

THE ROLE OF EXTERNAL ASSISTANCE TO IMPROVE THE HEALTH INDICATORS IN KARNATAKA

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Abstract

Measuring and analyzing the indicators for each sectors are essential to understand the progress of the nation. In case of understanding the status of health, both positive and negative indicators play a vital role. This article looks at the important health indicators and also discuss about the indicators that are developed based on the projects supported by the external assistance. The health projects supported by external assistance in Karnataka has been classified into three major areas i.e., RCH, diseases specific projects and infrastructure and health system development projects. The indicators such as fertility rate, institutional delivery, immunization, infant mortality rate, maternal mortality rate have been taken into consideration to analyze the influence of external assistance to improve the health indicators in Karnataka.

Key words Health indicators, external assistance, health policy

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Introduction

Health indicators are used to measure the health status of the country or a state. It largely shows the status of human development and progress made by the country. It also implies the political determination and success of the policy towards improving the health of its people.

As per WHO, an indicator is a measurement that reflects a given situation. Every health indicator is an estimate (a measurement with some degree of imprecision) of a given health dimension in a target population.(Leite)

Population-based information is essential to frame better health policies. Population-based survey in India has given information on the size of the population in each region, fertility, mortality, diseases, family planning, nutrition, basic facilities such as water and sanitation etc. The population-based information is collected in India through national level survey, such as, NFHS¹, DLHS² and Annual Health Survey³. The information collected through these surveys will help the state and nation to take required policy action in order to improve the health status in the backward regions of the country.

Largely these health indicators are identified by the international organizations, donors and research institutes. Some of the important health indicators are Infant Mortality Rate (IMR), Maternal Mortality Rate (MMR), Immunization Rate (IR), Fertility Rate (FR), Institutional delivery etc are largely used along with some of the specific diseases indicators such as HIV/AIDS, TB, Malaria etc. This paper tries to analyze the status of health indicators in Karnataka.

Objectives of the study

- To analyze the status of health indicators in Karnataka
- To analyze the influence of aid on health indicators

¹ NFHS - National Family Health Survey. It focuses on maternal child health and reproductive health. There have been 4 surveys conducted since 1992 till 2017

² DLHS - District Level Household Survey. This household survey focuses on district level data on reproductive child health programs. There have been 4 surveys conducted since 1998 to 2017

³ Annual Health survey – the data collected from the backward districts to get much deeper understanding of these regions and procure information on infant mortality.

Methodology

This study is based on the secondary data collected from the Govt of India websites, Govt of Karnataka, health and family welfare department website, HMIS data and also data is collected from the international websites.

The analysis of the influence of aid on health indicators is based on looking at the year of funding and change in the status of health indicators over a period of next five years at least. If the positive indicators such as institutional delivery, immunization has increased, this would mean that there has been an influence of foreign aid on improving the health indicators. If there has been decreasing or stagnant trend in the rate of indicators, this would mean that there has been not much/ no influence on the indicators. Same applies for the negative indicators such as MMR, IMR and Fertility rate. If these indicators have come down since the time of funding in a span of five to six years, it shows that there has been an influence of foreign aid in improving the health status. Keeping this simple method of analysis, this paper analyzes the influence of external assistance on health indicators.

Results and analysis

Status of health indicators in Karnataka

Karnataka is known as one of the prosperous and the developing states of India. The state is not just progressive in economic terms, but also in social indicators such as education, health is better off. Health indicators have seen better progress in Karnataka over a period of time in both rural as well the urban areas.

