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Inter State disparities in public health expenditure and health status in India

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Abstract

Health is a crucial input of human resource development and consequent economic growth. Investment in health, therefore, is an important source of productivity, growth and quality of life. Health is a state subject in India and therefore analysis of public health expenditure by States assumes greater significance. Adequate and efficient public health sending, health infrastructure, availability of and access to improved health care services are essential in improving health status. In this context the present paper seeks to examine the disparities in public health expenditure, health infrastructure and health status among 15 major states in India.

Key Words: *Inter-State Disparities, Public Expenditure, Health Infrastructure, Health Status*

1. Introduction

Health is a crucial input of human resource development and consequent economic growth. Investment in health care is a necessary social investment without which the large mass of working classes cannot realize good health and contribute to the economy. Investment in health, therefore, is an important source of productivity, growth and quality of life. The Constitution of India lays down that "the state shall regard the raising of the level of nutrition and the standard of living of its people and the improvement of public health as among its primary duties". But health sector has been accorded very low priority in terms of allocation of resources in India which is less than 1 per cent of GDP. It has further witnessed decline during the post reform period. The meagre resource allocation to health sector has adversely affected access, availability, and quality of health services.

In India health is the responsibility of State governments and therefore the budget allocations of each State include the allocation to health sector programmes. Besides this, State governments also receive support from central government through central sponsored programmes and various national programmes. Health development programmes are integrated with family welfare and nutrition programmes for vulnerable groups-children, pregnant women, and nursing mothers for achieving an acceptable standard of good health amongst the general population of the state.

Micheal and Ramu examined the role of public health spending on promoting health status in Ghana and concluded that health spending has contributed significantly to the improved health conditions achieved between 1990 and 2012 in Ghana. The results from Newey-West estimator suggest that raising public expenditure on health care are very crucial in promoting health status. The study made by Das revealed that there is a significant association between health expenditure and health infrastructure and when health expenditure is adequate, sound infrastructure is created and when there is sound infrastructure, health investment is discharged to enhance the quality of existing health care services. Ravi Duggal pointed out that health budgets constitute a critical source for health equity in any society. If health indicators show gross inequities then it is evident that public investment in health is also grossly inadequate. The prime cause of underdevelopment of health and health care is inadequate allocations to health in government budgets.

Adequate and efficient health spending, health infrastructure, availability of and access to improved health care services are essential in improving health status. In this context the present paper seeks to examine the disparities in public health expenditure, health infrastructure and health status among 15 major states in India.

2. Objectives

- To understand the inter-state variation in terms of health expenditure.
- To know the inter-state variation in terms of health infrastructure.
- To examine the inter-state variation in health status

Hypothesis

- There is no significant relationship between public expenditure on health and health status in India.

3. Nature and Sources of Data

Secondary data form the basis of this study. The data were collected from State Finances published by RBI, Economic Survey published by Finance Ministry of India and National Health Profile published by Ministry of Health and Family Welfare, Government of India.

4. Methodology

Health expenditure devoted per head of population was calculated for inter-state comparison since every state is different in geographical size and is endowed with different levels of population. Simple percentages have been worked out to know the share of health expenditure to aggregate expenditure and Per capita Net State Domestic Product. Mean and coefficient of variation have been calculated to examine the relative position of fifteen major states and to estimate the inter-state differentials.

5. Results and Discussion

Inter-State Disparities in Public Health Expenditure

Public expenditure on health is a crucial factor in determining the health status of the people in a country with higher incidence of poverty. Medical and Public Health is one of the major heads among social and community services. It is a state subject and the primary responsibility of providing health care is with state governments and therefore analysis of public health expenditure by States assumes greater significance. It is clear from the table that when compared with 2014-15, the per capita government spending on health has increased in all the states in the year 2016-17, but in different degrees.

