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Original Research Article

Utilization of Maternal and Child Health Services under MAMATA Scheme in Rural Areas of Ganjam District, Orissa

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ABSTRACT

Introduction: Many Scientifically sound programs have been unsuccessful in addressing the poor state of Maternal and Child health in India. Several Socio-Cultural barriers prevent the millions of poor, vulnerable and marginalised people across the country to utilize the services offered by such programs. MAMATA a Conditional Cash Benefit (CCB) Schemes aims to address such barriers by incentivising the service utilization. Objectives: 1. Study the utilization of MCH services under MAMATA 2. Suggest observation based recommendation for addressing any shortcomings in the scheme. Materials & Methodology: Community based observational study. 200 pregnant women registered under MAMATA Scheme were randomly selected in Kukudakhandi Block and followed up for a period of 15 months. Results & Discussion: 60% of the study populations were in the age group of 20-24 years. Socio Cultural barriers of service utilization like Caste (SC- 26.5%, ST-24%, OBC-31%), Low SES (94%), Illiteracy (34%), Unemployment (74.5%) were found to be prevalent amongst them. Many problems were faced initially by the beneficiaries - Limited knowledge about its conditionality's (21%), difficulty in opening of bank account (88%), registration with- in stipulated time period (72.5%). All the 20 pre-conditions of the scheme were fulfilled by 100% of the sampled population, in some cases reluctantly. Exclusive Breast Feeding, one such pre-condition though claimed to be carried out by 100% was actually practiced by only 20% of beneficiaries. Conclusion: The scheme was successfully able to address the gap in service utilization of MCH services. Its implementation has been smooth and readily accepted by the beneficiaries in the study area

Key Words: MCH, MAMATA, CCB, MMR, IMR, ANC, IFA, Vaccination, IGMSY, DMMAS, NAMHHR.

INTRODUCTION

The unacceptable poor state of Maternal and Child Health conditions prevalent in EAG states of India, is more because of the non-utilization of the available services (Demand barrier) than due to non-availability of services (Supply barrier). While most of the programs in RCH and RMNCH+A address the Supply barrier, the crucial aspect of Demand barrier is often neglected. [1,2] Conditional Cash Transfer Schemes (CCTS) incentivises service utilisation by the beneficiaries in form of cash benefits provided they fulfill certain pre-conditions as laid down by the scheme. [3,4] The success of JSY[5,6] in increasing in the number of Institutional Deliveries in India, is a proof that such schemes can address the Socio-cultural barriers preventing service utilization.

In keeping with its Commitment of improving the MCH Status the Government of Odisha launched MAMATA Scheme [7] on October 19th 2011. A CCTS aiming to improve the utilisation of MCH services within the state, the scheme provides for a partial wage compensation of Rs.5000 to be disbursed in four incentives over a period of one year. Each incentive is subjected to some preconditions targeted to reduce mortality and morbidity among the beneficiaries. There are 20 such Pre-conditions in total. The entire scheme and most of its pre-conditions are based on the platform of ICDS. This study throws light on the key aspects of utilization of MCH services through the scheme in the study area.

Aims and objectives:

1. To study the utilization of MCH services under MAMATA scheme
2. To suggest observation-based recommendations

MATERIALS & METHODOLOGY

Place- The present study was carried out in rural areas of Ganjam district.

Study period- 2 years i.e. from October 2011 to November 2013

Study Area- Kukudakhandi block randomly selected out of 22 blocks.

Study Design- Community based observational study.

Details of sampling- The study population constituted of 903 pregnant mothers of the Kukudakhandi block registered under Mamata scheme from January 2012 till June 2012. For the purpose of proper representation and considering the time and resources at hand, a minimum sample size constituting about 20% of the total study population (180) was considered adequate. Additionally to account for non-response or loss during follow-up additional beneficiaries constituting 10% of the sample size (20 in total) was taken. Based on this criterion a sample population of 200 Mamata beneficiaries was randomly selected.

Since the present Mamata scheme is set to run on the platform of ICDS, AWC acts as the focal point for delivery of services for Mamata. Randomly 12 AWC's from each sector thus constituting a total of 84 AWC's from all the seven sectors of the block were chosen, and the beneficiaries registered from these centres constituted the sampling frame (432) for the study. Amongst them, randomly 200 pregnant mothers were selected and followed up for a period of 15 months, after subjecting them to the following exclusion and inclusion criteria's–

The Inclusion Criteria's-

I. A resident of Kukudakhandi block.
II. She should be willing to stay in the block for the entire period of follow-up (15 months)
III. Given informed consent to participate in the study.