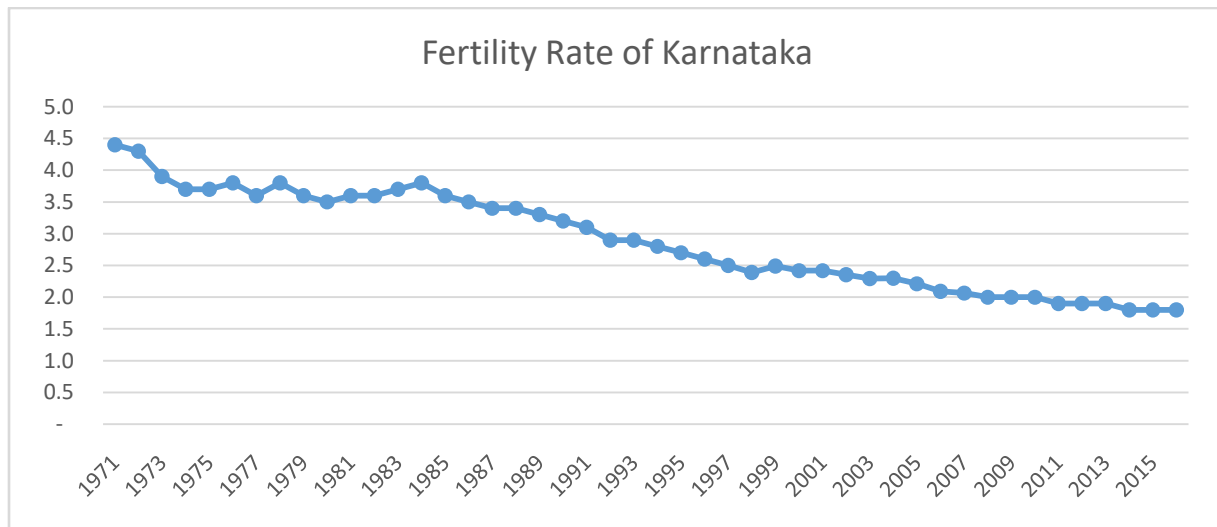
Fertility rate of Karnataka

As per the definition of OECD, Fertility rate means the total number of children that would be born to each woman in her childbearing years. (“Demography - Fertility Rates - OECD Data”)

The fertility rate of Karnataka largely shows a decreasing trend between the years 1971 and 2016. In 1971 the fertility rate of Karnataka was 4.4 and by 2016 it reduced to 1.8. The state fertility trend is much better than the national rate of 2.3 in 2016. The fertility rate of the Southern states of India, such as Tamil Nadu, Andhra Pradesh and Telangana is much lesser than Karnataka. Hence Karnataka has to catch up with these states in reducing the fertility rate.

The total fertility rate of urban Karnataka in 1971 was 3.4 and rural Karnataka had FR of 4.8. In the next 45 years, both the urban and rural fertility rate reduced. Urban FR reduced to 1.6 and rural FR reduced to 1.9. The fertility rate in rural Karnataka remains higher compared to urban Karnataka.

Figure 1 Fertility Rate of Karnataka



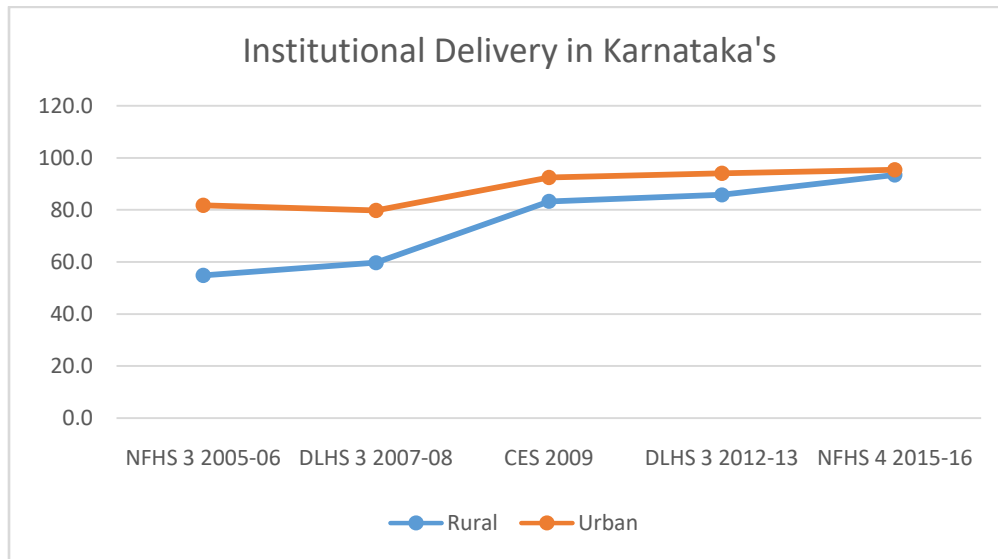
Source: Data from NITI Ayog

The institutional delivery rate in Karnataka

institutional delivery means a delivery conducted in an equipped hospital/ clinics by the trained doctor/ nurse. Institutional delivery is one of the important indicators to assess the status of health facilities in the state/ nation. It is considered an important factor to avoid maternal mortality.

