

Available online at <http://www.ijims.com>

ISSN: 2348 – 0343

## **A cross sectional study to assess the Knowledge and Practice about free transport service available under JSSK, among the Post-natal Mothers at a tertiary care Hospital in Maharashtra**

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### **Abstract**

Government of India has launched “Janani Shishu Suraksha Karyakram” on 1<sup>st</sup> July 2011, to assure free and cashless services (including free transport) to all pregnant women and sick neonates accessing public health institutions. The objective of the study was to find out level of awareness AND utilization of free transport service. In a Hospital based cross sectional study, among Post-natal Mothers in a tertiary care Hospital. Random sampling method was used to select sample of 250, after conducting a pilot study. In present study 114 (45.6%) of study participants were aware free transport service and 84 (33.6%) used free transport service available under JSSK. It was observed that awareness of free transport service was significantly higher among rural (71.4%) participants as compared to urban (24.6%). About 56.9% of the participants educated above secondary level were aware of this service, where as only 16.7% of illiterate were aware. Fifty percent and 53.4% of mothers belonging to General category and OBC families respectively were aware of the free transport service, whereas only 31.6% and 25.9% mothers belonging to S.C. & S.T. families were aware. Similar results were found regarding utilization of free transport service.

**Key words:** Knowledge, Practice, Free transport service, JSSK.

### **Introduction**

Developing countries today face high maternal and infant mortality rates. Most of the deaths in the developing countries occur each year from causes related to pregnancy and child birth.<sup>1</sup> The percentage of institutional deliveries increased from 41% in 2002 to 73% in 2009. However still about 27% of pregnant women are delivering at home and those deliver at institution are unwilling to stay for 48 hours, hampering the provision of essential services both to mother and neonate, which are critical for identification and management of complications during first 48 hours after delivery. Important factors affecting access include: high out of pocket expenses on- User charges for OPD, admission, diagnostic tests, blood, etc.

- Purchasing of medicine and consumables.
- Non availability of diet in institutions.
- Non availability of transport services for pregnant women.

Under these circumstances, Ministry of Health and Family Welfare Government of India has launched JANANI SHISHU SURAKSHA KARYAKRAM on 1<sup>st</sup> July 2011, Initiative to assure free services to all pregnant women and sick neonates accessing public health institutions. The scheme envisages free and cashless service to pregnant women including normal delivery and caesarean

operation and also treatment of sick newborn (age up to 30 days) in all government health institutions across the states and union territories.<sup>2</sup>

### **Objectives of Study**

- 1) To find out the level of awareness about free transport services provided under JSSK among Post Natal Mothers in tertiary care Hospital.
- 2) To find out association of socio-demographic factors with awareness and utilization of this service.

### **Materials and Methods:**

Study is to be conducted among women in post-natal mothers admitted after delivery (normal delivery / caesarean section) and also mothers of neonates age less than 30 days admitted in paediatrics ward at tertiary care hospital.

*Study design:* It is hospital based cross sectional observational study.

*Study population:* Post-natal mothers admitted in PNC ward and PNC mothers accompanying sick neonates ( age less than 30 days) admitted under paediatrics department.

*Place of study:* The study is to be conducted at tertiary care hospital, in post-natal ward, where women are admitted after delivery (normal/caesarean section) and in paediatric ward, NICU, PICU.

*Period of study:* Data collection is spanned over a period of six months, with effect from 1<sup>st</sup> March 2014 to 30<sup>th</sup> August 2014. Subsequently analysis and writing of the result was undertaken.

*Exclusion criteria:* Mother who are admitted in PNC ward after stillbirth or abortion and who were not willing to participate.

### **Method of study:**

*1. Sample size:-* In 2013-2014, at tertiary care centre, where study is to be conducted, average monthly admission in post-natal ward after normal delivery were 490 and after Caesarian section 143 mothers. In paediatrics department during 2013-2014 average monthly admitted neonates were 61. Pilot study was conducted taking 30 samples from above groups (25 from PNC ward and 5 from paediatrics ward) with predesigned questionnaires. Among 30 mothers only 5 (17%) are aware of free transport service available under JSSK.

