

# District Wise Comparative Analysis of Health Facilities in Chhattisgarh State

Firoj Kumar Sonwani

Asst. Professor Govt. R.N.M. College Bhatgaon, Balodabazar, Chhattisgarh, India

---

**Abstract:** Our review of the literature revealed that two types of health status measures, which we classify as direct and indirect, appear to meet the criteria stated above. Whereas health status is measured in terms of the respondents' functional capacity, illness level, or perceived level of health in the direct measures, health status is inferred from the level of use of health service or expenditures for care in the indirect measures. This article is based on indirect measures, e.g. Availability of government provided health services in per lakh population. Like District Hospitals, Civil Hospitals, Community Health Centres (CHCs), Primary Health Centres (PHCs), Number of working Doctors & Nurses, Number of Doctors & Nurses in per lakh population, Number of Health Centres & beds in per lakh population and Life Expectancy Rate. This article contained comparative analysis of health status among 16 districts of Chhattisgarh state using of availability of district wise health facility indicators. Without good health convenience we cannot get better health status of any country, State or any particular area. The health status of Kanker district is best and Durg district is most poor among the 16 districts of Chhattisgarh state in health facilities. But in district wise life expectancy rate, Durg district rate is better than other districts.

**Keywords:** Health status of Chhattisgarh state, District wise health status of Chhattisgarh, PHCs, CHCs, Life expectancy of Chhattisgarh state.

---

## I. INTRODUCTION

Our review of the literature revealed that two types of health status measures, which we classify as direct and indirect, appear to meet the criteria stated above. Whereas health status is measured in terms of the respondents' functional capacity, illness level, or perceived level of health in the direct measures, health status is inferred from the level of use of health service like Availability of District Hospitals, Civil Hospitals, Community Health Centres (CHCs), Primary Health Centres (PHCs), Working numbers of Doctors & Nurses, Number of Doctors & Nurses in per lakh population, Number of Health Centres & beds in per lakh population and Life Expectancy Rate. In this article all these are stand as measurement indicators of health status.

Health is defined by the World Health Organisation (WHO) as "a state of complete physical, mental, and social well-being and not merely absence of disease or infirmity". This definition was accepted by all the signatories to the Alma-Ata Declaration on health adopted by the Thirty-first World Health Assembly in 1978. This declaration gave the call of 'Health for All by 2000 AD' and accepted that primary health care was a key to attaining this goal. The purpose of this definition was to bring the positive concept of general well-being into focus rather than a negative definition of absence of disease.

Health is a fundamental human right, emphasised the Alma-Ata Declaration of 1978. Since the Alma-Ata conference on health, which focused on equitable and cost-effective primary health care, health has become an important national concern in most countries. Especially, in the developing countries, where health status of large sections of population is still low and population growth rates are high, health sector is very important. Since the 1960s, the social development movement and from the beginning of the 1990s, human development reports of the United Nations Development Programme (UNDP) have emphasised improvement in the health status of the population as one of the important goals of development.

In developing countries or states, there are a number of factors that affect the people's health status. There, are demand side factors such as income, as-sets, social practices as a result of ethnicity and religion, lifestyle, and supply side factors such as the health care system. Availability of government health conveniences, like number of doctors, nurses, hospitals in any particular area. If better health facilities are available in any area, definitely the people of that area can maintain their health better and improve health status of their place. In developing states, government support is very important for improving to public health status. In Chhattisgarh around 42 percent people are under poverty line, poor people cannot afford private health care fee, so government provided health facilities are necessary for poor citizens to maintain their own health. Improvement in the health status is considered a by-product of economic growth and of increase in per capita income. Historically health status has improved with industrialisation and economic growth. Thus, the population in the developed economies enjoys better health status than developing economies.

## II. MATERIALS AND METHODS

This article is based on unit-3 of my Ph.-D. Thesis. This unit is comparative study to available of government provided health facility in per lakh population among 16 districts of Chhattisgarh state since 2001 to 2008. The government health conveniences like District Hospital, Civil Hospital, Community Health Centres (CHCs), Primary Health Centres (PHCs), Working of Doctor & Nurses in Per lakh Population, Number of Beds in Per lakh Population. In this article also present health status of 16 districts by Life Expectancy Rate. All health indicators are explained by percentage, average and ranking method. During study the Chhattisgarh state has divided in 16 districts. Now it has 27 districts. This article is based on secondary data. The secondary data have collected to National Family Health Survey (N.F.H.S.) I,II,III, Registration Health Survey, Sample Registration System, World Development Report-2008, Economic Survey -2005-06, Census-2001, State wise Published budget document, Chhattisgarh State Economic Survey Report-2008-09 and published data of Directorate Health Services (D.H.S.), Chhattisgarh, Raipur 2009.