The 3rd NFHS (2005) data shows that the rate of delivery of Karnataka was 64.7% and by the end of 2016 it had increased to 94.3%. The leap in the percentage of institutional delivery is seen after 2009 in Karnataka as well.

Rural Karnataka has seen tremendous changes from 2005 to 2016 by raising the institutional delivery from 54.8% to 93.5%. Greater percentage of shift is seen in 2009. The same remains with the national trend. The status of urban Karnataka was already much better with 81.8% of the institutional delivery and this status increased up to 95.4% by the year 2016.

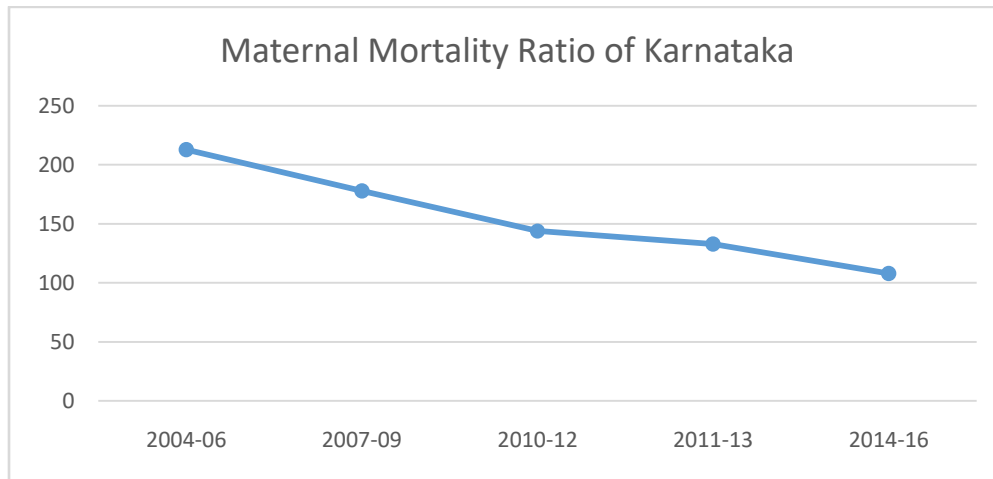
Figure 2 Institutional delivery in Karnataka

Source: NitiAyog

Maternal Mortality Rate (MMR)

As per the definition of WHO Maternal death is the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes. Maternal Mortality ratio is calculated based on the number of maternal death per 100000 registered live birth in the same time period. (“WHO | Maternal Mortality Ratio (per 100 000 Live Births)”)

In 2004-06 MMR in Karnataka was 213 and by the end of 2016 the mortality rate had come down to 108, which is lesser than the national average of 130. Karnataka, in the five years of time frame, has seen (2004-06 to 2007 to 2009) greater reduction in MMR with 35 points.