So sample size is calculated using following formula.

Sample size calculated :- 226, (at allowable error 5)

It is decided to take sample size of:- 250

*2. Sampling method :* Stratified random sampling method is used and accordingly it is decided to take 175 Mothers in PNC Ward admitted after normal delivery(n1), 52 Mothers in PNC Ward admitted after C-section delivery(n2), and 22 Mothers of newborns (age less than 30days) who are admitted under paediatrics department(n3).

$$N=n1+n2+n3=175+52+22=250$$

Initially, permission was sought both from Head of Department, Department of Obstetrics & Gynaecology and Ethical committee of the medical college hospital, where study is to be undertaken. A pilot study was undertaken to test the study instrument and the methodology to be adopted. The result of the study was presented to the staff (Head of Department, Associate professor, Assistant professor, statistician) of Department of Community Medicine following which necessary modifications were incorporated for the main study.

The above mentioned strategies were evaluated for “utilization” of maternal care services using a pretested semi structured questionnaire. Keeping the objectives as guidelines, a pre-coded questionnaire based on the pilot study was prepared for data collection.

**Method of data collection:** Primary data was collected using structured questionnaire relating to the operational mechanisms, constraints faced by the service providers and on the utilization of the services under JSSK,

**Interview method:** The selected mothers were visited, and after building a close rapport with them the questionnaire was administered to each.

### Results and Discussions

A cross sectional study, with sample size of 250, was conducted among post-natal mothers admitted after delivery (normal delivery / caesarean section) and also mothers of neonates age less than 30 days admitted in pediatrics ward at a tertiary care hospital.

Socio-demographic profile of study participants (mothers) revealed that maximum (75.2%) belonged to age group of 19-25 years. There were 55.2% participants from rural area and 44.8% from urban area. Majority belongs to General and OBC category, only 15.2% and 10.8% were from S.C. and S.T. families respectively. Occupation wise 76% housewives and literacy rate was 91.4%. In this study 49.6% of participants belong to Joint family, 27.2% from nuclear family. (See Table No. 1). In this study 114 participants (45.6%) were aware of free transport service available under JSSK. (See figure- 1). Out of 114 mothers 52 mothers (45.6%) told that the information about free transport was given to them by ASHA /Anganwadi Worker. For 42 mothers (36.8%) the informer was ANM/Staff nurse. Only six mothers (5.2%) told that the received information from relatives, from banners, wall paintings, etc about the programme. (See figure-2) .Among the mothers who had not used free transport service, majority (82%) of participants were unaware of the free transport service available under JSSK, (See figure-3). Eighteen percent of participants though they were aware of service but had not used the same because of vehicle were not made available to them, when they accessed for the ambulance service to nearest primary health sub centre, primary health centre.

Transport for pregnant women from home to hospital was good at Gujarat, Haryana as compared to Bihar, Andra-Pradesh, Uttar Pradesh, mainly because of because of poor awareness.<sup>3</sup>

In present study it was observed that awareness about the free transport service provided under JSSK, was significantly ( $p < 0.01$ ) higher among rural participants as compared to urban, as shown in Table No. 2. This may be due to ASHA and AWWs. ASHA and Anganwadi workers in rural areas are playing important role in making people aware of JSSK. Gayatri Rathore observed that there was good awareness about free entitlements under JSSK among pregnant women.<sup>4</sup> However, low awareness was observed by Jhimly Baruah in 2012 at Punjab, Uttar-pradesh, and Bihar.<sup>5</sup> After launch of NRHM there is improvement in health care delivery system in rural area. At village level ASHA, AWWs, ANM, are making people aware of various health programs through village health and nutrition day (VHND), village health nutrition and sanitation committee (VHNSC). Improvement in infrastructure of PHCs, Sub centers, FRUs, etc and appointment of additional staff at these health facilities had increased the proportion of institutional deliveries and timely referral service for high risk mothers.<sup>6</sup>

Present study reveals that educational status of participants was very important factor as far as awareness about the free diet and free transport service under JSSK is concerned. About 56.9% of the participants educated above secondary level were aware of these services, where as only 16.7% of illiterate were aware of the services available under JSSK. This difference is statistically highly significant, ( $p < 0.01$ ), (see Table No. 3).

