

A Desk Review to Assess the Impact of Janani Suraksha Yojna on Various MCH Indicators in District Gwalior, India

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Abstract

Introduction: Mothers who have always been succumbed by various physical, mental and social problems since long. It's the one group of society who always been on the edge of sword. This all above led to various maternal problems included high maternal mortality ratio and deprived health services, especially in developing countries like India. But over the time government has made lot of efforts to revert this pathetic condition of mothers. And in pursuance of this govt. has started number of programmes and schemes to make the mothers counted. One of such scheme is *Janani Suraksha Yojna (JSY)* a safe motherhood intervention started in 2005 with the objective to bring down the MMR by promoting institutional deliveries, decline in domiciliary delivery, increase in ANC registration & checkups, TT immunization etc. so they are the performance (MCH) indicators of the scheme which if anytime get analyzed can provide us at least some sort of clue about the performance of scheme over the time. Same was tried to pave out in this study with the objective of:

- To desk review various secondary data which is directly or indirectly related with JSY.
- To assess the impact of JSY on various MCH indicators.

Material and Methods: A desk review was done by collecting various secondary data and later on it was processed and analyzed by manually along with suitable statistical software.

Results: There has been significant rise in the No. of institutional deliveries after inception of JSY which was around 32744 (48.8%) in 2003-04 on the other hand it was counted around 36589 (50%) and 36045 (73.1%) in year 2006-07 & 2007-08 respectively.

In the same way like above ANC registrations have got increased and MMR brought down.

Conclusion: JSY has worked in accordance with objectives it was started in 2005 then. It played vital role in the reduction of MMR. So Govt. should try to launch more and more schemes like JSY to make the mothers life safe and fruitful.

Key words: JSY, desk review, MCH indicators

Introduction

Mothers who have always been succumbed by various physical, mental and social problems since long. It's the one group of society who always been on the edge of sword. This all above leaded to various maternal problems included high maternal mortality ratio and deprived health services, especially in developing countries like India.

Worldwide, nearly 600000 women between the ages of 15 and 49 die every year as a result of complications arising from pregnancy and childbirth. The tragedy is that these women die not from disease but during the normal, life-enhancing process of procreation. Most of these deaths could be avoided if preventive measures were taken and adequate care was available.¹ According to current estimates, South East Asia Region accounts for 170,000 maternal deaths annually. Maternal mortality rates vary from 830 per 100,000 live births in African countries to 24 per 100,000 births in European countries.²

India is among those countries, which have a very high maternal mortality ratio. It was 20 per 1000 live births in 1938 and declined to 10 per 1000 live births by 1959(83). According to SRS reported for the years 1997, maternal mortality for India was 407 per 100,000 live births. It declined to 301 per 100,000 for the year 2003. The maternal mortality in the country has declined substantially, by nearly 24 percent during 1997 to 2001-2003. Which includes 16 percent relative decline in EAG states and Assam.³

While India has relatively high rate of Maternal Mortality Ratio (MMR) in the developing world. Madhya Pradesh has one of the highest Maternal Mortality Ratio (379 per 100,000 live births as per SRS 2006) in India.⁴

The health of women and children has always been an important social goal of all societies. Over the years, maternal and child health has evolved through various stages of conceptual approach, technological advances and social prioritization. The realization that, improved maternal and child health is the key to the ultimate objective of lifelong health in any society, has led to renewed interest and global focus towards this very important social health issue.⁵

Over the time government has made lot of efforts to revert this pathetic condition of mothers. And in pursuance of this govt. has started No. of programmes and schemes to make the mothers counted. One of such scheme in *Janani Suraksha Yojna (JSY)* a safe motherhood intervention started in 2005 with the objective to bring down MMR by promoting institutional deliveries. By giving incentives to the mothers and motivators it has definitely showed its role in the safeguard of mothers like in terms of rise in institutional deliveries, decline in MMR/IMR, decline in domiciliary delivery, increase in

ANC registration & check ups, TT immunization etc. so they are the performance (MCH) indicators of the scheme which if anytime get analyzed can provide us at least some sort of clue about the performance of scheme over the time. Same was tried to pave out in this study with the objective of:

- To desk review various secondary data which is directly or indirectly related with JSY.
- To assess the impact of JSY on various performance (MCH) indicators.

Material & Methods

Study type: observational study with desk review of secondary data.

Data source: data of CMHO office and Health bulletin of M.P.⁶

Study duration: it was done from 1st of Jan 2009 to 1st of Feb 2009.