Figure 3 Maternal Mortality Ratio of Karnataka

Source: NitiAyog

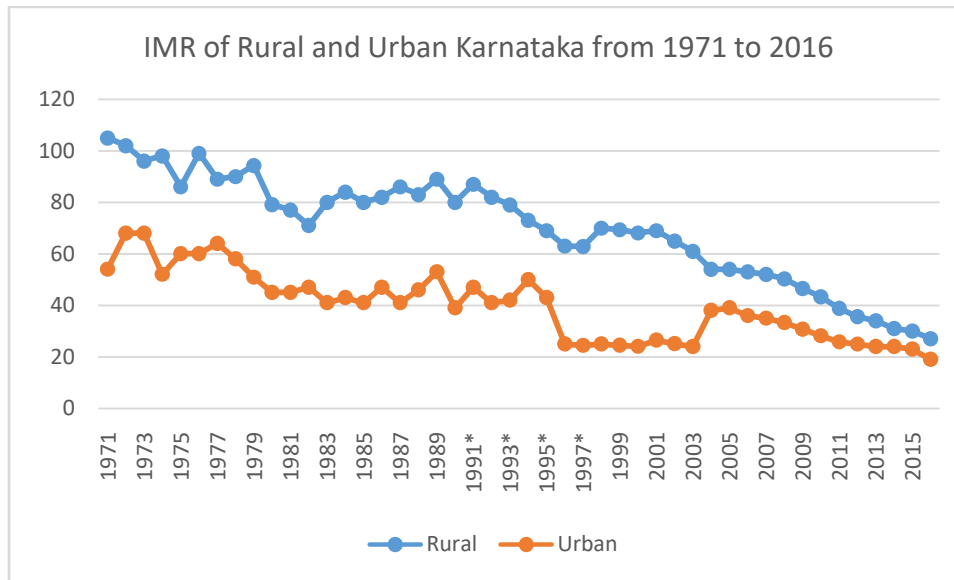
IMR status in Karnataka

As defined by OECD, the infant mortality rate is the number of deaths under one year of age occurring among the live births in a given geographical area during a given year, per 1,000 live births. (*OECD Glossary of Statistical Terms - Infant Mortality Rate Definition*)

In 1971, the IM rate of Karnataka was 95 and by 2016 it reduced up to 29. In spite of having the dipping rate of Mortality, a lot of fluctuation is seen from 1971 to 2000. Only after 2001, the IMR started dipping down with greater consistency.

It is important to note here that in the initial years (1971), there has been a wide gap between rural and urban areas. The difference between the two was 51 points. As the state focused on enhancing the lives of people, the result of a reduction in IMR is seen. The gap between rural and urban IMR status has also been reduced. By the end of 2016, this gap has reduced from 51 points to 8.

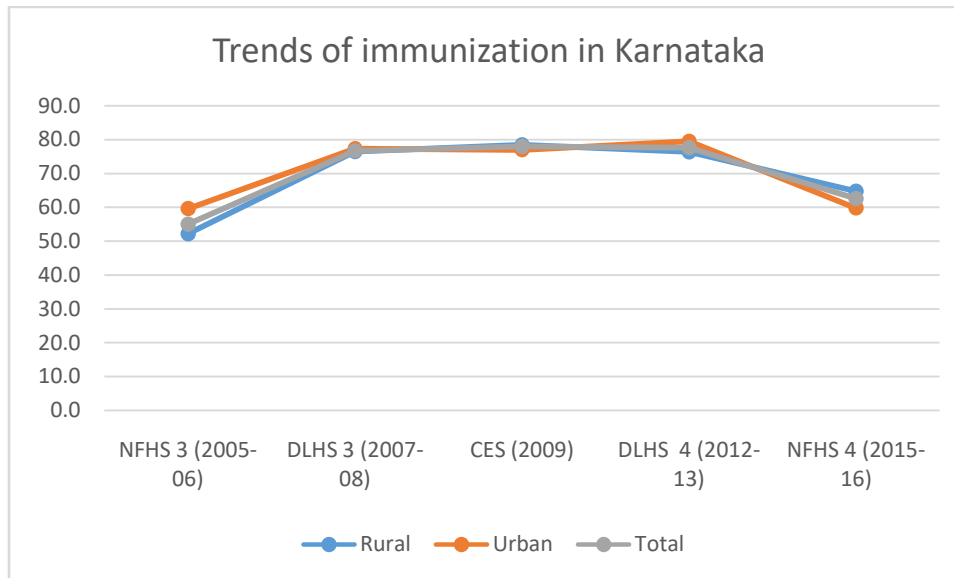
The great scale of reduction and consistency in rural areas is maintained only after 1998. With some small amount of fluctuation since 1996, urban areas have seen a reduction in IMR rate. Similarly in rural areas, the fluctuation is consistent only after 2006.

Figure 4 Difference between rural and urban mortality rate in Karnataka

Source: NitiAyog

Immunization status in Karnataka

Among all the states of India, Karnataka stands at 19th place in immunization rate. The below chart shows that the immunization rate increased from 55.0 to 76.7 and to 78.0 from 2005 to 2009. From 2012-13 onwards the Immunization rate starts decreasing 77.6 to 62.6. The rate of decrease is 15.0 points.

Figure 5 immunization trends in Karnataka

The below table shows the points by which there has been an increase or decrease in the rate of immunization. In the case of urban Karnataka, since 2007-08 to 2009, we could see the decline in the rate of immunization with -0.3. The high rate of decline could be seen in 2012-16 with -19.7. The decline in the immunization rate in rural areas could be seen 2009 onwards with -2.1 points in 2009-13 and -11.6 points in 2012-16.