The Exclusion Criteria's-

I. Those who did not plan on staying in the study area for the period of follow-up
II. Those who had abortions, still births or infant deaths during the course of study.

Statistical Analysis: Data analysed with Microsoft EXCEL and SPSS software in the Department of Community Medicine using percentages and proportions to draw conclusions.

RESULTS

Table-1 shows majority of the beneficiaries were Hindu (73%), living in a joint family (65.5%), belonging to the age group of 19-24 years (83%).Caste wise the population was evenly distributed with 26.5%, 24%, 31% & 18.5% of population belonging to Scheduled Caste, Scheduled Tribe, Other Backward Caste and general caste respectively. It was also observed that 94% of the subjects belonged to Low socio-economic status. Table-2 explains the illiteracy rates among the beneficiaries and their spouses were 34% 12.5% respectively. Only 31% of the pregnant and lactating women were able to complete their studies

till High School or beyond, compared to 68% of their spouses. Three fourth of the beneficiaries were involved in house-hold activities. Most of their spouses were either daily wage labourers (42.5%) or farmers (24.5%) with limited source of income to look after their family. 94.5% of the beneficiaries had registered themselves under the scheme before the stipulated period of six months of gestation. Special consideration was given to the rest 5.5% enabling them to register after 6 month of gestational age. AWWS were the main source of information regarding MAMATA scheme in majority of cases (76.5%). Table-3 shows only 21% of sample population knew all the norms and conditions of the scheme before registering. Majority of the beneficiaries (66.5%) enrolled into the Mamata for the monetary assistance it offered without having any idea about its conditionality. Table-4 reflects details of instalments which revealed that services like registration of pregnancy, Antenatal Check-up, TT immunization and taking of IFA tablets ware readily utilized with more than 75% of beneficiaries availing them before the stipulated period of time.

Table: 1 (Socio-cultural profile of the beneficiaries):

Sl/No	Socio-Demographic Characteristics	Attributes	Number of Sample Population (n= 200)	Percent of Sample Population (%)
1	**Age group**	< 20	46	23.00%
		20 - 24	120	60.00%
		25- 29	19	9.50%
		30-34	11	5.50%
		35+	4	2.00%
		Total	200	100%
2	**Religion**	Hindu	146	73.00%
		Muslim	4	2.00%
		Christian	28	14.00%
		Others	22	11.00%
		Total	200	100%
3	**Caste**	Schedule Caste	53	26.50%
		Schedule Tribe	48	24.00%
		Other Backward Caste	62	31.00%
		General	37	18.50%
		Total	200	100%
4	**Type Of Family**	Nuclear Family	69	34.50%
		Joint Family	131	65.50%
		Total	200	100%
5	**Socio economic status**	Low	188	94.00 %
		Middle	10	5.00 %
		High	2	1.00 %
		Total	200	100%

Table: 2 (Literacy and Occupational Status of the Study Sample):

SL	Level of Education	Beneficiaries (n=200)	Spouses of Beneficiaries (n=200)
1	Illiterate	68(34.00%)	25(12.50%)
2	Primary School	34(17.00%)	17(8.50%)
3	Middle School	36(18.00%)	22(11.00%)
4	High School	30(15.00%)	46(23.00%)
5	Higher Secondary	24(12.00%)	68(34.00%)
6	Graduate/ Post Graduate	8(4.00%)	22(11.00%)
	Total	200(100%)	200(100%)
	Occupation		
1	House Hold Activities/Unemployed	149(74.50%)	1(0.50%)
2	Labourers	27(13.50%)	85(42.50%)
3	Farmers	11(5.50%)	49(24.50%)
4	Business	5(2.50%)	20(10.00%)
5	Other Un-organized Sector	5(2.50%)	30(15.00%)
6	Organized Sector	3(1.50%)	15(7.50%)
7	House Hold Activities/Unemployed	149(74.50%)	200(100%)

Table: 3 (Awareness about Mamata at the time of registration):

	Awareness	Number of beneficiaries (n=200)	Percent age (%)
1	Aware of all norms and conditions	42	21%
2	Aware of cash incentives only	133	66.5%
3	Partly aware of some norms and conditions	25	12.5%
	Total	200	100%

Utilization of services mandated under the second instalment were 100%, with minimal or no delay on the part of beneficiary in seeking for vaccination services. The preconditions for third instalments like exclusive breast feeding for six months and introduction of age appropriate complementary feeding by that

age were fulfilled (100%) as recorded in registers. However, a close follow-up of the sample population revealed that only 20% of the beneficiaries had provided exclusive breast feeding to their child, with an alarming 70% of them discontinuing it before three months of Infants age as per Table-5.