Data collection and analysis: detailed data was collected from various resources like from CMHO office with their due permission & Health bulletin of state of M.P available on the website of MP Govt.⁶ regarding various performance indicators of JSY like total deliveries, institutional deliveries, domiciliary deliveries, maternal & infant deaths, ANC registration etc. Later on whole data was compiled, processed, and analyzed manually and with the help of suitable statistical software.

Ethical consideration: though it was not an interventional study. But due consent was taken from authorities of data sources.

Statistical analysis: tables and figures were used for the demonstration of data. Chi square test was applied for the measurement of significance at 95% confidence level. MS Office Excel 97-2003 and Epicalc 2000 software were used for the data processing and analysis.

Results

On the basis of secondary data there have been definite mount in the No. of institutional deliveries like it was around 48.44% of total deliveries in 2003-04 increased by 73.10% in 2007-08 and the difference was found to be insignificant ($p > 0.05$). Domiciliary deliveries on the other hand got down from 2004-05 (51.56%) to 26.90% in 2007-08 ($p > 0.05$). Maternal deaths & infant deaths ($P < 0.001$) have also reduced and there were no maternal deaths documented in 2006-07 & 08. (Table 1)

On the basis of distribution according to the block CHCs number of institutional deliveries have also got increased significantly over the time ($p < 0.01$). Dabra was on top so far as institutional deliveries are concerned and Hastinapur (Morar) was found to be at the bottom. (Table 2)

ANC registrations have also got increased but not significantly. More or less same with ANC with 3 checkups which also got increased from 21.48% in 2005-06 to 32.87% in 2007-08 ($p > 0.05$). (Table 3)

Coverage of TT-PW also got increased. For TT-PW it was 89.8% in 2003-04 and increased up to 101.5% in 2007-08. Coverage of IFA though got down from 2003-04 where it was 110.6% to 81.8% in 2007-08. BCG coverage has also been increased from 111.7% in 2003-04 to 115.6% in 2007-08. (Table 4)

As far as comparison of Gwalior is concerned with other major districts of M.P in the light of various sort of performance (MCH) indicators Gwalior was set at 4th position in the state but it leaded race so far maternal mortality is concerned where no mortality was reported in the year 0f 2007-08. It lied upon second position in infant mortality out of all deliveries in the state. The number of mothers registered during first trimester was found to be least in Gwalior than other districts. But it leaded in registration of mothers in second trimester than other states. Gwalior also fall down as far as 3 ANC checkups are concerned in contrast to others districts. Achievement of TT,IFA, and BCG was found more or less same among all districts of M.P. (Table 5)

Discussion

Present study has revealed after desk review of various data available that JSY have definitely impacted upon the various performance (MCH) indicators in the Gwalior district not only in Gwalior district but indeed around all the major districts of state.

There have been definite mount in the No. of institutional deliveries like it was around 43.44% of total deliveries in 2003-04 increased by 73.10% in 2007-08 more than in *NFHS- II, III* (22%,30%,) ⁷ and very much close to the goal of *NPP 2000 of India*.⁸ But this difference was found to be insignificant ($p > 0.05$) between year 2003-04 & 2007-08 for institutional delivery. This shows there has been definite impact of JSY on the no. of institutional deliveries over the time since its inception in 2005 although we can't deny other factors which might have been responsible for this like improved literacy & socio economic status etc. but by enlarge JSY have been one the most common factor responsible for the hike of this number. Monetary benefit and ASHA by large extent responsible for this reform as also found by *Neeraj jain et al* around 70% institutional deliveries were motivated and facilitated by ASHA.⁹ *Shobha Malini et al* found 62% institutional deliveries were motivated by ASHA and 65 % were motivated for ANC by ASHA.¹⁰ *B. Mohpatra et al* in their study found 78.9% beneficiaries were prompted by ASHA to avail the benefits of JSY.¹¹ These figures reveals importance of role of ASHA and other grass root level health worker in the conduction JSY.

Domiciliary deliveries on the other hand got down from 2004-05 (51.56%) to 26.90% in 2007-08 ($p > 0.05$). Maternal deaths & infant deaths ($P < 0.001$) have also reduced and there were no maternal deaths documented in 2006-07 & 08.it also shows the glory of JSY up to certain extent.

ANC with 3 checkups also got increased from 21. 48% in 2005-06 to 32.87% in 2007-08 ($p > 0.05$). It was less than the no. of *NFHS-III* which was 40.2%.⁷ But more than the *DLHS-3* (25.3% urban, 15.3% rural).¹² This may be because people are not aware of the importance of ANC checkups owing to deprived information about the scheme. *Ashok Mishra et al* also found, no information (74%) about the scheme was the most common reason for not availing the benefits of scheme.¹³ This shows how awareness regarding

any scheme or programme is important as far as its success is concerned. This may be the reason why still there is less proportion of JSY beneficiaries as found in **DLHS-3**(34.9%).¹²

Coverage of TT-PW and BCG also got increased. For TT-PW it was 89.8% in 2003-04 and increased up to 101.5% in 2007-08 far more than the **NFHS-I, II** (53.8%, 66.8%).⁷ BCG coverage was 111.7% in 2003-04 and 115.6% in 2007-08 more than the **DLHS-3**(82.4% urban, 77% rural).¹² May be because they the essential component of JSY.