Table 1 Rate of increase or decrease in the immunization rate in Karnataka

Increase or decrease in the points	Total	Urban	Rural
From 2005-06 to 2007-08	21.7	17.7	24.3
2007-08 to 2009	1.3	-0.3	2.0
2009 to 2012-13	-0.4	2.5	-2.1
2012-13 - 2015-16	-15.0	-19.7	-11.6

Source: Data released by NitiAyog

HIV / AIDS (Human Immunodeficiency Virus / Acquired Immunodeficiency)

The National Health profile 2018 of India shows that there are 11,81,125 (0.097%) patients infected with HIV who are taking treatment in 533 ART centres situated in different parts of the

country. Among the states, the highest HIV affected people are seen in Maharashtra (2,39,014), Andhra Pradesh (1,72,666), Karnataka (1,52,841) and Tamil Nadu (1,11,506).

As per the National Health Profile 2018, 1,49,60,341 pregnant women had undergone HIV test, out of which 0.073% (11,051) women were detected with HIV. 10,020 women have initiated with ART medication.

The status of HIV in Karnataka

Table 2 details of HIV infected people in Karnataka

Karnataka	General Client Tested	General Client Positives	ANC Tested	Positives	% of HIV positive (general population)	% of ANC positive patients
2007-08	199324	28912	NA	NA	14.51	NA
2008-09	445761	44847	NA	NA	10.06	NA
2009-10	745723	48472	NA	NA	6.50	NA
2010-11	626993	34869	NA	NA	5.56	NA
2011-12	1179801	39477	1010822	2333	3.35	0.23
2012-13	22763	1062	NA	NA	4.67	NA
2013-14	1664848	29473	1178907	1445	1.77	0.12
2014-15	1987333	28017	1232862	1295	1.41	0.11
2015-16	1934357	21943	1273892	1034	1.13	0.08
2016-17	1937320	19948	1323490	854	1.03	0.06

Source: KSAPS website; NA – Not Available

The above mentioned KSAPS released data shows an overall decreasing trend of HIV in Karnataka. Over a period of nine years, the HIV rate of infected people has drastically come down. In 2007-08, among the tested people, HIV was found among 14.51% of the people. By 2016-17 the rate of infected people had come down to 1.03%. Since 2013 onwards the rate of

decrease has been higher from 4.67% to 1.77%. Since 2007, the overall HIV infected rate of Karnataka is 2.76%.

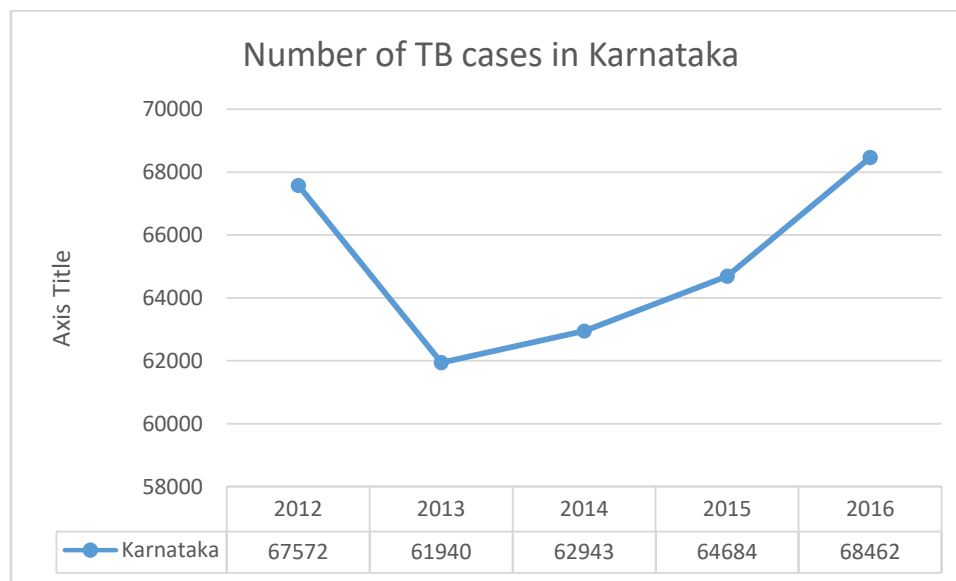
Among the pregnant women, the percentage of infected women have come down from 0.23% (2011-12) to 0.06% by the end of 2016-17. This data shows that the overall infected rate has drastically come down.

