

The Study Of National Rural Health Mission And Its Impact On Imr In India With Special Reference To The Southern States Of Rural And Urban Area In India

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Abstract:

National Rural Health Mission (NRHM) was implemented in 2005 across the various states of India along with the union territories. The paper intends to study the impact of NRHM on IMR in terms of Rural and Urban area in southern state of India. This study depends on the secondary data. Analysis and interpretations of data's were carried out using the statistical tools like tables, graphs and paired sample "t" test. The study result indicates that after NRHM states like TN, AP and KA had a remarkable decrease in IMR in Rural areas. In addition when studied the IMR at the urban areas during the pre and the post NRHM period states like TN and AP had a significant reduction there by increasing its performance.

Introduction

Health is an important form of human capital. It can enhance workers' productivity by increasing their physical capacities, such as strength and endurance, as well as their mental capacities, such as cognitive functioning and reasoning ability. Low levels of human capital will be an obstacle for the development and slow down the improvements in productivity and competitiveness. Human capital is the input associated with the human body and brain: good health, strength, brainpower, native ability, are elements that suggest a direct link between the human body and productivity. Recognising the importance of health, models of economic growth have been extended to include this factor as a human capital input.

Therefore, promotion of good health must be prime objective of every country's development program. It is precursor to improve the quality of life for a major portion of mankind. The preamble to the WHO constitution also states that enjoyment of the highest attainable standard of health is fundamental right of every human being and Governments are responsible for the health of their people and that they can fulfil that responsibility by taking appropriate and social welfare measure. Health has found an important place in the constitutions of all nations of the world.

Consequently, the entire countries of the world have started paying adequate role on enlightening the health status of people in the last three decades or so. In India, considering into account the above factors National Rural Health Mission was launched by the Hon'ble Prime Minister Dr Manmohan Singh in New Delhi on 12th April 2005 in the country, with a special attention on 18 states. Now a day, this mission is called as National Health Mission. It is the major ever health project in the health sector in the last 50 years. It recognizes the importance of health care in the process of economic and social development and improving the quality of lives of our citizens. It offers effective health care to rural population, throughout the country for the states which have weak public health indicators and weak infrastructures. It would also help to achieve the goals set under the NRHM policy and millennium Development Goals.

Review of Literature

Shyam Ashtekar (2008) reported about national rural health mission in India. The researcher remarked that the failure of decentralisation, the lack of inter-sectoral coordination, and the undermining of traditional health support are the reasons why the National Rural Health Mission has not delivered what it had set out to achieve.

Amarjeet Sinha (2009) studied about the NRHM in India. The researcher identified that the National Rural Health Mission provides a large canvas and platform for health action. During the short period of its existence there is ample evidence to show that the mission has been moving in the right direction, crafting a credible public system of health delivery starting from the village and going up to the district level.

Rajib Dasgupta and Ramila Bisht (2010) comments on National Rural Health Mission in India. The authors argued that The National Urban Health Mission was supposed to address the unmet health needs of urban Indians. Yet, it has failed to commence work even 18 months after the announcement of its formation.

Abhay Shukla, Kerry Scott and Dhananjay Kakde (2011) make a conversation about the merits, shortcomings and potential of India's National Rural Health Mission (NRHM) specifically focuses on community-based monitoring (CBM) within NRHM. The authors discuss five key processes that have contributed to CBM's preliminary effectiveness in the pilot districts in Maharashtra.

The study on health care and health indicators in India by **Amarjeet Sinha (2012)** the researcher mentions that there is a lot to despair as far as India's health indicators are concerned. They do not match our economic performance over the last two decades. Public expenditure on health in India as a proportion of the gross domestic product (GDP) continues to be one of the lowest in the world, in spite of an increase from below 1% to a little over 1% with the National Rural Health Mission (NRHM). The crib deaths in West Bengal, the misuse of NRHM funds in Uttar Pradesh, the poor state of maternity homes in the country's capital among other such similar happenings have rightly resulted in a public outcry. Though the NRHM is a centrally sponsored programme, health is a state subject and it is the leadership at the state level that makes all the difference.