## III. FINDINGS

Having analysed the Chhattisgarh government provided health facilities of districts. According to result the Kanker districts health status is best and Durg districts health status is poor among the 16 district of Chhattisgarh state. But in district wise life expectancy rate, Durg district rate is good than other districts. Overall in Chhattisgarh state the government health facility is satisfactory but lake of better maintenance to providing health facility, it not getting fully benefit of peoples. In short people health is good own risk and weight of money. In this situation I can say that the goal of health for all will not achieve soon in Chhattisgarh state.

**Table – 1: Health Infrastructure of Chhattisgarh State**

S.No.	Particulars	Required	Imposition	Shortfall
1.	Sub-Centre	4164	4741	-
2.	Primary Health Centre	659	721	-
3.	Community Health Centre	164	136	28
4.	Multipurpose worker (Females / ANM at Sub centre & PHCs)	5462	4850	612
5.	Health worker (Male) / MPW(M) at sub centre	4741	2514	2227
6.	Health Assistant (Female)/ LHV at PHCs	721	749	-
7.	Health Assistant (Male) at PHCs	721	114	607
8.	Doctor at PHCs	721	862	-
9.	Physicians at CHCs	136	6	130
10.	Specialists at CHCs	544	107	437

11.	Radiographers	136	108	28
12.	Pharmacist	857	791	66
13.	Laboratory Technicians	857	474	383
14.	Nurse/Midwife	1673	639	1034

Source: RHS Bulletin 2008

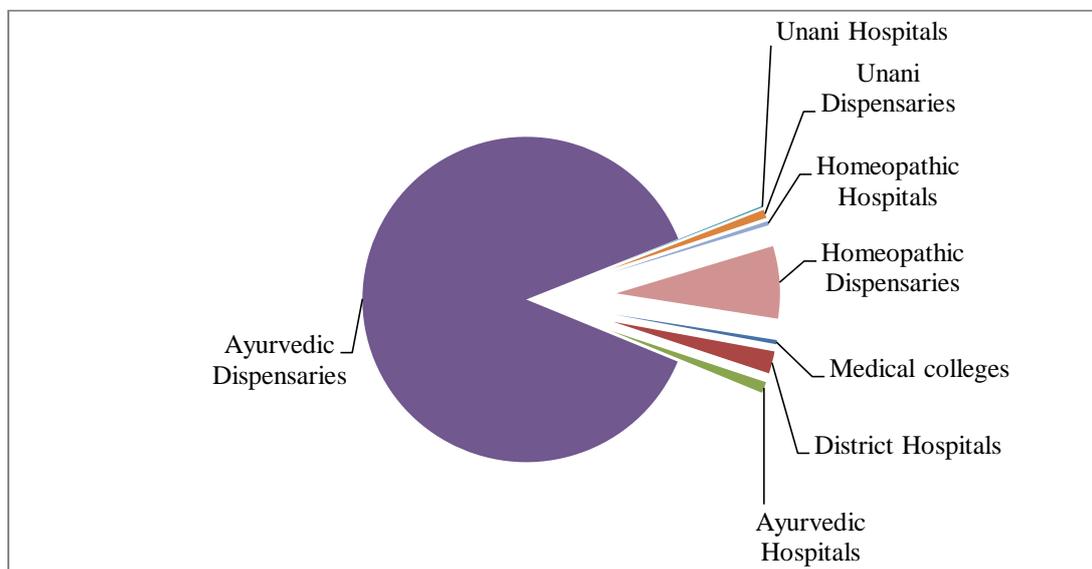
**Table-2: The Other Health Institution in Chhattisgarh State**

S.No.	Health Institution	Number
1.	Medical colleges	3
2.	District Hospitals	16
3.	Ayurvedic Hospitals	8
4.	Ayurvedic Dispensaries	634
5.	Unani Hospitals	1
6.	Unani Dispensaries	6
7.	Homeopathic Hospitals	3
8.	Homeopathic Dispensaries	52

Source: RHS Bulletin 2008

As above the tables show Health Infrastructure with Health Institution in Chhattisgarh State during since 2008-09. According to table-1, position number of Sub-centres, Primary Health Centres, Health Assistants (Female) & Doctors at PHCs are less than requirement but Community Health Centres, ANMs, Health workers (Male), Health Assistants (Male), Physicians, Specialist, Radiographer, Pharmacists, and Laboratory Technicians & Nurses are higher than requirement and according to table-2 available institutions are Medical Colleges -3, District Hospitals – 16, Ayurvedic Hospitals – 8, Ayurvedic Dispensaries – 634, Unani Hospital – 1, Unani Dispensaries – 6, Homeopathic Hospitals – 3, Homeopathic Dispensaries-52 in Chhattisgarh state.

