

## A Study on impact of government maternity benefit schemes on women in utilization of Block Primary Health Centres (BPHCs) in Coimbatore District

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### Abstract

**Background:** Maternal health is an important aspect in every woman's life. The maternal mortality ratio (MMR) is a major health indicator for public health outcome. In India efforts are made to reduce the MMR by improving the public health infrastructure, encouraging institutional delivery and reducing out of pocket expenditure (OOPE) by giving financial assistance through maternity benefit schemes both at central and state level. **Objective:** To study the impact of government maternity benefit schemes on women towards utilization of Block Primary Health Centres in Coimbatore District. **Material and methods:** 100 women who visited the 2 block PHCs Somanur and Nallattipalayam were interviewed using interview schedule. The data was analyzed using simple percentage and ANOVA method. **Results:** 83% have taken more than 9 ANC visits and 72% have not spent any out of pocket expenditure, which shows the performance and effective utilization of PHCs. Over 90% of the respondents have utilized the benefits under all the three schemes. Above 75% of the women agree that the cash and non-cash assistance provided under the scheme encouraged, educated and supported them in several ways for a safe delivery. **Conclusion:** The participation of medical personnel at every level can be pointed out as the reason for safe motherhood initiative in this district. Removing procedural difficulties, spreading awareness among the rural population, removing the problems by the people involved in processing and extending the benefits to even deliveries in private sector due to complications will benefit more number of women in future.

**Keywords:** Maternal Mortality Ratio (MMR), Out of pocket expenditure (OOPE), midwives, maternity benefit schemes.

## INTRODUCTION

Maternal and child health are inter-related and the natal care services plays a vital role in safe delivery of every woman. The maternal mortality ratio (MMR) is a major health indicator of public health outcome and every country takes considerable steps to reduce the MMR. The role of midwives plays a greater role maternal, natal and child health. According to WHO, Midwives educated and qualified to international standards can provide 87% of services needed by mothers and newborns. <sup>[1]</sup> As per a report by UNFPA, women who receive continuous midwife care as per WHO recommendations, experience 24% and 16% reduction in preterm birth and death of infants respectively. <sup>[2]</sup> In 2015 the MMR of India is 174 per 1,00,000 live births. Out of the reported deliveries 86% were attended by skilled birth attendants as of 2017 (World Health Statistics, 2018) In order to ensure reduction in MMR, availability of skilled birth attendant in every delivery and to increase the proportion utilizing public infrastructure Government of India and respective state Governments have floated several monetary and non-monetary maternal benefit schemes [Fig 1].

**Figure 1: Types of maternity benefit funds in Tamilnadu**

S.No	Maternity Benefit Funds	Providing agency	Eligibility	Assistance
1.	Janani Suraksha Yojana(JSY) - 2005	Central	<ul style="list-style-type: none"> <li>• Aged above 19 years</li> <li>• BPL family</li> <li>• Only for 2 live births</li> </ul>	<ul style="list-style-type: none"> <li>• 1<sup>st</sup> instalment – ₹ 500 after 3<sup>rd</sup> ANC checkup,</li> <li>• 2<sup>nd</sup> instalment- ₹200 for institutional delivery.</li> </ul>
2.	Janani Shishu Suraksha Karyakaram (JSSK)-2005	Central	All women and children visiting any government facility.	<ul style="list-style-type: none"> <li>• Benefits to mothers</li> <li>• Benefits to children</li> </ul> In the form of free medicines, food & supplements and other facilities
3	Dr. Muthulakshmi Reddy Maternity Benefit Scheme (MRMBS)- 1987	Tamilnadu state Government	<ul style="list-style-type: none"> <li>• Aged above 19 years</li> <li>• BPL family</li> <li>• Only for 2 live</li> </ul>	<ul style="list-style-type: none"> <li>• 1<sup>st</sup> installment of ₹4000 - after 3<sup>rd</sup> ANC visit, during 7<sup>th</sup> month of pregnancy</li> </ul>

			births	<ul style="list-style-type: none"> <li>• 2<sup>nd</sup> installment of ₹4000 - after delivery in public facility and</li> <li>• 3<sup>rd</sup> installment of ₹4000 - after taking up necessary vaccinations for new born.</li> </ul>
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*Source: Relevant government websites*

As per WHO Global health estimates, complications during pregnancy and childbirth are the leading cause of death for 15 to 19 year-old girls globally which could be reduced by reducing marriage before the age of 18 years and increasing use of skilled antenatal, childbirth and postnatal care among adolescents. There are also up to three times more adolescent pregnancies in rural and indigenous populations than in urban populations.<sup>[3, 4]</sup> In rural India since the PHCs plays a vital role in providing maternal and child care services, this study aims at studying the impact of maternity benefit funds towards utilization of Block Primary Health Centres for natal and neo-natal services.

### **OBJECTIVE**

To study the impact of government maternity benefit schemes on women towards utilization of Block Primary Health Centres in Coimbatore District.