It is very interesting to note here that the number of people undergoing the HIV test has also increased over a period of time. In spite of some fluctuation, the percentage of people going through the HIV test has increased. The percentage of people undergoing HIV test was just 1.86% in the year 2007, whereas by 2016 the rate has gone up by 18.03%. This increasing trend shows the improved level of awareness among people. Regularization of the test especially during pregnancy by the health institutions is one of the main reason for these changes.

Status of TB in Karnataka

Karnataka is in 10th place with the highest number of TB patients in the country. From 2012 to 2013 the TB rate had decreased by 5,632 cases but unfortunately, from 2014 onwards, the rate of TB has gone high.

Figure 6 Number of TB cases identified in Karnataka

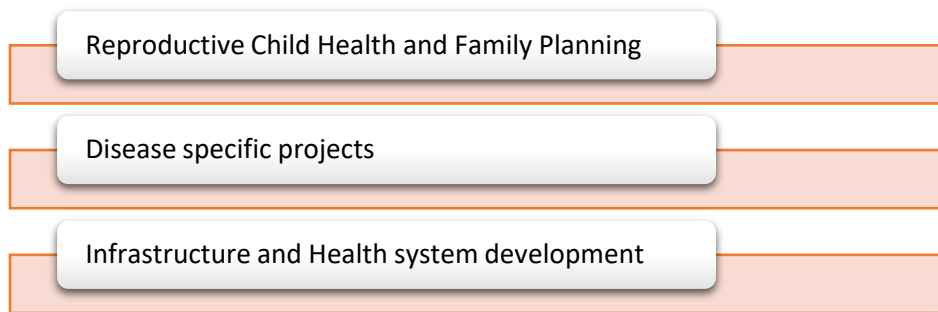


Analysis of the influence of foreign aid on improving Karnataka's health indicators

Karnataka has been one of the important states to receive foreign aid from both bilateral and multilateral donors. Based on the donor's area of focus, loans and grants has been given to the different aspects of the health sector of India as well as Karnataka. To measure the success of implementing the donor driven projects, it was essential to have project-based indicators. As a result, indicators are framed and used to monitor the progress of the project.

Based on the health projects supported by different donors to Karnataka, the project could be largely classified into three main areas i.e.,

Figure 7 Category of Health projects supported to Karnataka



RCH and Family Planning

Out of 17 externally aided projects supported, 6 projects (35%) have extensively focused on family planning and reproductive & child health. The major focus of Family planning programme has been to reduce the population rate and hence improve women's health and thereby poverty. As a result, major indicators used to measure the success of family planning projects are – Fertility Rate and Contraceptive use. In this section, the discussion has largely focused on the fertility rate.

From 1990 onwards Karnataka has received funds both in terms of loan and grant from World Bank to implement projects related to family planning. The details of the same are mentioned below

Table 3 Donor support and change in Fertility rate of Karnataka

Donor	Project	Year of project implementation	The fertility rate of Karnataka					
			1993	1994	1995	1996	1997	1998
World Bank	India population Project VIII	1993	2.9	2.8	2.7	2.6	2.5	2.4
World Bank	India population Project IX	1994						

From the above data, it is definitely clear that the fertility rate has decreased from the time World Bank supported IPP projects have been implemented in Karnataka. It is also important to note that the government of India and state government have also been spending great amount of resources on family welfare programmes. For example, 2015-16 public expenditure details brought out by National Accounts Cell shows that out of Rs 1,40,054 crores, 12.6% of the nation's health budget was spent on family welfare activities in the nation. Hence Government's share in improving the health status and especially in this case, reducing the fertility rate is also higher.

Controlling the growing size of the population has always been the priority of the Government since independence. The support from external assistance, largely from World Bank played an important role in adding more rigger into the family planning program. With the effort of both donor and national government, the fertility rate has reduced.

Apart from Family planning projects, a large number of projects are focused on Reproductive and Child Health. These RCH projects largely focused on saving the lives of mothers and newborn children and improving their health status. The prime indicators used to analyze the progress of these projects are – Institutional delivery, Maternal Mortality Rate, Infant Mortality Rate and the rate of immunization.