There are still sort of gaps between the districts for the performance of scheme and its indicators which need to be filled up, and there should be almost homogenous performance of the scheme throughout the state not just in one or two district.

Limited data with secondary sources were some of the limitations of study. A nationwide survey would give the more applicable results. More qualitative research is needed in this direction to assess the impact of JSY.

Conclusion

JSY have definitely impacted upon the various MCH indicators over the span of time but somehow it has ended up with limited success and still we are far away from the goals of MDG and National health policy 2002. So it demands some more needful qualitative research to explore the various performance deciding factors and to act upon these factors will definitely make this scheme more impactful & fruitful.

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Abbreviation

JSY: Janani Suraksha Yojna., MMR: Maternal Mortality Rate, MCH: Maternal and Child Health., ANC: Anti natal Check up, TT: Tetanus Toxoid, IFA: Iron folic acid
MDG: Millennium Developmental Goal.

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Table 1: Distribution of deliveries on the basis of years in Gwalior district

Deliveries	Pre-JSY		Post – JSY		
	2003-04	2004-05	2005-06	2006-07	2007-08(%)
Total deliveries	67589	74359	79465	73178	49309
Institutional deliveries	48.44%	49.46%	60.22%	50%	73.10%
Domiciliary deliveries	51.56%	50.54%	39.78%	50%	26.90%
No of maternal deaths	NA	NA	04	0	0
No of infant deaths	NA	NA	292	358	422

NA: Not available

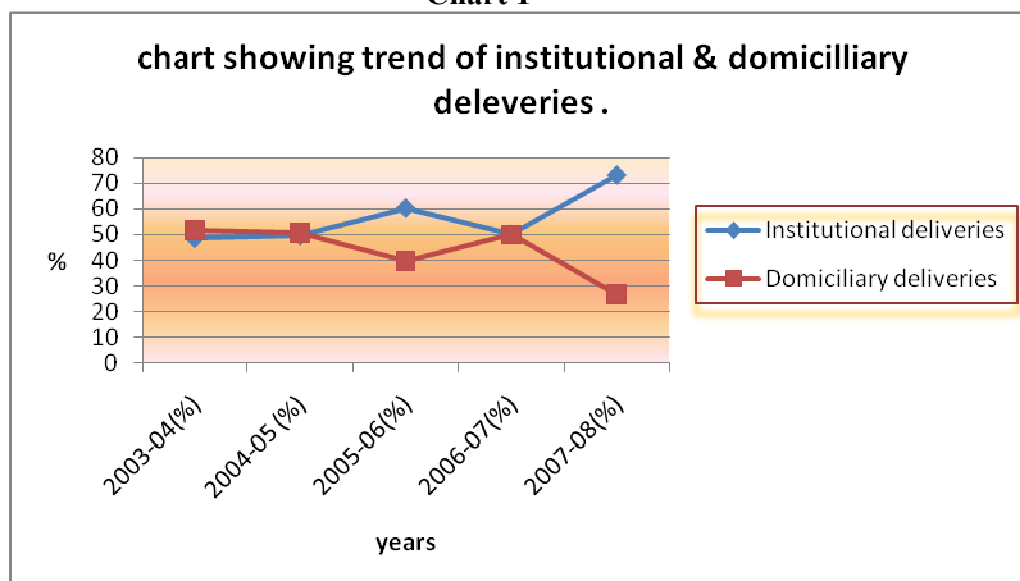
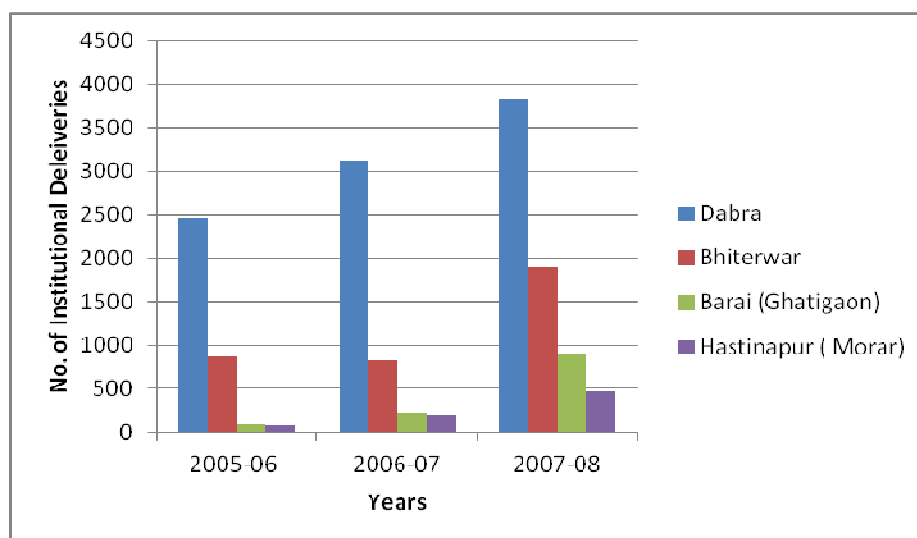
Chart 1