Table 1: Public Expenditure on Health: Inter-State Variation

STATES	Per Capita Expenditure			% to Aggregate Expenditure			% to PNSDP		
	2014-15	2015-16	2016-17	2014-15	2015-16	2016-17	2014-15	2015-16	2016-17
Andhra Pradesh	637.16	552.73	707.02	4.10	4.40	4.70	0.68	0.51	0.58
Assam	601.65	1374.12	1231.04	4.20	6.10	5.30	1.10	2.25	1.84
Bihar	326.36	440.48	673.15	3.80	3.70	5.30	1.04	1.29	1.82
Gujarat	1029.06	1187.91	1296.63	5.50	5.60	5.40	0.83	0.86	0.86
Haryana	840.80	1056.23	1425.52	4.00	3.30	4.30	0.57	0.65	0.79
Karnataka	945.41	1091.23	1064.45	4.50	4.80	4.10	0.71	0.75	0.67
Kerala	1216.11	1464.16	1594.30	5.30	5.60	5.10	0.87	0.94	0.93
Madhya Pradesh	628.42	712.64	918.55	4.30	4.00	4.40	1.21	1.27	1.27
Maharasthra	766.42	1013.66	872.16	4.30	4.90	3.90	0.61	0.76	0.61
Odisha	753.91	800.13	1108.08	4.90	4.60	5.00	1.27	1.23	1.47
Punjab	827.72	1089.12	1131.56	4.40	5.10	4.90	0.79	0.95	0.91
Rajasthan	907.13	1143.84	1307.42	5.60	4.60	5.60	1.30	1.49	1.56
Tamil Nadu	994.92	1095.58	1143.97	4.70	4.70	4.50	0.76	0.76	0.73
Uttar Pradesh	568.20	733.26	877.47	5.10	4.80	5.60	1.41	1.67	1.81
West Bengal	688.17	762.86	767.07	5.20	4.90	4.50	NA	NA	NA
Mean	**782.10**	**967.90**	**1074.56**	**4.66**	**4.74**	**4.84**	**0.94**	**1.10**	**1.13**
C.V(%)	**27.30**	**29.10**	**24.30**	**11.88**	**14.79**	**10.88**	**28.51**	**41.43**	**40.90**

Source: Per Capita Expenditure & % to Aggregate Expenditure: Calculated from State Finances Data, RBI ; % to PNSDP : Calculated from Economic Survey Data, Finance Ministry

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Less than 5 percent of the aggregate expenditure went for health services in majority of the states. Similarly, less than 1 percent of the state income was allotted for health services in most of the states. It is not only dismally low but most of the expenditure is on staff salaries leaving little or nothing for facilities, drugs and other consumables. More over inter-state disparity among the 15 states is high in terms of ratio of per capita expenditure on public health to per capita net state domestic product.

Inter-State Disparities in Health Infrastructure

The health infrastructure in terms of Sub Centres, Primary Health Centres, Mobile Medical Unit, Hospitals, Dispensaries, Bed capacity and Medical personnel is a cornerstone for desired health sector development. Availability of and accessibility to health care facilities significantly improves the health status. Table 2 provides information regarding health infrastructure in the selected states.

Table 2: Health Infrastructure: Inter-State Variation

States	Avg. Population served per Sub Centre	Avg. Population served per PHC	Avg. Population served per CHC	Avg. Population served per MMU	Avg. Population served per Govt.Hospital	Avg. Population served per Govt.Hospital Bed
Andhra Pradesh	11537	82196	457829	0	342484	3819
Assam	7022	32001	214894	499215	26707	1924
Bihar	10680	57663	702081	3148727	100589	8645
Gujarat	7138	47812	195109	647680	129270	1946
Haryana	10667	57968	249791	3053000	165195	3427
Karnataka	6684	26508	302786	547140	131314	1262
Kerala	7798	43297	158564	2098647	27873	939
Madhya Pradesh	8472	66503	233159	721065	170166	2661
Maharashtra	11349	66304	333544	3001900	166880	2306
Odisha	6352	32551	112676	372623	23745	2294
Punjab	9865	68178	194080	1213000	120797	2460
Rajasthan	5063	35071	127755	1402846	97005	2291
Tamil Nadu	7966	50728	180249	180249	127838	1235
Uttar Pradesh	10628	62364	282132	1639759	222688	3581
West Bengal	9022	102915	268052	2461842	58697	1170
Mean	**8682.83**	**55470.69**	**267513.45**	**1399179.67**	**127416.53**	**2664.00**
C.V (%)	**22.55**	**36.01**	**53.63**	**76.38**	**63.23**	**68.02**

Source: Population Data: Economic survey, Finance Ministry; Health Infrastructure Data: National Health Profile, CBHI; Average, Mean & CV: calculated from the data collected from the above sources

It may be observed from the table that some states are developed in respect of certain indicators and backwards in respect of others. As far as MMU is concerned, the inter-state variation is high which is followed by Govt. hospital beds and Govt. hospitals.