Table: 4(Details of the Instalments):

	SN	Conditions to be fulfilled	Fulfilled within the stipulated time* (n=200)	Fulfilled after the stipulated time (n=200)	Would not have fulfilled had it not been mandatory (n=200)
First Instalment (* 6 Completed month of Gestation)					
	1	Pregnancy registered at AWC	144 (77.00%)	46 (23.00%)	60 (30.00%)
	2	Received at least 1 ANC check-up	150 (75.00%)	50 (25.00%)	40 (20.00%)
	3	Received IFA tablets	150 (75.00%)	50 (25.00%)	38 (19.00%)
	4	Received 1 dose of TT Vaccine	146 (73.00%)	54 (27.00%)	6 (3.00%)
	5	Attended 1 counselling session	80 (40.00%)	120 (60.00%)	142 (71.00%)
Second Instalment (***3 completed months of Infants age)**	6	Registration of Child Birth.	157 (78.50%)	43 (21.50%)	21 (11.50%)
	7	Received BCG vaccination.	200 (100%)	0 (0%)	0 (0%)
	8	Received OPV-1 & DPT-1.	200 (100%)	0 (0%)	0 (0%)
	9	Received OPV-2 & DPT-2.	189 (94.50%)	11 (5.50%)	8 (4.00%)
	10	Attended 2 IYCF counselling session.	67 (33.50%)	133 (66.50%)	162 (81.00%)
	11	Child has been weighed 2 times.	164 (82.00%)	36 (18.00%)	20 (10.00%)
Third Instalment (***6 completed months of Infants age.)**	12	Child has been exclusively breast fed.	_____	_____	_____
	13	Introduced to complementary feeding after 6 months.	_____	_____	_____
	14	Received OPV-3 & DPT-3.	194 (97.00%)	6 (3.00%)	4 (2.00%)
	15	Attended 2 IYCF counselling session.	49 (24.50%)	151 (75.50%)	160 (80.00%)
	16	Child has been weighed 2 times.	73 (36.50%)	127 (63.50%)	139 (69.50%)
Fourth Instalment (***9 completed months of Infants age**)	17	Received Measles Vaccine	84 (42.00%)	116 (58.00%)	44 (21.00%)
	18	Received first dose of Vitamin-A	84 (42.00%)	116 (58.00%)	44 (21.00%)
	19	Complementary feeding is being continued	_____	_____	_____
	20	Child has been weighed 2 times.	42 (21.00%)	158 (79.00%)	170 (85.00%)

Table: 5 (Breast feeding practices among the beneficiaries):

SL	Exclusive breast feeding continued for	Number of beneficiaries (n=200)
1	Less than one month	66 (33.00%)
2	For one to two months	24 (12.00%)
3	For two to three months	50 (25.00%)
4	For three to four months	9 (4.50%)
5	For four to five months	7 (3.50%)
6	For five to six months	4 (2.00%)
7	Exclusive breast feeding for six months	40 (20%)
	Total	200 (100%)

It was also observed that fulfilment of conditionality's such as attending IYCF counselling sessions (75.5%) and weighing of child (63.5%) were delayed in maximum cases, because they did not think it was necessary, and had to do it in the last minute out of compulsion. Only 42% of the sample population had taken measles with vitamin-A within the stipulated time, while the rest had to be traced and urged by AWW to take the vaccination.

DISCUSSION

The study population (903) constituted of 74.4% of total registered pregnancies (1210) in the block. It was found that not a single pregnant or lactating woman fulfilling the criteria of Mamata, was left out from obtaining its benefits in the study area.

A study conducted by National Alliance for Maternal Health and Human Rights(NAMHHR) [8] in four states of India including Odisha, for assessing the utilization of IGMSY scheme revealed that in Bargarh district of Odisha, no potential beneficiary were left out**,** compared to 37% and 22% in Uttar Pradesh and Jharkhand, thus highlighting the efficiency of ICDS staff of Odisha.

Majority of the beneficiaries were in the age group of 20-24 years (60%), Hindu (73%), living in a joint family (65.5%). Caste wise the population was evenly distributed among SC (26.5%), ST (24%) and OBC's (31%). Only 18.5% belonged to general caste, presumably because majority of them were employed in the government sector, which disbars them from utilizing Mamata services.

