

Original Research Article

Knowledge, Awareness and Utilization of JananiSurakshaYojana Services among Mothers of children (0-2years) attending AWC's of UHTC, Burla : A Cross-sectional study**Bharati Panda¹, Sushree Priyadarsini Satapathy², Abhishek Dandapat^{3*}**¹*Assistant Professor, Department of Community Medicine, VIMSAR, Burla, India*²*Senior Resident, Department of Community Medicine, VIMSAR, Burla, India*³*Postgraduate Student, Department of Community Medicine, VIMSAR, Burla, India***Received: 26-04-2021 / Revised: 09-06-2021 / Accepted: 07-07-2021****Abstract**

Background: Safe motherhood is perceived as a human right and the health sector is always encouraged to provide quality services to ensure the same. Government of India launched a conditional cash benefit scheme called JananiSurakshaYojana (JSY) on April 11, 2005 under the flagship of National Rural Health Mission (NRHM) to reduce Maternal Mortality Rate (MMR) and Neonatal Mortality Rate (NMR) by promoting institutional deliveries for which cash assistance are provided to mothers delivering in health facilities. **Methods:** It was a cross sectional study conducted among 120 beneficiaries of UHTC, Burla from July 2019 to Dec 2019. Consecutive convenient sampling technique was used in which the list of JSY scheme eligible candidates (mothers) from ANC register of Anganwadi Centres (AWCs) under UHTC, Burla were included for study purpose, out of which, 120 beneficiaries were found to be eligible for this study. These beneficiaries were interviewed with pretested, predesigned, semi structured questionnaire in the AWCs after obtaining verbal consent. **Results:** Majority of the JSY beneficiaries (64.2 %) were in the age group 20-25 years and 50 % of them heard about JSY scheme before pregnancy. ASHA (25 %) and AWWs (47.5 %) are the main source of information. 97.5 % registered their pregnancy at government institutions out of which 80.8 % registered in the first trimester. 80.8 % beneficiaries had undergone more than 4 ANC's and majority of them (33.33 %) had not received any PNCs. Maximum beneficiaries (86.7 %) had received the incentives through self-account credit. **Conclusion:** Awareness and knowledge is better in our study but utilization of this scheme remains less. Majority of women ignored postnatal care. Intensification and strengthening of IEC is required.

Keywords: JSY, beneficiaries, ANC, institutional delivery, ANM, AWW, incentive, PNC, UHTC

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Introduction**Background**

India accounted for 19 % of the globally estimated 2,87,000 maternal death in 2010[1]. Maternal mortality ratio (MMR) of India has declined from 212/1,00,000 live births in 2007-09 to 178/1,00,000 live births in 2010-12[2]. Most of the neonatal deaths in developing countries occur at home, unattended by skilled health professional [3]. Safe motherhood is perceived as a human right and the health sector is always encouraged to provide quality services to ensure the same. Thus, Government of India launched JananiSurakshaYojana (JSY) – a maternity benefit scheme in 12 April 2005 under the flagship of National Rural Health Mission (NRHM) and is presently under National Health Mission (NHM)[4]. It was implemented under the objective of reducing maternal and neonatal mortality by promotion of institutional delivery.

Important features of JSY are –

- The scheme focuses on the poor pregnant woman with special dispensation for states having low institutional delivery rates namely the states of Uttar Pradesh, Uttaranchal, Bihar, Jharkhand, Madhya Pradesh, Chhattisgarh, Assam, Rajasthan,

Orissa and Jammu and Kashmir. While these states have been named as Low Performing States (LPS), the remaining states have been named as High performing States (HPS).

- Tracking Each Pregnancy:** Each beneficiary registered under this Yojana should have a JSY card along with a MCH card. ASHA/AWW/ any other identified link worker under the overall supervision of the ANM and the MO, PHC should mandatorily prepare a micro-birth plan. This will effectively help in monitoring Antenatal Check-up, and the post-delivery care.
- Eligibility for Cash Assistance:** BPL Certification – This is required in all HPS states. However, where BPL cards have not yet been issued or have not been updated, States/UTs would formulate a simple criterion for certification of poor and needy status of the expectant mother's family by empowering the gram pradhan or ward member.

