6	209	858	1065235	4657	
Gulbarga	1	30	505	2860	3737877	16224	
Haveri	1	11	358	1131	1580506	4851	
Koppal	2	11	229	896	1391292	8458	
Raichur	1	9	249	1226	1924773	5559	
Uttara Kannada	2	13	199	1940	1436847	10291	
Bangalore	12	6	258	4968	9588910	2190	
Bangalore Rural	1	3	238	613	987257	936	
Chamarajanagar	1	6	303	1040	1020962	5685	
Chikkaballapura	1	7	240	948	1254377	1324	
Chikmagalur	2	10	423	1478	1137753	7201	
Chitradurga	1	15	359	1562	1660378	8388	
Dakshina Kannada	3	10	498	2009	2083625	4843	
Davanagere	3	9	394	2096	1946905	6018	
Hassan	1	21	545	2792	1776221	6814	
Kodagu	2	8	220	1207	554762	4102	
Kolar	5	6	262	1712	1540231	8223	
Mandya	2	11	483	1930	1808680	4961	
Mysore	4	17	569	3553	2994744	6269	
Ramanagara	1	7	294	799	1082739	3555	
Shimoga	2	11	396	1807	1755512	8465	
Tumkur	1	13	612	2082	2681449	10598	
Udupi	2	10	365	1014	1177908	3598	
North	25	154	3894	20197	26060291	98621	
South	44	170	6459	31610	35052413	93170	
Karnataka	69	324	10353	51807	61130704	191791	

Source: Karnataka at a Glance

Name	District	Community	PHCs and	Total	District	Community	PHCs	Total	Index	Index
Bagalkot	0.47	12	0.85	0.69	0.42	1.08	0.76	0.62	0.76	25
Belgaum	0.19	0.95	0.85	0.71	0.21	1.06	0.95	0.79	0.71	29
Bellary	21	0.97	0.8	1.26	1.98	0.91	0.75	1.19	1.24	11
Bidar	0.52	1.11	0.99	0.85	0.51	1.09	0.97	0.84	0.86	22
Bijapur	0.81	1.04	0.95	0.8	0.53	0.68	0.62	0.52	0.74	27
Dharwad	1.92	0.31	0.67	122	2.63	0.42	0.92	1.66	1.22	12
Gadag	25	1.06	1.16	0.95	1.79	0.76	0.83	0.68	1.22	13
Gulbarga	0.24	1.51	0.8	0.9	0.17	1.09	0.58	0.65	0.74	28
Haveri	0.56	1.31	1.34	0.84	0.57	1.34	1.37	0.86	1.03	17
Koppal	1.27	1.49	0.97	0.76	0.66	0.77	0.5	0.39	0.85	23
Raichur	0.46	0.88	0.76	0.75	0.5	0.%	0.83	0.82	0.75	26
Uttara Kannada	1.23	1.71	0.82	1.59	0.54	0.75	0.36	0.7	0.96	20
Bangalore	1.11	0.12	0.16	0.61	15.23	1.62	2.18	8.4	3.68	1
Bangalore Rural	0.9	0.57	1.42	0.73	2.97	1.9	4.71	2.42	1.95	2
Chamarajanagar	0.87	1.11	1.75	12	0.49	0.62	0.99	0.68	0.96	19
Chikkaballapura	0.71	1.05	1.13	0.89	21	3.13	3.36	265	1.88	4
Chikmagalur	1.56	1.66	2.2	1.53	0.77	0.82	1.09	0.76	1.3	10
Chitradurga	0.53	1.7	1.28	1.11	0.33	1.06	0.79	0.69	0.94	21
Dakshina Kannada	1.28	0.91	1.41	1.14	1.72	1.22	1.9	154	1.39	8
Davanagere	1.37	0.87	1.19	1.27	1.39	0.89	1.21	1.29	1.18	14
Hassan	0.5	2.23	1.81	1.85	0.41	1.82	1.48	1.52	1.45	7
Kodagu	3.19	2.72	2.34	2.57	1.36	1.15	0.99	1.09	1.93	3
Kolar	2.88	0.73	1	1.31	1.69	0.43	0.59	0.77	1.18	15
Mandya	0.98	1.15	1.58	1.26	1.12	1.31	1.8	1.44	1.33	9
Mysore	1.18	1.07	1.12	1.4	1.77	1.61	1.68	21	1.49	6
Ramanagara	0.82	1.22	1.6	0.87	0.78	1.17	1.53	0.83	1.1	16
Shimoga	1.01	1.18	1.33	1.21	0.66	0.77	0.87	0.79	0.98	18
Tumkur	0.33	0.91	1.35	0.92	0.26	0.73	1.07	0.73	0.79	24
Udupi	1.5	1.6	1.83	1.02	1.55	1.65	1.88	1.04	1.51	5
Karnataka	1	1	1	1	1	1	1	1	1	
North	0.85	1.11	0.88	0.91	0.7	0.92	0.73	0.76	0.86	
South	1.11	0.92	1.09	1.06	1.31	1.08	1.28	1.26	1.14	

Appendix Table 2: Districtwise Normalised Indicators on Health Infrastructure Facilities, 2010