An Exploratory Case Study was conducted in two districts of Tamil Nadu with a study Population of 200, for exploring the utilization of DMMAS scheme [9] in the study, majority of the population were found to be Hindus with 72% belonging to the age group of 18-25 years, and two-thirds of them living in the nuclear family. 31% of them belonged to SC & ST while 68% belonged to OBC.

The Socio-Economic Status of the Sample population is assessed by using Family Formation Pattern and Health Scale, WHO (1976). The study revealed that majority of subjects (94%) belong to Low socio- economic status, thus reiterating the fact that even though BPL (Below Poverty Line) criteria was not used for selection of beneficiary in the Scheme, majority of disadvantaged population are getting its benefits without being side-lined. De la Brière et al [10] observed that most CCT programs are very well-targeted and effective in reaching the poor and the excluded groups, notably the extreme poor living outside the reach of social protection programs tied with formal sector employment. They computed that on an average, 80% of the benefits go to the 40% poorest families.

The study revealed that 34% of beneficiaries and 12.5% of their spouses were illiterate. Singh MK et al [11] in their study noted that educated women with an educated husband belonging to higher SEC had higher odds of utilization of ASHA services. The AHS-2011 [12] estimates the literacy rates in Ganjam district to be 65.7% for females and 84.6% in males.

One of the objectives of Mamata scheme was to provide partial wage compensation to people employed in un-organized sectors. For such people trying to meet their daily needs is a struggle and a day off from work, even during the period of pregnancy is a luxury only a few could have afforded. Study revealed that such people got the benefits of Mamata without any roadblocks. 74.5% of the beneficiaries were involved in house-hold activities like cooking, washing, looking after elders, animal live-stock etc. Most of their spouses were either daily wage labourers (42.5%) or farmers (24.5%).

The NAMHHR study on IGMSY shows that 98-99 percent was engaged in agriculture, construction and trade works. Similarly PHRN study on DMMAS where 88% of the beneficiaries were engaged in unpaid work with only 12% had paid work. 93% of their spouses were working under the unorganized sector.

Only 21% of sample population was aware of all the norms and conditions of the scheme before registering. Majority of the beneficiaries (66.5%) enrolled for the monetary assistance it offered without having any idea about its conditionality. This lack of awareness usually precipitated in delays for fulfilling the conditionality of future instalments. The source of

information was AWWs in majority (76.5%) of cases.

Service Utilization for first instalment of Rs.1500 (given at the end of 6 months of gestation on fulfilment of five pre-conditions):

It was observed that 72.5% of the beneficiaries in the study sample had registered themselves within the stipulated period of time (before 4 month of gestation), while in 22% of the cases the period of registration had to be extended to 6 months of gestation. Special consideration was given to 11 cases (5.5%) who had failed to register after 6 months of gestation, by the order of Collector Ganjam District.

The study revealed that 88% of beneficiaries faced problems in obtaining a savings account, the primary reason being the lack of an identity proof. On the other hand the DMMAS study showed that less than 6% encountered any problems in applying for the scheme.

The Scheme is operationalized to work under the platform of ICDS, with Angan-Wadi Worker (AWW) being the official responsible for social mobilization. It was observed that 76.5% of the beneficiaries learnt about the scheme through the AWW. In rest of the 23.5% cases it was a friend or health staff & posters. PHRN group in their study on utilization of MCH services under DMMAS had found that 80% of the beneficiaries got the information from health functionaries and about a quarter from AWWs.

In more than 25% of the cases the conditions requisite for getting the first instalment were fulfilled beyond the stipulated time. In most of these cases the beneficiaries had no knowledge about the conditionality of scheme. The AWW had to track them down and convince them to avail the service.

As per Annual Health Survey-2011, only 48.5% of pregnancies were registered in Ganjam district. Though 93.2% of pregnant mothers undergo ANC, only 60.2% do so in first trimester. 92% of pregnant women received at least one TT injection, while only 30.7% of them consumed. 100 IFA tablets The 100% utilization of the afore mentioned services by the Mamata beneficiaries, in the present background shows that the scheme has been able to achieve its objective of addressing the “Demand barrier” and increasing the utilisation of maternal and child health services in the study area.

Services like registration, ANCs, TT immunization & IFA intake were readily utilized with more than 75% of them availing before the stipulated period of time. In many cases though IFA tablets were procured by the beneficiaries, most of them have not taken the full recommended dose of 100 tablets. With a documented high prevalence of anaemia rate in the area, it would be well advised to have a conditionality of completing the IFA dosage instead of just procuring them.