**Chart- A: Size of health Institutions in Chhattisgarh State**



Source: As given in Table – 2

**Table – 3: District wise Availability of Doctors & Nurses in Chhattisgarh State**

S.No.	District	Sanctioned Doctor	Working Doctor	Sanctioned Nurses	Working Nurses
1.	Bastar	224	80	546	486
2.	Bilaspur	286	170	605	447
3.	Dantewada	115	25	393	270
4.	Dhamtari	102	36	253	236
5.	Durg	297	151	716	593
6.	Janjgir	162	58	405	302
7.	Jaspur	159	44	365	295
8.	Kanker	146	48	341	296
9.	Kabirdham	101	36	235	190
10.	Korba	204	88	334	227
11.	Koria	134	32	228	175
12.	Mahasamund	121	33	325	287
13.	Rajnandgaon	183	57	481	397
14.	Raigarh	213	90	499	449
15.	Raipur	324	168	850	757
16.	Sarguja	363	109	919	826
Total		3134	1225	7495	6133

Sources: D.H.S. Raipur 2009 (Directorate Health Services) Chhattisgarh, Raipur

**Table – 4: District wise Availability of Doctors & Nurses in Chhattisgarh State**

S.No.	District	% of working Doctor	Rank	% of working Nurses	Rank	Average Rank	District Rank
1.	Bastar	35.72	7	89.02	5	6.5	4
2.	Bilaspur	59.45	1	73.89	14	7.5	5
3.	Dantewada	21.74	16	68.71	15	15.5	11
4.	Dhamtari	35.30	9	93.29	1	5.0	3
5.	Durg	50.85	3	82.29	10	6.5	4
6.	Janjgir	35.82	6	74.57	13	9.5	7
7.	Jaspur	27.68	13	88.83	6	9.5	7
8.	Kanker	32.88	10	86.80	8	9.0	6
9.	Kabirdham	35.65	8	80.85	11	9.5	7
10.	Korba	43.14	4	67.97	16	10.0	8
11.	Koria	23.89	15	76.76	12	13.5	10

12.	Mahasamund	27.28	14	88.31	7	10.5	9
13.	Rajnandgaon	31.15	11	82.54	9	10.5	9
14.	Raigarh	42.26	5	89.98	2	3.5	2
15.	Raipur	51.86	2	89.06	4	3.0	1
16.	Sarguja	30.03	12	89.89	3	7.5	5
Total		39.09		81.83			

Sources: As given table-3

As above in table 3 & 4 show percentage of working doctors and nurses (Only regular) in 16 districts of Chhattisgarh state. District wise working doctor and nurse percent is based on total sanction post during study period (2008-09). In table-4 has districts ranked according to working doctor and nurse percent by using ranking method. According to working doctor ranks among 16 districts, in Bilaspur district rank is 1<sup>st</sup> and Dantawada district rank is last 16<sup>th</sup>, and according to nurse ranks, in Damtari district rank is 1<sup>st</sup> and Korba district rank is last 16<sup>th</sup>. If we will see combine rank of working doctor and nurse among above districts, the Raipur district rank is 1<sup>st</sup> and Dantewada district rank is last 16<sup>th</sup>. If we will see overall in 16 districts of Chhattisgarh state that only 39.09 percent doctor and 81.83 percent nurse are working against sanction post.