RCH

- Institutional delivery
- Maternal Mortality
- Infant Mortality
- Immunization rate

Since 1990 onwards, Karnataka has received support to implement two projects exclusively on improving the RCH indicators in Karnataka. Both of these projects were supported by the World Bank. The detailed discussion is as follows

Table 4 Donor support and change in institutional delivery rate in Karnataka

Donor	Project	project implemented year	% of Institutional delivery				
			2005-06	2007-08	2009	2012-13	2015-16
World Bank	India population Project VIII	1993	64.7	65.1	86.4	89.1	94.3
World Bank	India population Project IX	1994					
World Bank	Reproductive and Child Health Services (RCH) Project	1997 - 2003					
World Bank	Reproductive Health I (Supplement)	2002					

Strengthening health institutions was highly essential to reduce maternal and child mortality. In this regard, NRHM project has played a vital role in India and Karnataka to improve the institutional delivery. The projects such as RCH supported by World Bank in 1997 and in 2002 helped the state to look at parameters such as institutional delivery in a more serious way. From the year 2009 onwards, the rate of increase in the institutional delivery has tremendously grown higher. The credit goes to the effort made under NRHM.

The below-mentioned data shows the reduced MMR status of Karnataka since 1997. The rate of decrease in MMR is seen largely after the introduction of Millennium Development Goals (2000) and after the introduction of NRHM, which primarily focused on reducing MMR and IMR in the nation. Public health institutions were revamped to save the lives of mothers and newborn children. Influence of collaborative work by the state government and international donors in terms of finance, policy changes, strengthening of management and administrative system, result based framework, monitoring and evaluation system brought the required changes in the health indicators of Karnataka.

Table 5 Donor support and change in maternal mortality rate in Karnataka

Donor	Project	Year of implementation of the project	Maternal Mortality Rate (MMR)					
			1997-08	2004-06	2007-09	2010-12	2011-13	2014-16
World Bank	India population Project VIII	1993	245	213	178	144	133	108
World Bank	India population Project IX	1994						
World Bank	Reproductive and Child Health Services (RCH) Project	1997 - 2003						
World Bank	Reproductive Health I (Supplement)	2002						

Infant Mortality Rate is another indicator largely used to analyze the health system of the nation and this falls under the category of RCH.

Table 6 Donor support and change in Infant mortality rate in Karnataka

Donor	Project	Year of implementation of the project	Infant Mortality Rate (IMR)					
			1996	1998	2000	2002	2004	2006
World Bank	India population Project VIII	1993	53	58	57	55	49	48
World Bank	India population Project IX	1994						
World Bank	Reproductive and Child Health Services (RCH) Project	1997 - 2003						
World Bank	Reproductive Health I (Supplement)	2002						

At a slow pace, the IMR of Karnataka has been reducing since 1996. Compared to the 1970s the rate of IMR has come down to a great extent. The falling rate of IMR is largely due to the focus given on strengthening the health institutions, increasing institutional delivery and strengthening immunization system. As mentioned above, the effort of state and support of donors such as World Bank, UNICEF, WHO have been the reason for reduction of IMR in the developing countries including India and its states.

Table 7 Donor support and change in immunization rate in Karnataka

Donor	Project	Year of implementation of the project	Immunization rate				
			2005-06	2007-08	2009	2012-13	2015-16
World Bank	India population Project VIII	1993	55.0	76.7	78.0	77.6	62.6
World Bank	India population Project IX	1994					
World Bank	Reproductive and Child Health Services (RCH) Project	1997 - 2003					
World Bank	Reproductive Health I (Supplement)	2002					

Most of the Family planning and RCH projects have also focused on providing immunization to children. Though the data is not available from 1990 to 2000, we could still see the increasing trend in the immunization rate. But as mentioned in the previous chapter, it is a matter of concern to see the decreasing trend of immunization in recent years.

Undoubtedly, the increasing trend of immunization until 2009 is due to the constant effort made by the Government and required support provided by the donor agencies.

Infrastructure and Health system development

Out of 17 externally aided projects, five (29%) of them have largely focused on building the health infrastructure. The World Bank's most recent project KHSDRP has been taken into consideration for the analysis. As a project KHSDRP, claimed to address the regional disparity in building the health infrastructure. Analyzing this project was essential to understand how much this external assistance (largely given in this projects) have been useful in addressing the regional disparity.

The detailed analysis in objective 4 shows that improper planning by World Bank has ended up building health institutions that already had an excess amount of PHCs and SCs. As a result, districts that were lagging behind as per the IPHS have not received the required amount of support. Hence, the loan amount received by paying interest on it has not been fully and effectively used.