Table 2: Distribution of institutional deliveries on the basis of blocks (CHCs) in Gwalior district

Blocks	2005-06	2006-07	2007-08
Dabra	2461	3126	3838
Bhiterwar	869	828	1906
Barai (Ghatigaon)	88	231	902
Hastinapur (Morar)	79	195	470
Total	3497	4380	7116

Chi-square : 695.60, P-value: 0.000004

Chart 2: showing trend of Institutional Deliveries among Blocks.**Table 3: Distribution of ANC check ups on the basis of years in Gwalior district**

ANC check ups	2005-06(%)	2006-07(%)	2007-08(%)
Total ANC registered	50182	57831	64703
After 1 st trimester	1506 (3)	13186 (22.8)	3982(6.15)
After 2 nd trimester	48676(97)	44646(77.2)	60721(93.85)
ANC with three check- ups	17076 (21.48)	11896 (16.26)	16206 (32.87)

Table 4: Distribution of TT –PW (Pregnant women), BCG vaccination & IFA on the basis of time in Gwalior district

TT–PW (Pregnant women)	Pre-JSY		Post – JSY		
	2003-04(%)	2003-04 (%)	2005-06(%)	2006-07(%)	2007-08(%)
Service need	58500	60000	62000	55260	55390
Achievement	52510(89.8)	64196(107)	37688(60.8)	57830(104.7)	56223(101.5)
IFA-PW(Pregnant women)					
Service need	58500	46000	62000	55260	55390
Achievement	64724(110.6)	56754(123.4)	40365(65.1)	29779(53)	45308(81.8)
BCG vaccination					
Service need	53500	56000	58000	54228	51512
Achievement	59743(111.7)	55665(99.4)	52541(90.6)	64264(118.5)	59542(115.6)

Table 5: Comparison of district Gwalior with other districts of M.P. for different performance (MCH) indicators for the year 2007-08

MCH indicators	Gwalior	Jabalpur	Bhopal	Indore	Rewa
Maternal and infant deaths					
Total deliveries	49309	59677	45950	89047	67125
Total ANC reg.	64703	72951	62673	115559	78660
Institutional deliveries	36045 (73.10)	45041 (75.47%)	41144 (89.54%)	83939 (94.26%)	42185 (62.84%)
Domiciliary deliveries	13264 (26.90)	14636 (24.53%)	4806 (10.46%)	5108 (5.74%)	24940 (37.15%)
No of maternal deaths	0(0.00)	43(0.07%)	65(0.14%)	57(0.064%)	54(0.08%)
No of infant deaths	422(0.86)	23(0.04%)	147(0.32%)	489(0.55%)	972(1.45%)
ANC Registration					
After 1 st trimester	3982 (6.15%)	60909 (83.49%)	14276 (22.78%)	45218 (39.13%)	26974 (34.29%)
After 2 nd trimester	60721 (93.85%)	12042 (16.51%)	48397 (77.22%)	70341 (60.87%)	51686 (65.71%)
ANC with three check- ups	16206 (32.87)	62301 (85.40%)	62547 (99.8%)	96074 (83.14%)	53412 (67.90%)
TT –PW (Pregnant women)					
Service need	55390	72353	65650	94609	67297
Achievement	56223	71957	58229	93056	71569

	(101.5)	(99.45%)	(88.7%)	(98.36%)	(106.34%)
IFA-PW(Pregnant women)					
Service need	55390	72353	38426	52538	64592
Achievement	45308 (81.8)	72476 (100.17)	39968 (104.01%)	63050 (120%)	56249 (87.36%)
BCG					
Service need	51512	67289	61055	87987	62586
Achievement	59542 (115.6)	70711 (105.08%)	67021 (109.77%)	95105 (108.08%)	71834 (114.77%)