Source: Karnataka at a Glance, 2011

		Actual		Composition				
Year	Capital	Revenue	Total	Capital	Revenue	Total		
1990-91	657	37415	38072	1.7	98.3	100		
1991-92	528	45428	45956	1.1	98.9	100		
1992-93	712	48638	49350	1.4	98.6	100		
1993-94	1025	53528	54553	1.9	98.1	100		
1994-95	1111	67571	68682	1.6	98.4	100		
1995-96	1692	77530	79222	2.1	97.9	100		
1996-97	1039	85590	86629	1.2	98.8	100		
1997-98	8369	101806	110175	7.6	92.4	100		
1998-99	25833	106908	132741	19.5	80.5	100		
1999-00	28090	131174	159264	17.6	82.4	100		
2000-01	21618	131636	153254	14.1	85.9	100		
2001-02	15221	141385	156606	9.7	90.3	100		
2002-03	8798	134504	143302	6.1	93.9	100		
2003-04	15200	142191	157391	9.7	90.3	100		
2004-05	23258	146121	169379	13.7	86.3	100		
2005-06	72778	144199	216977	33.5	66.5	100		
2006-07	71139	159254	230393	30.9	69.1	100		
2007-08	133333	190092	323425	41.2	58.8	100		
2008-09								
(RE)	147564	246105	393669	37.5	62.5	100		
2009-10 (BE)	155161	287736	442897	35	65	100		
Growth Rate	37	10	12					

Appendix Table 3: Districtwise Normalised Indicators on Health

		Actual		Composition				
Year	Capital	Capital Revenue		Capital	Revenue	Total		
1990-91	657	37415	38072	1.7	98.3	100		
1991-92	528	45428	45956	1.1	98.9	100		
1992-93	712	48638	49350	1.4	98.6	100		
1993-94	1025	53528	54553	1.9	98.1	100		
1994-95	1111	67571	68682	1.6	98.4	100		
1995-96	1692	77530	79222	2.1	97.9	100		
1996-97	1039	85590	86629	1.2	98.8	100		
1997-98	8369	101806	110175	7.6	92.4	100		
1998-99	25833	106908	132741	19.5	80.5	100		
1999-00	28090	131174	159264	17.6	82.4	100		
2000-01	21618	131636	153254	14.1	85.9	100		
2001-02	15221	141385	156606	9.7	90.3	100		
2002-03	8798	134504	143302	6.1	93.9	100		
2003-04	15200	142191	157391	9.7	90.3	100		
2004-05	23258	146121	169379	13.7	86.3	100		
2005-06	72778	144199	216977	33.5	66.5	100		
2006-07	71139	159254	230393	30.9	69.1	100		
2007-08	133333	190092	323425	41.2	58.8	100		
2008-09								
(RE)	147564	246105	393669	37.5	62.5	100		
2009-10								
(BE)	155161	287736	442897	35	65	100		
Growth								
Rate	37	10	12					

Appendix Table 4: Capital and Revenue Expenditure on Health in Karnataka from 1990-91 to 2009-10

Source: Various Issues of Study of State finances, RBI

	Actual					Composition					
	Medical	Family	Water	Nutrition	Health	Medical	Family	Water	Nutrition	Health	
Year	and	Welfare	Supply and			and Public	Welfare	Supply and			
	Public		Sanitation			Health		Sanitation			
	Health										
1990-91	24959	0.0002	6086	7684	38729	64	0	16	20	100	
1991-92	30065	0.0002	8100	8319	46484	65	0	17	18	100	
1992-93	36732	0.0002	9577	3753	50062	73	0	19	7	100	
1993-94	40149	0.0002	11856	3573	55578	72	0	21	6	100	
1994-95	46886	0.0002	18054	4853	69793	67	0	26	7	100	
1995-96	41880	9457	22108	7469	80914	52	11.7	27	9	100	
1996-97	45281	8268	25525	8594	87668	52	9.4	29	10	100	
1997-98	58009	12797	31675	16063	118544	49	10.8	27	14	100	
1998-99	70375	11506	43119	33574	158574	44	7.3	27	21	100	
1999-00	81553	16097	53402	36302	187354	44	8.6	29	19	100	
2000-01	83837	16696	40355	33984	174872	48	9.5	23	19	100	
2001-02	86524	22060	37244	25999	171827	50	12.8	22	15	100	
2002-03	83732	16680	34042	17646	152100	55	11	22	12	100	
2003-04	81415	18155	45000	28021	172591	47	10.5	26	16	100	
2004-05	86673	17718	52253	35993	192637	45	9.2	27	19	100	
2005-06	101175	13444	86815	88321	289755	35	4.6	30	30	100	
2006-07	117899	17062	74298	92273	301532	39	5.7	25	31	100	
2007-08	162593	20625	115470	158070	456758	36	4.5	25	35	100	
2008-09	202174	27799	138049	173211	541233	37	5.1	26	32	100	
(RE)											
2009-10	207642	29696	144488	216232	598058	35	5	24	36	100	
(BE)											
Growth	10.3	187.2	16.1	22.3	14.4						
кате	1				1						

Appendix Table 5: Composition of Health Expenditure of Karnataka from 1990-91 to 2009-10

Source: Various Issues of Study of State finances, RBI