### **METHODOLOGY**

This is a facility based study in which 2 blocks PHCs viz., Somanur and Nallattipalayam out of 12 block PHCs, which recorded highest number of deliveries in April 2017 to March 2018 were selected. 50 women who have fully or partially utilized the PHCs for maternal or child care from each block PHC were selected. Interview schedule was used for the survey. Percentage analysis and ANOVA were applied to analyse the collected data and draw inferences.

## ANALYSIS AND INTERPRETATION

## I. PERCENTAGE ANALYSIS

Table 1: Demographic profile of the respondents (n= 100)

S.No	Variables	Groups	Percentage (%)
1.	Current age (in years)	21-23 yrs	25
		24-26 yrs	41
		27-29 yrs	27
		30-33 yrs	7
	<b>Total</b>		<b>100</b>
2.	Education of the respondent	No formal education	3
		Primary education	52
		Middle school level	21
		Higher secondary level	15
		Diploma/ Graduate	4
	PG & above	5	
<b>Total</b>		<b>100</b>	
3.	Occupation	Homemaker	19
		Self employed	13
		Daily/weekly labourer	51
		Salaried	5
		Farming & allied activities	12
<b>Total</b>		<b>100</b>	
4.	Family income per month ( in ₹)	Upto 5000	26
		5000 -10000	51
		10000 - 15000	16
		15000 - 20000	7
<b>Total</b>		<b>100</b>	
5.	Number of ANC visits during last pregnancy	3-5 times	8
		6-8 times	9
		9-11 times	22
		12-14 times	61
<b>Total</b>		<b>100</b>	
6.	Amount spent as	Nil	72

	<b>medical expenditure during checkups &amp; deliveries</b>	Medicines	7
		Diagnostic services	18
		Blood and Utility kits	3
	<b>Total</b>		<b>100</b>
7.	<b>Distance of PHC from residence</b>	Less than 1 km	39
		1 -3 Kms	13
		Above 3 Kms	48
	<b>Total</b>		<b>100</b>

Source: Primary data

**Table 1** shows that women aged between 24 to 26 years constituted 41% of the sample and 7% were aged between 30-33 years. Majority 52% of the women had at least primary education, only 3% had no formal education and 9% were graduates and above. 51% were engaged as daily/weekly laborers and 19% were homemakers. Majority 51% have income of ₹5,000 – ₹10,000 p.m., followed by 26% of the households falling under income group of up to ₹5,000 p.m and only 7% of the households were earning ₹15,000 -20,000 p.m. Number of antenatal visit shows that 83% of women have taken more than 9 visits, 9% have taken 6-8 visits and 8% have taken 3-5 visits. 72% of the respondents have not spent any out of pocket expenditure and 18% have spent some amount towards diagnostic services. 48% of the women travelled more than 3 kilometers to reach the PHC while 39% were staying within 1 km distance of the PHC.

**Table 2: Benefits availed under Maternal Benefit Schemes (n=100)**

S.no	Maternity benefit schemes	Availed (%)	Not availed (%)	Total (%)
1	Benefits availed-MRMBS-I Installment - ₹4,000	100	0	100
	Benefits Availed MRMBS-II Installment - ₹4,000	91	9	100
	Benefits Availed MRMBS-III Installment - ₹4,000	94	6	100
2	Benefits Availed JSY-I Installment - ₹500	100	0	100
	Benefits Availed JSY-II Installment - ₹200	91	9	100
3	Benefits Availed JSSK-Pregnant Women	100	0	100
	Benefits Availed JSSK-Children	95	5	100

Source: Primary data

**Table 2** shows the proportion of women who have availed benefits under all the maternal benefit schemes. Under MRMBBS scheme 100% availed cash assistance of I instalment, 91% of II installment and 94% of III installment. Under JSY scheme 100% availed assistance of I installment and 91% received II installment. Reasons for not availing second or third installment were private

facility delivery, not taking up proper vaccinations as per schedule and lethargy in processing. Under JSSK every women is given non cash assistance in the form of free facilities and benefits given to children stands at 95% as few services are given to sick infants only

**Table 3: Impact of government schemes in utilization of PHC for deliveries**

Impact of government schemes	Strongly Agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly Disagree (%)	Total (%)
All the schemes encouraged me to take up institutional delivery	6	71	9	2	12	100
I felt I should deliver in a public facility to utilize the scheme	73	12	6	3	6	100
The monetary and non-monetary benefits motivated for regular checkups	68	9	15	5	3	100
The schemes helped in reducing my out of pocket expenditure	75	10	2	8	5	100
I was provided with nutritional diet, free drugs, transport services	79	4	3	11	3	100
My wage loss during pregnancy was compensated	17	63	11	6	3	100
The schemes ensured me of safe delivery	6	72	7	11	4	100
Experienced a feeling of support through the benefits of the scheme	76	6	3	10	5	100
I was educated and counseled on various matters related to pregnancy and delivery	7	78	15	0	0	100
Midwives gives us good moral support	68	8	6	13	5	100