The study on impact of National Rural Health Mission on per natal in rural India by **Sharad Kumar Singh and Ravinder Kaur (2012)**. The researcher find out that innovations under national rural health mission have paved the way for increased utilization of hospitals for childbirth. The association of increase in hospital deliveries with decline in the prenatal mortality rate in rural India after the launch of NRHM in 2005 was assessed using the sample registration system reports.

Dr.Navitha Thimmalah and Mamatha K.G- (2014) intends to study the impact of NRHM in term of health infrastructure and to examine the impact of NRHM on health indicators like IMR, MMR, CDR and TFR in Kamataka. The researcher found that the number of sub centres, primary health centres and community health centre has increased between 2005 and 2010. Also IMR, MMR, CDR and TFR have come down after the implementation of national rural health mission.

Objectives of the Study

1. To examine the impact of NRHM in term of IMR rural between southern state of India.
2. To analysis the impact of NRHM in term of IMR urban between southern state of India.

Hypotheses of the Study

- There is a significant reduction in IMR rural after implementation of NRHM
- There is a significant reduction in IMR urban after implementation of NRHM

Methodology and Scope of the Study

Statistical and Econometric methods were used to interpret and analyse the secondary data's. The data's were collected from different government report like Sample Registration System, Statistical Reports of different years, Office of RGI, New Delhi and SRS Bulletins for different years, Sample Registration System, Office of RGI, New Delhi. The scope of study is NRHM and its impact on rural and urban IMR in the southern state of India on the basis of secondary data available.

Result and Discussion**Table 1 Infant Mortality Rates (Rural) in southern States of India (1999-2016)**

year/state	India	TamilNadu	Kerala	Andhra Pradesh	Karnataka
Before Implementation Of NRHM					
1999	75	58	14	75	69
2000	74	56	14	74	68
2001	72	55	12	74	69
2002	69	50	11	71	65
2003	66	48	12	67	61
2004	64	45	13	65	54
2005	64	39	15	63	54
After Implementation Of NRHM					
2006	62	39	16	62	53
2007	61	38	14	60	52
2008	58	34	12	58	50
2009	55	30	12	54	47
2010	51	25	14	51	43
2011	48	24	13	47	39
2012	46	24	13	46	36
2013	44	24	13	44	34
2014	43	23	14	43	31
2015	41	22	13	41	30
2016	38	20	10	38	27