Scale of Cash Assistance for Institutional Delivery

Category	Rural area		Total	Urban area		Total
	Mother's package	ASHA's package	Rs.	Mother's package	ASHA's package	Rs.
LPS	1400	600	2000	1000	200	1200
HPS	700		700	600		600

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In Odisha (low performing state), JSY scheme was first implemented in June 2006 and is presently running in all government facilities and accredited private health institutions[3]. JSY scheme integrates cash assistance with delivery and post-delivery care. Each beneficiary should have JSY scheme card along with Mother and Child Protection (MCP) card. Both the women and Accredited Social Health Activist (ASHA) are given cash assistance for ensuring a safe institutional delivery.⁶ ASHA bridges the gap between healthcare provider and client, thereby motivating women and their families to seek delivery care at a health facility near to them[7]. JSY scheme, being a centrally funded conditional cash transfer scheme for incentivization of mother of low socioeconomic status had a great impact in reducing maternal and newborn health morbidities and mortalities by promotion of institutional delivery. A recently published article in 'The Lancet' journal indicates that introduction of JSY scheme in India has been associated with a significant reduction of 3.7 % perinatal death per 1000 pregnancies and 2.3 % neonatal deaths per 1000 live births[8,9].

Aims and Objectives

1. To assess the knowledge and awareness regarding JSY scheme among the enlisted mothers of children (0-2years) from ANC register of Anganwadi Centres(AWCs) under UHTC,Burla
2. To assess utilisation pattern of the scheme among the JSY scheme beneficiaries.
3. To find out the association between utilisation of JSY scheme & Socio-demographic variables.

Methods

Study Design:It was a cross-sectional observational study.

Study Setting:The study was conducted by enlisting JSY scheme eligible mothers from ANC register of Anganwadi Centres(AWCs) under UHTC,Burla of Veer Surendra Sai Institute of Medical Sciences And Research (VIMSAR), Burla.

Study Duration:This study was conducted in the period from July 2019 to December 2019.

Study Population:120 women having children 0- 2 years of age (the list of JSY scheme eligible candidates from ANC register from Anganwadi Centres(AWCs) under UHTC,Burla) were included for our study purpose.

Sample Size:120 beneficiaries enlisted from ANC register of Anganwadi Centres(AWCs) under UHTC,Burla were included

Sampling Technique:Consecutive convenient sampling used to get the list of JSY scheme eligible candidates from ANC register from Anganwadi Centres(AWCs) under UHTC,Burla. 13 AWCs under UHTC (50 %), Burla out of 25 AWCs were selected for our study purpose by lottery method (randomly).140 women having children 0-2 years of age who had already registered their pregnancy at AWC's of UHTC, Burla were interviewed out of which 3 refused and 17 gave partial answers hence 120 were considered for our study. The final interview and analysis of our study included the same.

Study Tool:Pre designed pretested semi structured questionnaire.

Data collection method:The list of JSY scheme eligible candidates were sorted out from 13 AWCs under UHTC, Burla out of 25 AWCs by lottery method (50 % of total AWCs).We did consecutive sampling and selected maximum beneficiaries. All the registered beneficiaries of AWCs were included in the study(140-Mothers). After taking informed consent of the respondents, information on beneficiaries & their husband's age, religion, caste, education, occupation, possession of Below Poverty Line (BPL) card issued by state government of Odisha, socioeconomic status, place of child birth as well as eligibility and receipt of cash incentive under JSY scheme were collected through a pretested and predesigned questionnaires with the assurance that confidentiality will be maintained.

Statistical analysis:The data was analyzed using Statistical Package for the Social sciences (SPSS) version 26 and interpreted to draw the conclusion about the success rate of awareness and utilization of JSY scheme in the area. Categorical variables expressed in number, frequency and percentage. Association between the variables were analyzed using chi-square. The difference was said to be significant if p value is less than 0.05.

Ethical Approval:Ethical clearance for conducting the study was taken from the ethical committee of the institution (VIREC Reg. No.ECR/ 861/ Inst/OR/2016) i.e. VIMSAR, Burla.

Data source

- a) By interviewing post-partum mothers themselves.
- b) By inspection of the MCP card.
- c) By inspection of JSY scheme register

Inclusion Criteria

- a) Post-natal mothers who delivered b/w the month of May 2019 to October 2019
- b) Aailed services under JSY scheme.
- c) Willing to participate in study.