The concern is not just about the amount invested but also the time invested on building the health infrastructure. Rather, it is also about the required funds and human resources to run the institutions. Improper planning in the allocation of health institutions will not just add to the burden on the state but also the districts that have more institutions which will receive more funds than the districts that have lesser. Hence the less developed districts will remain poorer and the health indicators will also remain poor in these backward districts.

Except for a fewcases, KHSDRP has not been much of use in strengthening the health infrastructure in Karnataka.

Disease-specific project

Disease Specific projects

- HIV/ AIDS
- Tuberculosis

Out of the 17 projects supported by donors in Karnataka, three projects have focused on specific diseases (including issues such as cataract and glaucoma). Both HIV and TB projects were supported by the World Bank to Karnataka. World Bank supported HIV project was initiated in the year 1999 and TB project in the year 1994. But unfortunately, the data to reflect the status of both the diseases at this point of time (project beginning stage) is not available. Hence the data is analyzed based on its availability. For example, funding for HIV/ AIDS project was utilized by 2004 and the data for analysis is available from 2007. The decreasing trend in the HIV infected rate definitely shows the results of the past effort and its present success.

In case of TB, Karnataka shows an increasing trend in the number of patients. This shows that the effort from state government has not been effective enough to address the problem. Many public health activists and academicians have been raising their concern about disease-specific projects implemented at both state and national level, where the major focus is to treat the disease but there has been lesser effort to prevent the diseases. There are many socio-economic factors that lead to TB such as malnutrition, poor housing structure, cleanliness of the environment etc. Until we address these issues, it's difficult to eliminate TB from our planet.

Conclusion

Since Independence, India has been receiving support to implement various projects. Health is one of the major sectors among them. The share of external assistance has only been 1.68 % of the total health expenditure in India in the year 2008-09 (as per the health financial report of India) whereas the Central government and state government have spent 26.70% of the total health expenditure and the remaining 71.62% is spent by private players. Government spending on health includes many other national priority areas along with the indicators supported by the donors through external assistance. In this case, the donor contribution is an additional source along with the existing funding system. Hence we cannot conclude that the changes in the health indicators are due to the funding received from external assistance. Because, for many years, government has been spending extensive money on changing the health status of India. For

example, Family planning program of India is in existence since 1951. India started receiving funds from external assistance for this project in 1972, only after 21 years of India implementing population control project. But, changes in indicators such as fertility rate were evident since a long time. External assistance has been a support to the government to prioritize some of the areas.

The major health indicators such as MMR, IMR have drastically reduced and indicators such as institutional delivery has increased. There are the results of importance given in policy and program.

With all these, the cause of concern is the decreasing trend of immunization, especially in urban areas and an increasing number of TB patients in India as well Karnataka. It is a high time to look at TB as a public health concern than as medical problem. Improvement in the nutrition level of people, proper housing facilities, clean environment are the essential factors to prevent TB. As Ravi Duggal argues, medicalization of the issue is the major concern in India. Largely the donors have been focusing on the medical/infrastructural aspects of the issues as these indicators are easy to measure and show the progress of funding. As a result, in spite of road accidents being the major causes of death, the external assistance has not focused much on it.

Pre decided agenda and projects that have measurable indicators are chosen for funding as the results of these projects are easy to measure. Hence, public health has not received much attention as much as disease-specific or family planning programs have received.

References

- “Demography - Fertility Rates - OECD Data.” *TheOECD*,
<http://data.oecd.org/pop/fertility-rates.htm>. Accessed 5 Mar. 2019.
- Leite, Paulo. “PAHO/WHO | HEALTH INDICATORS: Conceptual and Operational Considerations (Section 1).” *Pan American Health Organization / World Health Organization*, 31 May 2018,
https://www.paho.org/hq/index.php?option=com_content&view=article&id=14401:health

h-indicators-conceptual-and-operational-considerations-section-1&Itemid=0&limitstart=1&lang=en.

- *OECD Glossary of Statistical Terms - Infant Mortality Rate Definition.*
<https://stats.oecd.org/glossary/detail.asp?ID=1347>. Accessed 8 Mar. 2019.
- “WHO | Maternal Mortality Ratio (per 100 000 Live Births).” *WHO*,
<https://www.who.int/healthinfo/statistics/indmaternalmortality/en/>. Accessed 8 Mar. 2019.