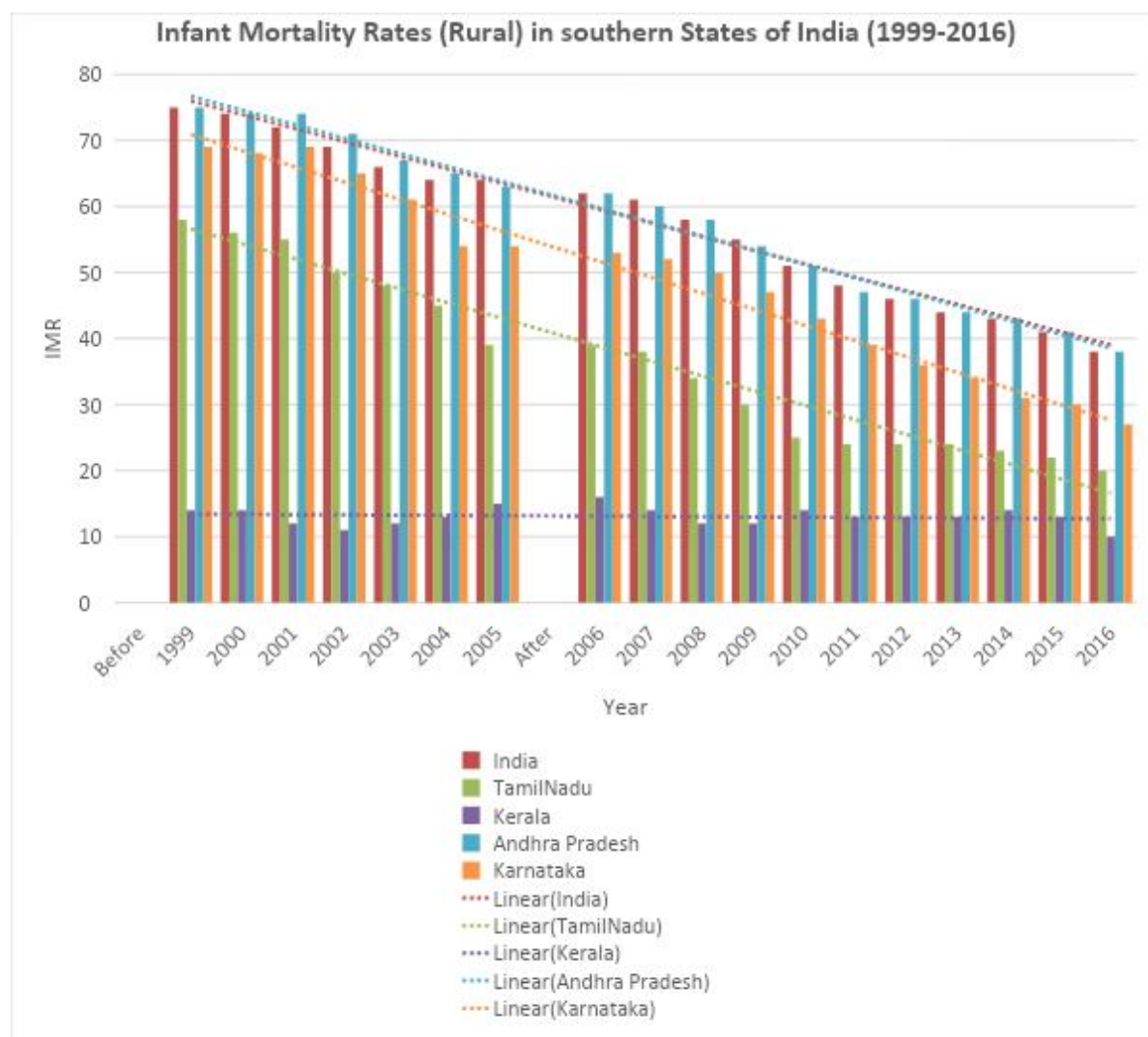
*Source: Sample Registration System Statistical Reports for different years, Office of RGI, New Delhi.

* SRS Bulletins for different years, Sample Registration System, Office of RGI, New Delhi.

*http://www.censusindia.gov.in/vital_statistics/SRS_Report_2016/8.Chap%204-Mortality%20Indicators-2016.pdf

From the Table 1, it shows that in the year 2005 when NRHM was launched, there were IMR Rural area numbering as 39 in TNs, 15 in KLS, 63 in APs, 54 in KAs and 64 in India. In the year 2013, the IMR of TN reduced from 39 to 24, KL from 15 to 13, AP from 63 to 44, KA from 54 to 34 and over all India IMR Rural area was decreased from 64 to 44 decreased respectively.

Feg. IMR in Rural area in India and the southern states of India



The above Fig-1 shows the IMR in Rural area in India and the southern states of India. It is clear that after NRHM i.e. after 2005 Rural IMR in India and southern states of India has gradually decreased along the years. But, comparing the southern states of India the IMR Rural area is lower in Kerala and Highest in Andhra Pradesh.