Exclusion Criteria

- a) Age less than 19 years of age.
- b) Postnatal mothers who lost their baby either due to still birth/ neonatal birth.
- c) Delivered after April 30 2019 & have more than 2 children.
- d) Mothers who have registered at rural health center's but residing in urban areas.

Results

The study was conducted among 140 mothers, out of which 3 (refused to participate) did not give consent to this study and 17 (provided partial answers) answered inappropriately who were excluded from this study, 120 beneficiaries who gave consent with complete answers in the interview were taken for final interview and analysis.

Table 1:Socio-demographic Profile of the Study Population

Variables	Frequency (n=120)	Percentage (%)
Age Group (In Years)		
≤19	8	6.7
20-25	77	64.2
26-30	28	23.3
>31	7	5.8
Caste		
GENERAL	23	19.2
SEBC	33	27.5
SC	48	40.0
ST	16	13.3
Educational Status		
Illiterate	19	15.8
Lower primary	36	30.0
Upper primary	44	36.7
Intermediate	14	11.7

Graduate	7	5.8
Income		
≤10000	77	64.2
10000-40000	41	34.2
>40000	2	1.7
Occupation		
Housewife	106	88.3
Govt. Job	6	5.0
Pvt. Job	8	6.7
Socioeconomic Status		
Upper	6	5.0
Upper middle	38	31.7
Lower middle	39	32.5
Upper lower	37	30.8
Type of family		
Joint	45	37.5
Nuclear	60	50
Three Generation	15	12.5
BPL		
Yes	43	35.8
No	77	64.2

Table 1- depicts majority of JSY scheme beneficiaries i.e. 77 (64.2 %) were in the age group of 20-25 years. As per our study 44 (36.7 %) of the beneficiaries were educated up to upper primary level. It was found that 48 (40 %) of them belonged to scheduled caste. Most of the beneficiaries i.e. 106 (88.3 %) were homemaker's or housewives by occupation. Majority i.e. 60 (50 %) belonged to nuclear families. 38 (31.7 %) of them belonged to upper middle socioeconomic status, 39(32.5 %) belonged to lower middle socioeconomic status, and 37 (30.8 %) to upper lower socioeconomic status as per modified Kuppuswamy scale of socioeconomic status.

Table 2: Awareness and Knowledge About JSY

	Frequency (n=120)	Percentage (%)
Time When Heard about JSY		
Before pregnancy	60	50
During pregnancy	34	28.3
After delivery	9	7.5
Still ignorant	17	14.2
Source of Information		
Asha	30	25
ANM	6	5
AWW	57	47.5
Others	10	8.3
Still Ignorant	17	14.2
Knowledge of JSY		
Cash incentive	64	53.3
Institutional delivery	10	8.3
Cash incentive+ institutional delivery	29	24.2
Still ignorant	17	14.2

It was observed in table 2 that 60 (50 %) of study population have heard about JSY scheme before pregnancy. The main source of information was Anganwadi worker (AWW) who was the source of information to 57 (47.5 %) of them. Maximum of the beneficiaries i.e. 64 (53.3 %) have an idea that JSY scheme is all about cash incentivization regarding other benefits they were unaware.

Table 3: Utilization of JSY Services among the Beneficiaries

	Frequency (n=120)	Percentage (%)
Pregnancy Registration		
Govt. Hospital	117	97.5
Pvt. Hospital	2	1.7
Not registered	1	0.8
Timing of Registration		
1 ST Trimester	97	80.8
2 ND Trimester	22	18.3
Not Registered	1	0.8
No. of ANC		
0	1	0.8

1	1	0.8
2	4	3.3
3	10	8.3
4	7	5.8
>4	97	80.8
Mode of Travel		
Rented vehicle	89	74.2
Any other	23	19.2
No travel	7	5.8
Not applicable (in gestation)	1	0.8
Place of delivery		
Govt. Institutional	109	90.8
Pvt. Institutional	2	1.7
Home delivery	7	5.8
On the way	1	0.8
Not applicable (in gestation)	1	0.8
Did Asha accompany		
Yes	67	55.8
No	52	43.3
Not applicable	1	0.8
If home delivery, assisted by		
Skilled birth personnel	0	
Unskilled birth personnel	7	5.8
Postnatal visit		
0	40	33.3
1	22	18.3
2	29	24.2
3	11	9.2
4	18	15
Received money		
Account credit	104	86.7
Not received	16	13.3

Information on utilization of services under JSY scheme from 120 women was collaborated and results were analyzed underutilization of antenatal care, delivery care, and postnatal care services from table 3.