**Table- 5: District wise working Doctor and Nurse in Per Lakh Population**

S.No.	Districts	Population (In Lakh)	Working Doctors	No. of Doctors in Per lakh Population	Rank	Working Nurses	No. of Nurses in Per Lakh Population	Rank
1.	Bastar	1306673	80	6.13	6	486	37.20	5
2.	Bilaspur	1998335	170	8.51	2	447	22.37	15
3.	Dantewada	719487	25	3.48	16	270	37.53	4
4.	Dhamtari	706591	36	5.10	12	236	33.40	7
5.	Durg	2810436	151	5.38	11	593	21.10	16
6.	Janjgir	1317431	58	4.41	14	302	22.93	13
7.	Jaspur	743160	44	5.93	7	295	39.70	3
8.	Kanker	650934	48	7.38	3	296	45.48	1
9.	Kabirdham	584552	36	6.16	5	190	32.51	9
10.	Korba	1011823	88	8.70	1	227	22.44	14
11.	Koria	586327	32	5.46	10	175	29.85	11
12.	Mahasamund	860257	33	3.84	15	287	33.37	8
13.	Rajnandgaon	1283224	57	4.45	13	397	30.94	10
14.	Raigarh	1265529	90	7.12	4	449	35.48	6
15.	Raipur	3016930	168	5.57	8	757	25.10	12
16.	Sarguja	1972094	109	5.53	9	826	41.89	2
Total		20833803	1225	5.88		6133	29.44	

Source: Census 2001, D.H.S. Raipur 2009

In table -5 has projected of district wise availability of doctors and nurses in per lakh population also its have ranking according to availability. In Korba district 8.70 doctors available in per lakh population than other districts. So this district got 1<sup>st</sup> rank, and in the Dantewada district only 3.48 doctor available in per lakh population. 3.48 is very short among all other district so Dantewada district got last 16<sup>th</sup> rank. Likewise if we availability of nurses in per lakh population that we will get in Kanker district 45.48 nurses available in per lakh population, its high number to other district so this district got 1<sup>st</sup> rank and Durg district only 21.10 nurse available in per lakh population. This is short number than other so this district got last 16<sup>th</sup> rank. In Tribal Districts like Kanker, Bastar, Sarguja and Dantewada are some better than non tribal districts in availability of nurses. In over all Chhattisgarh state 5.88 doctors and 29.44 nurses available in per lakh population.

**Table- 6: District wise No. of Health Centres (CHCs+PHCs) and Beds in Per Lakh Population**

S.No.	Districts	Population (In Lakh)	Total Health Centre (PHCs+ CHCs)	No. of Health Centre in Per lakh Populatio n	Rank	Total Beds in PHCs & CHCs	Working Nurses	No. of Beds in Per Lakh Population	Rank
1.	Bastar	1306673	66	5.06	3	605	486	46.31	4
2.	Bilaspur	1998335	84	4.21	8	670	447	33.53	10
3.	Dantewada	719487	30	4.17	9	300	270	41.70	7
4.	Dhamtari	706591	26	3.68	13	230	236	32.56	12
5.	Durg	2810436	86	3.07	15	780	593	27.76	16
6.	Janjgir	1317431	48	3.65	14	440	302	33.40	11
7.	Jaspur	743160	40	5.39	2	400	295	53.83	2
8.	Kanker	650934	36	5.54	1	380	296	58.38	1
9.	Kabirdham	584552	28	4.79	6	265	190	45.34	5
10.	Korba	1011823	41	4.06	10	305	227	30.15	14
11.	Koria	586327	29	4.95	4	245	175	41.79	6
12.	Mahasamund	860257	32	3.72	12	260	287	30.23	13
13.	Rajnandgaon	1283224	50	3.90	11	450	397	35.07	9
14.	Raigarh	1265529	59	4.67	7	495	449	39.12	8
15.	Raipur	3016930	83	2.76	16	865	757	28.68	15
16.	Sarguja	1972094	97	4.92	5	960	826	48.68	3
Total		20833803	835	4.01		7650	6133	36.72	

Source: Census 2001, D.H.S. Raipur 2009

In table-6 has presented district wise availability of total government health centres (PHCs + CHCs) and beds in per lakh population also its have ranking according to availability. In Kanker district, highest 5.54 health centres available in per lakh population than other districts. So this district got 1<sup>st</sup> rank and in the Raipur district only 2.76 health centres available in per lakh population. 2.67 is very short among all other district so Raipur district got last 16<sup>th</sup> rank. Likewise if we will see number of Beds availability in per lakh population that we will get in Kanker district highest 58.38 beds available in per lakh population, its high number to other district so this district got 1<sup>st</sup> rank and Durg district only 27.76 beds available in per lakh population. This is short number than other so this district got last 16<sup>th</sup> rank. In Tribal Districts like Kanker, Bastar, Sarguja and Dantewada availability of health centres and beds are some better than non tribal districts. In over all Chhattisgarh state only 4.01 health centres and 36.72 beds available in per lakh population.