Paired 't' Test Results on Infant Mortality Rates (rural) in southern States of India

States	Statistical value	Before NRHM	After NRHM	Decreasing Mean	Std.D	CO.R	t.Value	df	Sig
India	Mean	69.1429	54.4286	14.71429	1.79947	.992	21.634	6	.000
Tamilnadu	Mean	50.1429	30.5714	19.57143	2.57275	.926	20.127	6	.000
Kerala	Mean	13.0000	13.4286	-.42857	1.39728	.506	-.812	6	.448
Andhra Pradesh	Mean	69.8571	54.0000	15.85714	1.77281	.983	23.665	6	.000
Karnataka	Mean	62.8571	45.7143	17.14286	1.46385	.976	30.984	6	.000

- H₀: There is no difference in IMR (rural) pre and post NRHM period in southern States of India.
- H_A: There is difference in IMR (rural) pre and post NRHM period in southern States of India.

Paired sample t test indicating that the Tamilnadu M.D value is 19.57143 and its STD. Deviation value is found as 2.57275. The T statistic test is significant at 1% ((df: 6, t: 20.127, sig.0.000) level. Hence, the null hypothesis is of no difference in IMR pre and post NRHM period in Tamilnadu is rejected and alternative hypothesis of significant difference is accepted. With respect to Kerala, the M.D is -.42857 and its STD. deviations 1.39728. The t statistic is significant at 1% ((df: 6, t: -.812, sig.0.448) level. Therefore, the null hypothesis of no difference in IMR pre and post NRHM period in Kerala is accepted and alternative hypothesis of significant difference is rejected.

On the other hand, AP M.D value is 15.85714 and its STD. deviation value 1.77281. The t statistic is significant at 1% (df: 6, t: 23.665, sig.0.000) level. So, the null hypothesis of no difference in IMR pre and post NRHM period in AP is rejected and alternative hypothesis of significant difference is accepted. In the case of KR, M.D value is 17.14286 its STD. Deviation value 1.46385. The t statistic is significant at 1% ((df: 6, t: 30.984, sig.0.000) level. Hence, the null hypothesis of no difference in IMR pre and post NRHM period in KR is rejected and alternative hypothesis of significant difference is accepted.

Whereas, India M.D value is 14.71429 and its STD. Deviation value 1.79947. The t statistic is significant at 1% ((df: 6, t: 21.634, sig.0.000) level. Hence, the null hypothesis of no difference in IMR pre and post NRHM period in India is rejected and alternative hypothesis of significant difference is accepted. Over all the above Paired sample T test analysis's reveals that value of STD .deviation value to TN, AP and KA is higher than other state like KL and in India. Therefore, it is conclude that after NRHM state like TN, AP and KA are good performed than other state in IMR pre and post NRHM period. On whole, H_A: There is difference in IMR pre and post NRHM period in southern States of India is accepted.

Table 2: Infant Mortality Rates (Urban) in southern States of India (1999-2016)

year/state	India	TamilNadu	Kerala	Andhra Pradesh	Karnataka
Before Implementation Of NRHM					
1999	44	39	16	37	24
2000	44	38	14	36	24
2001	42	35	9	40	26
2002	40	32	8	35	25
2003	38	31	10	33	24
2004	40	35	9	39	38
2005	40	34	12	39	39
After Implementation of NRHM					
2006	39	33	12	38	36
2007	37	31	10	37	35
2008	36	28	10	36	33
2009	34	26	11	35	31
2010	31	22	10	33	28
2011	29	19	9	31	26
2012	28	18	9	30	25
2013	27	17	9	29	24
2014	26	16	10	28	24
2015	25	16	10	25	23
2016	23	14	10	24	19