Antenatal Care Utilization Patterns

The study revealed that 117 (97.5 %) of them registered their pregnancy in government institutions. Majority of the beneficiaries i.e. 97 (80.8 %) registered during 1st trimester of pregnancy. It was observed that 97 (80.8 %) of the participants underwent more than 4 Antenatal checkups at health centers.

Delivery Care Utilization Patterns: 109 (90.8 %) among the beneficiaries delivered in government hospitals and 7 (5.8 %) delivered at home. It was also found that 89 (74.2 %) of the beneficiaries reached the place of delivery via a rented vehicle. 67 (55.8 %) of the women were accompanied by ASHA to the institution.

Postnatal Care Utilization: The study shows that majority of the beneficiaries had not taken any postnatal visit i.e. 40 (33.33 %) to the health centers. It shows that majority of the beneficiaries 95 (79.2 %) received JSY scheme incentive through account credits (individual bank accounts given at time of registration).

Table 4: Association of socio-demographic profile with timing of registration

Socio-demographic profile	Timing of Registration		Chi-Square Test (P-value)
	During first Trimester (n=97)	During second Trimester (n=23)	
Age Groups (In Years)			
≤25	75(77.3 %)	10(43.5 %)	X ² =10.306
>26	22(22.7 %)	13(56.5%)	P=0.001326**
Occupation			
Housewife	84(86.6 %)	21(91.3 %)	X ² =0.3756
Working lady (Govt. Job+ Pvt.Job)	13(13.4%)	2(8.7%)	P=0.539475
Educational Qualification			
Illiterate	13(13.4%)	6(26.1 %)	X ² =2.2448
Literate (Primary+ Upper Primary+ Intermediate+ Graduate)	84(86.6%)	17(73.9 %)	P=0.134063
Socio-Economic Status			
Upper + Upper middle +Lower middle(Upper)	72(74.2 %)	10(43.5%)	X ² =8.1233
Upper lower+ lower (Lower)	25(25.8 %)	13(56.5%)	P=0.00437**

** P-Value <0.05 it is significant

As per table 4, statistically there is no significant association between occupation, educational qualification and time of pregnancy registration i.e. maximum number of beneficiaries (77.3 %) is in age group greater than 25 years who have registered during first trimester. It can be clearly seen that pregnancy at younger age is significantly associated with early registration of pregnancy ($P=0.001326$). Similarly women with the level of educational qualification of primary, intermediate & graduate level (86.6 %) have registered themselves in first trimester of pregnancy. Higher Socio-Economic Status is significantly associated with early registration of pregnancy ($P=0.00437$).

Discussion

This study vividly brings out the fact that the study respondents were definitely being primed about this 100 % centrally sponsored JSY scheme.