Source: Primary data

**Table 3** shows the extent of impact which the maternity benefit funds had on the maternal health seeking behaviour of the women who visited the BPHCs. 71% agree that all the schemes encouraged to take up institutional delivery and 73% strongly agree that these schemes created an urge to deliver in public facilities to utilize the maternity benefit schemes. 68% strongly agree that the benefits were of great motivation for regular ANC checkups, 75% strongly agree that their out of pocket expenditure (OOPE) was reduced to a great extent and 63% agreed that their wage loss was compensated to an extent. Provision of nutritional diet, free drugs, and transport services was agreed by 79%. 72 % were confident about safe delivery measures and 78% were satisfied with the

education and counselling provided. 76% experienced a strong feeling of support through the benefits of the scheme and midwives were a source of good moral support to 76% of the mothers. Overall the maternity benefits schemes show a very positive impact on the mothers attending the PHCs for ANCs, delivery and child care. A close association between the women taking up all maternal services and receiving the assistance under the scheme was documented in a similar study. More number of ANC visits in public facilities and delivery in any public facility increases the probability of receiving money.<sup>[5]</sup>

## II. ANOVA

The following are the hypotheses framed and inferences derived based on ANOVA test.

- a) Null Hypothesis ( $H_0$ ): There is no significant relationship between demographic variables and the impact of maternity fund schemes on utilizing maternal services.
- b) Alternative Hypothesis ( $H_1$ ): There is significant relationship between demographic variables and the impact of maternity fund schemes on utilizing maternal services.

**Table 4: ANOVA - Demographic variables and Impact of government schemes in utilization of PHC for deliveries**

S.No	Variable	Calculated 'F' Value	Table value	Inference
1.	Age	2.087	2.699	Not Significant
2.	Educational qualification	2.893	2.311	Significant
3.	Occupation	4.755	3.523	Significant
4.	Family income per month	2.254	2.699	Not Significant
5.	Number of ANC visits	8.188	3.992	Significant
6.	Amount of medical expenditure	2.514	2.699	Not Significant
7.	Distance from residence	10.227	4.831	Significant

Source: Primary data

ANOVA test was applied and results obtained on 1% and 5% level of significance are shown in **table 4**. The analysis revealed that the calculated value is greater than the table value for the demographic factors like educational qualification, occupation, number of ANC visits and distance from residence. Hence the null hypothesis ( $H_0$ ) is rejected. The alternative hypothesis ( $H_1$ ) holds good stating that the above factors have some impact on the utilization of maternity benefit schemes.

Conversely, for factors like age, family income per month, amount of medical expenditure the calculated value is lesser than the table value thereby accepting the null hypothesis ( $H_0$ ). Hence, these have no impact on the utilization of maternity benefit schemes.

## DISCUSSIONS

The study shows that majority (68%) were in the average reproductive age group of 24 years- 29 years. Educational qualification shows that only 3% among the sample population are uneducated and except 19% of women everyone are engaged in some type of activities to support their families financially. 77% of the households have an income for upto ₹10,000 p.m. and only 7% have income above ₹15,000 p.m. 83% have taken more than 9 ANC visits and 72% have not spent any out of pocket expenditure, which shows the performance and effective utilization of PHCs in Coimbatore district. On the contrary Ganesan & Chitra<sup>[6]</sup> has identified that the women belonging to higher social groups were mostly benefited from the scheme and the services in the PHCs which should actually benefit pregnant women below the poverty line.

Regarding the receipt of assistance under the three schemes, MRMBS, JSY and JSSK, over 90% of the respondents have utilized the benefits under the scheme, which show the success of the public healthcare system in achieving the purpose of the scheme. Lim et al.,<sup>[7]</sup> has reported that the JSY has helped in increasing institutional delivery and reducing mortality ratio. Further results of study by Francis Xavier & Santhya<sup>[8]</sup> show that women receiving benefit under conditional cash transfer assistance( JSY) expressed better satisfaction towards the study variables.

The impact score of the schemes shows that above 75% of the women agree that the cash and non-cash assistance provided under the scheme encouraged, educated and supported them in several ways for a safe delivery.

The ANOVA table reveals that the demographic factors like educational qualification, occupation, number of ANC visits and distance from residence have some impact on the utilization of maternity benefit schemes. whereas, factors like age, family income per month, amount of medical expenditure have no impact on the utilization of maternity benefit schemes.

## CONCLUSION

The study shows the current state of utilization of maternal benefit schemes by women attending the BPHCs for maternal and child care services. The number of ANC visits, reduction in out of pocket expenditure, increase in number institutional delivery, increase in number of women using public infrastructure and enhancement of safe delivery shows the success of the maternity benefit schemes.



The role of midwives in every stage of pregnancy and child care is appreciable and inevitable. The participation of medical personnel at every level supports safe motherhood initiative in this district. Removing procedural difficulties, spreading awareness, eradicating bribe and lethargy and extending the benefits to even deliveries in private sector due to complications will benefit more number of women in future

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