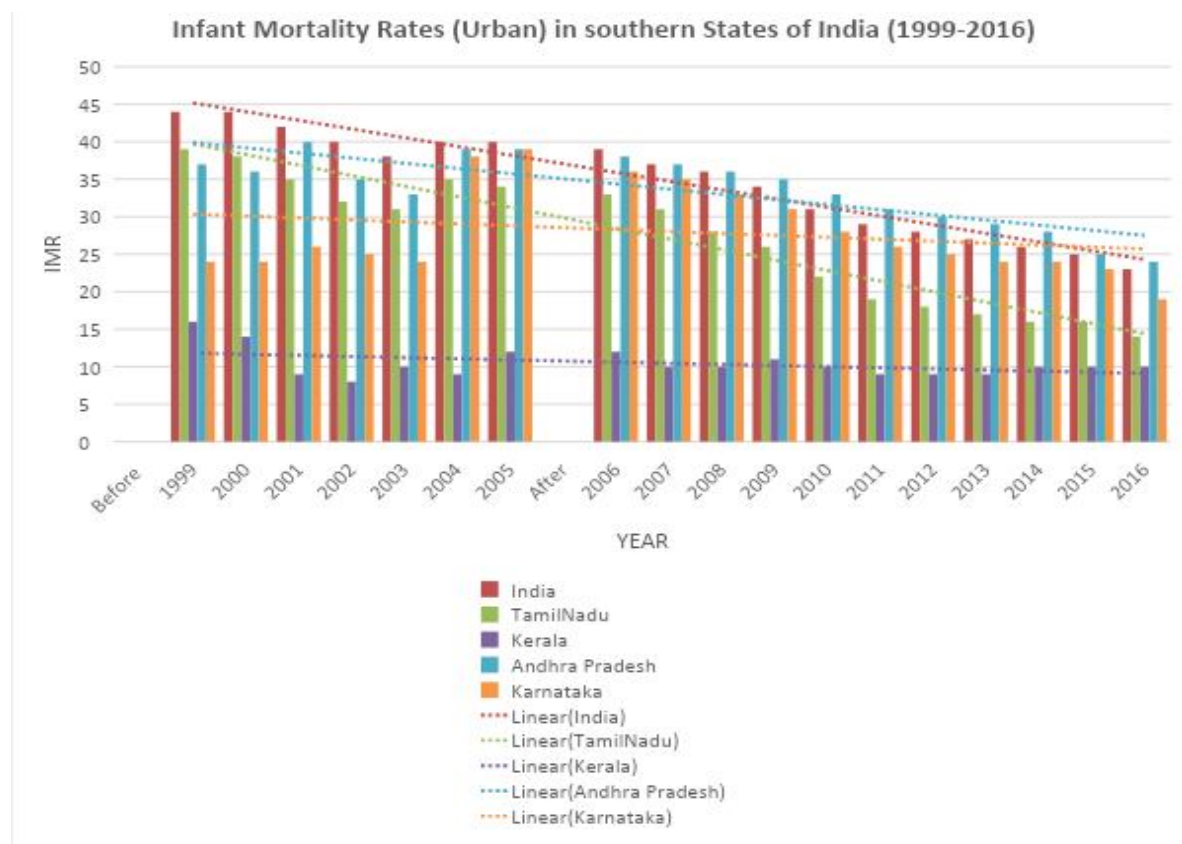
*Source: 1. Sample Registration System Statistical Reports for different years, Office of RGI, New Delhi.

*SRS Bulletins for different years, Sample Registration System, Office of RGI, New Delhi

*http://www.censusindia.gov.in/vital_statistics/SRS_Report_2016/8.Chap%204-Mortality%20Indicators-2016.pdf

From the table 2, it shows that in the year 2005 when NRHM was launched, there were IMR in Urban area 34 in TNs, 12 in KLS, 39 in APs, 39 in KAs and 56 in India. After NRHM in the year 2013, the IMR the IMR of TN from 34 to 17, KL from 12 to 9, AP from 39 to 29, KA from 39 to 24 and over all India from 40 to 27 diminished respectively.

Fig .2 the IMR in Urban area in India and southern states of India.



The above fig .2 shows the IMR in Urban area in India, TamilNadu and southern states of India. It is indicating that after NRHM i.e. after 2005 Urban IMR in India and southern states of India has gradually declined along the years. But, the southern states of India the IMR urban area is lower in Kerala and Highest in Andhra Pradesh after NRHM.