Inter-State Disparities in Health Status

Due to the multidimensional nature of the concept of health it is hard to define and measure the health status of population. Therefore, usually some indicators like Crude Birth Rate, Crude Death Rate, Infant Mortality Rate, Maternal Mortality Rate, Anemia among Women and Life Expectancy at Birth are used to measure the health status. Although several studies have shown that India's performance in health is poor when compared with other countries, the health status is improving year by year. It can be understood from the data on mortality rate and life expectancy.

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Table 3: Indicators of Health Status: Inter-State Variation

STATES	CBR	CDR	IMR	MMR	Anemia among Women(15-49 yrs) in %	LEB
Andhra Pradesh	16.2	7.5	37	92	60	68.5
Assam	20.8	8.1	47	300	46	63.9
Bihar	21.6	6.6	42	208	60.3	68.1
Gujarat	17.3	6.3	33	112	54.9	68.7
Haryana	18.2	6.5	36	127	62.7	68.6
Karnataka	16.6	7.1	28	133	44.8	68.8
Kerala	14.2	7.1	12	61	34.2	74.9
Madhya Pradesh	23.2	8.0	50	221	52.5	64.2
Maharasthra	16.9	7.0	21	68	48.0	71.6
Odissa	17.5	8.5	46	222	51.0	65.8
Punjab	15.9	7.2	23	141	53.5	71.6
Rajasthan	21.7	6.5	43	244	46.8	67.7
Tamil Nadu	14.6	8.2	19	79	55.1	70.6
Uttar Pradesh	26.1	7.6	46	285	52.4	64.1
West Bengal	15.9	6.6	26	113	62.5	70.2
Mean	**18.4**	**7.3**	**33.9**	**160.4**	**52.3**	**68.5**
C.V	**18.0**	**9.4**	**33.8**	**47.8**	**14.2**	**4.4**

Source: Economic Survey and NHP; Mean & C.V: Calculated

Table shows that health status as measured through the above indicators has improved in all the states. Kerala achieved highest Life Expectancy at Birth (LEB) and lowest IMR, MMR, Anemia percentage. It is evident that among the 15 major states, Kerala has spent more on medical and public health and hence it has witnessed a significant decline in CBR, CDR, IMR, MMR and improvement in LEB. At the same time the disparity is also widening, as is evident in the high value of co-efficient of variation for all the indicators. The inter-state variation is high for the indicators Maternal Mortality Rate and Infant Mortality Rate.

Correlation between Public Expenditure on Health and Health Status

There is an association between public expenditure on health and health indicators like Crude Birth Rate, Crude Death Rate, Infant Mortality Rate, Maternal Mortality Rate, Anemia among Women and Life Expectancy. Generally, health indicators continue to be quite good in the states which relatively spent more on health sector. The health indicators will be poor if there is no consistency in per capita expenditure on health. Several studies have examined the impact of government healthcare expenditures on health outcomes and revealed that there is a positive relationship between healthcare expenditures and life expectancy at birth and negative relationship between public expenditure on health and other health status like CDR, IMR, MMR etc. The present study also confirms that there is a positive relationship between public expenditure on health and LEB (0.28) and inverse relationship between public expenditure on health and CBR (-O.26), CDR (-0.095), IMR (-0.27), MMR (-0.11), Anemia among women (-0.533). Therefore the hypothesis "There is no significant relationship between Public expenditure on health and health status" is rejected.

6. Conclusion

Public expenditure on health services is low in all the states in India both in terms of ratio of health expenditure to aggregate expenditure and net state domestic product. There is lot of inter-state variation regarding the per capita expenditure on health. Inter-state disparities can also be seen in

health infrastructure and health status indicators. The study shows some sort of correlation between government spending on health and health status. The findings suggest that the state governments should allocate more on health sector in order to maintain balanced growth among the states and to create a healthy society which is conducive for the overall development of the country.

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