This study found that majority of the beneficiaries 77(64.2 %) were in the age group of 20 -25 years of age. This study finding is similar to a study conducted in Himachal Pradesh by DrPremal Chauhan¹⁰ in which 64 % of the beneficiaries under JSY scheme were in this age group. Our study reveals that 44 (36.7 %) of the beneficiaries were educated up to upper primary level. Similar reference came from another study conducted in urban areas of Bhubaneswar by DrIpsa Mahapatra¹¹ that most of the beneficiaries (30.57 %) were educated up to matriculate level. Majority of the beneficiaries in our study belong to nuclear families i.e. 60 (50 %) in contrast to the study carried out at tribal area of Thane district of Maharashtra¹² where majority of them belong to joint families i.e. 72.7 %. An equitable distribution of upper middle socioeconomic status 31.7 %, lower middle socioeconomic status 32.5 %, and upper lower socioeconomic status 30.8 % according to modified Kuppuswamy scale are found in our study. Similar findings were observed in another study^[13] where upper middle socioeconomic status were 27.1 %, lower middle socioeconomic status 34.3 % and upper lower socioeconomic status 29.6 %. This study found that majority of the beneficiaries i.e. 60(50 %) heard about JSY scheme before pregnancy which is better as compared to a study held at urban slums of Raipur in which majority (49.03 %) of the beneficiaries heard about JSY scheme during their pregnancy^[14]. Awareness regarding JSY scheme before pregnancy will help the pregnant mother to avail all the services in better way in comparison of getting to know of it in intranatal & postnatal period. Anganwadi worker played the key role in dispersion of information regarding JSY scheme to the beneficiaries i.e. about 47.5 % of the beneficiaries. Similar study conducted in Maharashtra^[15] reveals that ANMs (45.87 %) are major source of information. Majority of the beneficiaries in our study (53.5 %) as well as in the study of rural area of North India.¹⁶ 65.85 % of the beneficiaries were ignorant about the prime motive of JSY scheme i.e. to promote institutional delivery to decrease Maternal Mortality Rate (MMR) and Infant Mortality Rate (IMR). The study also observed that about 97.5 % of the beneficiaries registered their pregnancy at government hospitals during first trimester of pregnancy. The same results were found in the study performed among urban areas dwellers of Bhubaneswar¹¹ i.e. 94.65 % of the beneficiaries registered at government hospitals during first trimester. Maximum or more than 4 antenatal checkups were attended by 80.8 % of the beneficiaries in our study which is comparatively more than the study conducted at rural area of Punjab i.e. 55.67 %¹⁷ of the beneficiaries. It was found that 74.2 % of the beneficiaries reached the place of delivery by hiring a vehicle and 55.8 % of the beneficiaries were accompanied by ASHA. A contrasting scenario was seen in the study of rural area of north India^[16] where 48.09 % of the beneficiaries were benefitted by free transport facility and 79.39 % of the beneficiaries were accompanied by ASHA. Interestingly, the number of deliveries at government institution which is the key stream of the JSY scheme seemed to have reached after exploration of the overwhelming number of institutional deliveries i.e. 90.8 % of the beneficiaries in

our study, similar to the study conducted in West Bengal showed 78.8 % of the beneficiaries institutional deliveries^[18]. The agonizing aspect is the lack of awareness about post-natal care of mother as well as the child in our study area where it is seen that 33.33 % of the beneficiaries have not opted for any PNCs. On the other hand, 31.9 % of the beneficiaries opted for more than 3 PNCs and 22.8 % of the beneficiaries have opted for 3 PNCs as per the study held at Karimganj district, Assam^[19].

The study found that 79.2 % of the beneficiaries received cash incentive through direct bank transfer. However, the beneficiaries in the study of Puducherry²⁰ showed that 52.1 % of the beneficiaries received money through direct bank transfer and 46.5 % of the beneficiaries received direct cash incentive.

Conclusion

JSY scheme (a conditional cash benefit scheme) is surely a star programme of the Central Government and State Health Administration especially in Odisha which has taken it up with a vigor. This study reveals that UHTC of Burla is definitely a beneficiary of the programme in terms of institutional delivery and getting cash assistance under the JSY scheme. Sadly, although majority of respondents knew about the JSY scheme regarding monetary benefit, they were unaware of the name of the scheme and its prime motto i.e. to promote institutional delivery. AWW and ASHA are the main motivators of JSY scheme. It also reveals that the number of beneficiaries who have registered their pregnancy in the first trimester in the government hospital with more than four ANC visits is highly satisfactory. It is very sad to visualize the failed postnatal care strategy implementation. It also came to spotlight that majority had to hire a vehicle to reach the place of delivery in the given period of time. Majority of the beneficiaries have not attended any postnatal visit (PNC) when it is the responsibility of the health care provider to make them aware about the importance of post natal visits (PNC) when both the mother and child are in the clutches of risk and danger. The implementation of JSY scheme will surely have an impact on indicators like MMR and IMR due to rise in timely institutional delivery. The innovative engagement of human resources as per need and the arrangements for incentives at each level will help to build up a role model of public health delivery system of India.

Recommendation

- Information Education and Communication (IEC) via various channels including print, electronic, traditional, personal communication should be strengthened by continuous monitoring and supervision.
- Timely incentivization of ASHA for increasing work performance and motivation.
- Improvements in manpower, infrastructure, transport (102 ambulance) and essential facilities at health institutions are critical to ensure that women stay at clinic for at least 24 hours and avail PNCs.

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