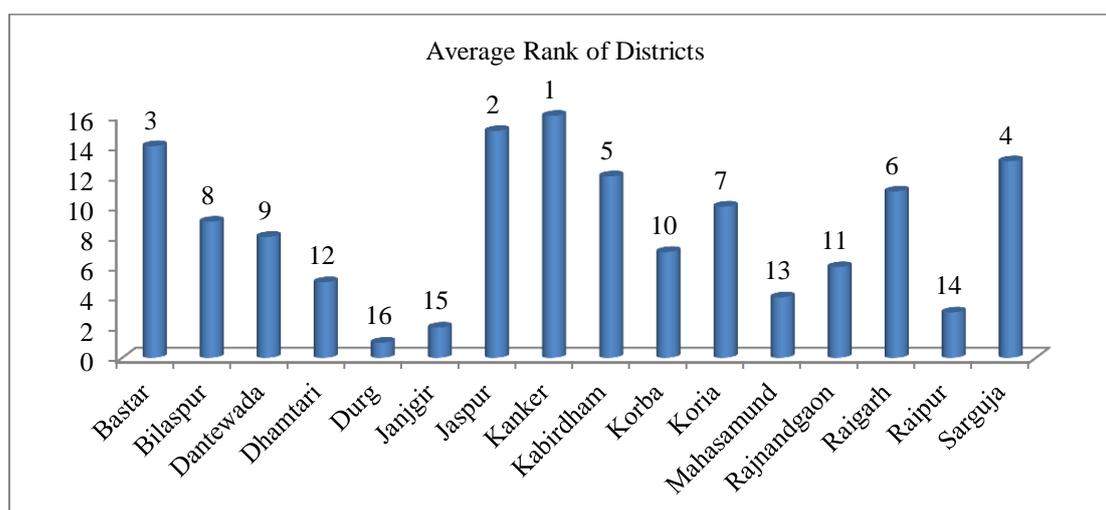
Table- 7: Average Rank of Districts

S.No.	Districts	Rank of No. of Doctor in Per lakh Population	Rank of No. of Nurse in Per lakh Population	Rank of No. of Health Centre in Per lakh Population	Rank of No. of Beds in Per lakh Population	Average of Total Ranks	District Rank
1.	Bastar	6	5	3	4	4.50	3
2.	Bilaspur	2	15	8	10	8.75	8
3.	Dantewada	16	4	9	7	9.00	9
4.	Dhamtari	12	7	13	12	11.00	12
5.	Durg	11	16	15	16	14.50	16
6.	Janjgir	14	13	14	11	13.00	15
7.	Jaspur	7	3	2	2	3.50	2
8.	Kanker	3	1	1	1	1.50	1
9.	Kabirdham	5	9	6	5	5.75	5
10.	Korba	1	14	10	14	9.75	10
11.	Koria	10	11	4	6	7.75	7
12.	Mahasamund	15	8	12	13	12.00	13
13.	Rajnandgaon	13	10	11	9	10.75	11
14.	Raigarh	4	6	7	8	6.25	6
15.	Raipur	8	12	16	15	12.75	14
16.	Sarguja	9	2	5	3	4.75	4

Source: As given in Table – 5 & 6

In table- 7 has presented average ranks of district wise ranks to doctors, nurses, health centres and beds in per lakh population as given table-5 & 6. This is district wise final rank that rank show actual health status to all districts of chhattisgarh. According to final rank 1<sup>st</sup> rank has got to Kanker district because in Kanker district all above health facility is better than other 15 districts. Jaspur district rank is 2<sup>nd</sup>, 3<sup>rd</sup> rank of Bastar district, Sarguja district got 4<sup>th</sup> rank, 5<sup>th</sup> rank of Kabirdham district, to Raigarh district rank is 6<sup>th</sup>, Koria district rank is 7<sup>th</sup>. Likewise Bilaspur district rank is 8<sup>th</sup>, Dantewada district rank is 9<sup>th</sup>, Korba District rank is 10<sup>th</sup>, Rajnangaon District rank is 11<sup>th</sup>, Dhamtari district rank is 12<sup>th</sup>, Mahasamund district rank is 13<sup>th</sup>, Raipur District has got 14<sup>th</sup> rank, Janjgir district has got 15<sup>th</sup> rank and last 16<sup>th</sup> rank goes to Durg district. According to final ranking all tribal districts health status is better than non tribal districts in Chhattisgarh state.