Paired't' Test Results on Infant Mortality Rates (urban) in southern States of India

States	Statistical value	Before NRHM	After NRHM	M.D	Std.D	CO.R	t.Value	df	Sig
India	Mean	41.1429	33.4286	7.71429	2.69037	.815	7.586	6	.000
Tamilnadu	Mean	34.8571	25.2857	9.57143	4.50397	.652	5.623	6	.001
Kerala	Mean	11.1429	10.1429	1.00000	2.70801	.413	.977	6	.366
Andhra Pradesh	Mean	37.0000	34.2857	2.71429	4.30946	-.196	1.666	6	.147
Karnataka	Mean	28.5714	30.5714	2.00000	10.63015	-.798	-.498	6	.636

- H0: There is no difference in IMR (urban) pre and post NRHM period in southern States of India.
- HA: There is difference in IMR (urban) pre and post NRHM period in southern States of India.

On the basis of analysis conducted by using paired sample T test, it shows that the Tamilnadu M.D value is 9.57143 and its STD. Deviation value 4.50397. The t statistic is significant at 1% ((df: 6, t: 5.623, sig0. .001) level. Hence, the null hypothesis of no difference in IMR pre and post NRHM period in Tamilnadu is rejected and alternative hypothesis of significant difference is accepted. In the case of Kerala state, the M.D is 1.00000 and its STD .deviations value 2.70801. The t statistic is significant at 1% ((df: 6, t: .977, sig0. .366) level. Hence, the null hypothesis of no difference in IMR pre and post NRHM period in Kerala is accepted and alternative hypothesis of significant difference is rejected.

Whereas, AP M.D value is 2.71429 and its STD.deviation values 4.30946. The t statistic is significant at 1% (df: 5, t: 1.666, sig0.147) level. So, the null hypothesis of no difference in IMR pre and post NRHM period in AP is rejected and alternative hypothesis of significant difference is accepted. With respect to KR state, M.D value is -2.00000 its STD. Deviation value 10.63015. The t statistic is significant at 1% ((df: 6, t: -.498, sig0.636) level. Therefore, the null hypothesis of no difference in IMR pre and post NRHM period in Tamilnadu is accepted and alternative hypothesis of significant difference is rejected.

However, India M.D value is 7.71429 and its STD. Deviation values 2.69037. The t statistic is significant at 1% ((df: 6, t: 7.586, sig0.000) level. Hence, the null hypothesis of no difference in IMR pre and post NRHM period in India is rejected and alternative hypothesis of significant difference is accepted. Over all the above analysis's reveals that value of STD .deviation value to AP and TN is higher than other state like KL, KR and in India .Therefore, this analysis is concluding that TN and AP are good performed state than other in IMR Urban area pre and post NRHM period. On whole, HA: There is difference in IMR pre and post NRHM period in southern States of India is accepted but except the Kerala and Karnataka state.

Major Findings of the Study

The major findings of the study are as follows:

1. Paired sample T test analysis's reveals that value of STD .deviation value to TN, AP and KA is higher than other state like KL and in India and HA: There is difference in IMR Rural pre and post NRHM period in southern States of India is accepted.
2. The analysis shows that value of STD .deviation value to AP and TN is higher than other state like KL, KR and in India and HA: There is difference in IMR Urban pre and post NRHM period in southern States of India is accepted but except the Kerala and Karnataka state.

Conclusion and Policy Recommendation

To conclude, after NRHM states like TN, AP and KA are good performed than other state in IMR in Rural area and TN and AP are good performed state in IMR Urban area pre and post NRHM period. Therefore, if Government continuous effectively this programme especially Rural and Urban area in AP and KA then there is no doubt that southern state can reduce its Infant Mortality as per the requirements of Millennium Development Goals and it helps to reduces interstate disparities in IMR Rural and Urban. For that, Government should extend effectively the facility to the hilly region people and tribal people. In addition, the both sectors and NGO Partnership should put combined effort to bring reforms in the health system in the rural areas of southern States of India.

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