Majority of them (71%), said that they would not have attended antenatal counselling had it not been mandatory under the scheme and 60% of the beneficiaries attended the counselling sessions way beyond the stipulated period of time, only after they realized it as a precondition for first instalment.

Service Utilization for second instalment of Rs.1000 (given when the infant is 3 months of age on fulfilment of six pre-conditions):

The services mandated under the second instalment were utilized by all (100%) the beneficiaries. The current trends in Ganjam [13] shows that though the coverage of new born children with BCG vaccine is more than 96%, subsequent vaccination rates decline rapidly. For example only 61% of children are found to have taken 3 doses of polio vaccine, and only 40.5% have completed their 3 doses of DTP vaccine. The rates of booster doses decline even further. This is attributed to loss of contact with health professional subsequent to delivery. Mamata with its conditionality ensures that the beneficiary remains in contact with health professional

regularly thereby avoiding such short comings.

Beneficiaries were hesitant in assessing Counselling services, with an unprecedented 81% of the beneficiaries admitting that they would not have availed the services had they not been mandatory.

Vaccination services were availed by 100% of the beneficiaries in time. No delays were noticed in fulfilling the stipulation of weighing of child at least two times after birth.

Service Utilization for third instalment of Rs.1000 (given when the infant is 6 months of age on fulfilment of five pre-conditions):

The first two preconditions for third instalments necessitates exclusive breast feeding for six months and introduction of age appropriate complementary feeding. The verification of the fulfilment of this clause is done by the self-declaration of mother. All the beneficiaries (100%) furnished such certificates claiming ideal breast feeding practices. However a close follow-up revealed that only 20% had provided exclusive breast feeding, with an alarming 80% of them dis-continuing it before three months of Infants age. As per AHS-2011, only a quarter (25%) of the children is exclusively breast fed for six months in Ganjam district. Similar observations were made by PHRN group which states that though the DMMAS beneficiaries continued to breast feed their child for a year, the data regarding exclusive breast feeding was inconclusive.

The reasons attributed to such behaviour were of insufficient milk production, early resumption of house hold work and influence of elder members of the family. Counselling especially at the IYCF counselling sessions in this regard would go a long way in bridging the knowledge gaps of these young mothers. [14] Though such sessions are made mandatory under the Mamata scheme a disturbing 69.5% of the beneficiaries felt that they would not have attended the counselling session had it not been a criterion for monetary incentive.

Service Utilization for the fourth instalment of Rs.1500 (given when the infant is 9 months of age on fulfilment of four pre-conditions):

The willingness and interest on part of the beneficiary to vaccinate her child sadly seems to be fading when it comes to taking Measles vaccination and Vitamin-A prophylaxis as compared to previous vaccinations. DLHS-2 [15] and NFHS- 3 [16] data also showed the same decreasing trend of vaccination. The existing trends of measles & Vitamin-A supplementation in Ganjam are 82% and 60.2% respectively (AHS-2011). Almost 58% of the beneficiaries had to be traced and urged by AWW to take the vaccination, as they had not done so within the stipulated period of time. Over 21% of them felt that they would not have taken had they not been compelled to do so by the scheme. This could be either due to long period of non-contact with the health personnel after DPT-3 & OPV-3 or due to repeated stock out of vaccines. Measles and Vitamin A deficiency are considered as the main reasons behind prevailing high level of child malnutrition in India. In light of this, the importance of Mamata in promoting the utilization of MCH services in the study area cannot be under estimated.

CONCLUSION

Despite being a relatively new scheme, the utilization of Mamata in the study area has been smooth and readily accepted by the beneficiaries. No eligible beneficiary has been deprived of the schemes benefit highlighting the efficiency of the ICDS staff. Without making BPL as a criterion for selection, the scheme is able to reach out to the most deprived and vulnerable groups in the community. Most of them enrolled into Mamata for monetary assistance without knowing the norms and conditionality's of the scheme. Although the utilization of MCH services mandated under the scheme were 100%, some conditionality's like counselling sessions mandatory under the scheme were the reason

for discomfort amongst few. Similarly self-certification regarding exclusive breast feeding and appropriate complementary feeding, full course of IFA intake made by all, but only few of them had done so in reality. However with regard to different mandatory conditionality's of the scheme, it has proven to be successful in filling the gap between policy and people, still there is scope for proper training and capacity building of AWWs regarding the scheme. Provision of adequate and equitable full wage compensation, in order to meet all objectives and offer equity with the organized sector is recommended. Also conditionality's like exclusive breast feeding and start of complementary feeding should be parted with, instead beneficiaries should be encouraged to adopt these best practices at their own rather than out of compulsion.

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