Chart-2: Average Rank of Districts



Source: As given in Table – 7

**Table-8: District wise Life Expectancy Age of Chhattisgarh State**

S.No.	Districts	Female	Male	Average Age	District Rank
1.	Bastar	63	61	62	3
2.	Bilaspur	62	61	61.5	4
3.	Dantewada	63	61	62	3
4.	Dhamtari	60	60	60	6
5.	Durg	65	63	64	1
6.	Janjgir	62	60	61	5
7.	Jaspur	62	60	61	5
8.	Kanker	63	61	62	3
9.	Kabirdham	60	57	58.5	7
10.	Korba	62	60	61	5
11.	Koria	64	63	63.5	2
12.	Mahasamund	60	60	60	6
13.	Rajnandgaon	60	57	58.5	7
14.	Raigarh	62	60	61	5
15.	Raipur	60	60	60	6
16.	Sarguja	64	63	63.5	2
Chhattisgarh		62	60.44	61.22	

Source: Chhattisgarh a State in Born 1998, Census 2001

As above in table-8 show district wise (Male and Female) life expectancy age of Chhattisgarh state. After average life expectancy age (Male and Female) has ranked of all districts, according to average life expectancy value. According to district ranking value, Durg districts average life expectancy age is 64 year. This value is higher than other district, due to Durg district got 1<sup>st</sup> rank. It's mean Durg districts people live more year than other districts people. Koria and Sarguja districts rank is 2<sup>nd</sup>. Bastar, Dantewada and Kanker district rank is 3<sup>rd</sup>. Bilaspur district got 4<sup>th</sup> rank. Janjgir, Jaspur, Korba and Raigarh district got 5<sup>th</sup> rank. Dhamtari, Mahasamund and Raipur districts rank is 6<sup>th</sup>. Rajnandgaons people life expectancy age is 58.5 year, its low value than other districts, so Rajnandgaon district rank is last 7<sup>th</sup>. Over all Chhattisgarh state life expectancy age is 62 (Female) and 60.44 (male) years and average age (Male & female) is 61.22 year.

#### IV. CONCLUSION

We can conclude to health status of Chhattisgarh state by district wise government provide health facilities data. Conclusion of this article that almost all tribal districts like Bastar, Dantawada, Jaspur, Kanker, Koria, Raigarh, Sarguja are better position in government health facilities than non tribal districts like Raipur, Durg, Bilaspur, Dhamtari. Its one can be basic reason in non tribal districts have numbers of private health facilities than tribal districts so government consideration in tribal districts for providing health facilities in tribal districts But I can't say that all these facilities are sufficient for good health its only able to peoples alive not for better health status. The government provided 50 percent health facilities are in use and 50 percent are not working due to lake of maintenance. It is main fault of all government sectors. The government should have considered in this point.

## REFERENCES

- [1] Budget Govt. of India 2008-09
- [2] Budget Govt. of Chhattisgarh 2008-09
- [3] Census Government of India 2001
- [4] Chhattisgarh a State in Born 1998
- [5] D.H.S. Raipur 2009 (Directorate Health Services, Chhattisgarh, Raipur)
- [6] Economic survey, Government of India 2005-06
- [7] Economic survey, Government of Chhattisgarh 2008-09
- [8] National health accounts 2004-05
- [9] NFHS I-1992-93, II-1998-99, III-2004-05
- [10] Registration health survey (RHS) 2008-09
- [11] R.B.I. Bulletin 2008-09
- [12] Sample Registration System 2008
- [13] World development report 2008
- [14] Bharadwaj, J.L.(1996), "Health Status in India at Global Prospectus: An Economic Analysis" Nava Arthiki, Vol. 7, No. 2, 1996, P. 60-65
- [15] Mahadevia, Darshin (2000), "Health for all in Gujarat Is it achievable?", Economic & Political Weekly, Vol. 35, No. 35/36, PP. 3193-3197+3199-3204
- [16] Sonwani, Firoj Kumar (2010), "A Study of Health Status of Chhattisgarh State" Ph.-D. Thesis, Pt. RSU Raipur Chhattisgarh
- [17] Thomus, William J., Lichtensten, Rechard (1986), "Including health status in medicare's adjusted average per capita cost capitation formula", Medicare, Vol. 24, No.3, PP.259-275