Modified BJ Prasad socioeconomic classification was used to determine socioeconomic status of participants. In present study no statistically significant association ( $p>0.05$ ) was found between socioeconomic class of participants and awareness about free transport service available under JSSK. In present study 50% and 53.4% of mothers belonging to General category and OBC families respectively were aware of the free diet and free transport service available under JSSK, whereas only 31.6% and 25.9% mothers belonging to S.C. and S.T. families were aware of these services. This difference is significant ( $p<0.05$ ). Similar findings were found regarding utilization of free transport service available under JSSK.

As reported by District health officials of Solapur district there were a total 77 ambulances / referral vehicles in the rural area (PHCs) and 16 vehicle in urban (ie. District and Sub-district hospitals) for free transport services. All the vehicles were fitted with GPS, unlike findings reported by M.O.H. & F.W. Maharashtra (2011-2012)<sup>7</sup>. Geeta SP et.al. found in their study that 69% of total number of deliveries in 2008-09 in rural Nanded, Maharashtra were conducted in institutions. They found a substantial increase in proportion of institutional deliveries since implementation of NRHM.<sup>8</sup>

AK Singh et. al found in their study in Gujrat that literacy status of mother and low socioeconomic class of family were strongly associated with place of delivery, 32.35 % of mother deliver their babies at home due to inconvenience in hospital and economical constraints.<sup>9</sup> Adamson PC mentioned in his study in Karnataka, that among marginalized population (SC/ST) 56.7% were institutional deliveries and 35.9% at home.<sup>10</sup> As per District Level House Hold Survey-DLHS- 4 (2012-13) in Solapur district percentage of institutional delivery increased to 92.2% and there were only 7.8% home deliveries in the districts.<sup>11</sup>

## Conclusions

In present study it was observed that awareness about the one of the important components of JSSK, (i.e Free transport) and utilization of free transport service was higher among rural participants as compared to urban.

Present study reveals that educational status of participants was very important factor as far as awareness about the free transport and utilization of free transport service under JSSK is concerned.

Awareness as well as utilization of free transport service under JSSK is higher among mothers belonging to general and O.B.C. category as compared to S.C./C.T category.

A.N.Ms. and A.W.Ws. (Anganwadi workers) are playing important role to make people aware of the JSSK.

## Recommendations

After careful analysis of the data the following recommendations were suggested:

1. Awareness at the community level should be enhanced through wider dissemination of IEC activities, especially in urban area, Public private partnership can also be worked out for providing transport service.
2. More focus should be given for education of girls, as educated mothers are more aware of health services and its importance.
3. Mothers belonging to S.C./S.T. families should be given more attention with the help of village level worker like ASHA, AWWs, and also VHSNC, self help groups, etc.

## Limitations

Since it was hospital based study under taken on a small sample, a complete extrapolation of findings may not be possible. Hence to obtain the more precise picture of the status of JSSK, a comprehensive community based study needs to be undertaken involving ANCs, PNCs, ASHA, ANM, etc.

**Acknowledgments:-**

We express gratitude to Dr. Mrs. Kumavat A.P., former professor and Head, Department of community medicine, Dr. V.M.Govt.Medical.College Solapur, Maharashtra.

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Table-1  
**Socio-demographic profile of participants under study (n=250)**

<b>Sr. No</b>		<b>Characteristics</b>	<b>Number.</b>	<b>%</b>
1	Age group	Less than 18 years	12	4.8%
		19-25 years	188	75.2%
		26-35 years	50	20%
		Above 35 years	00	00%
2	Location	Urban	138	55.2%
		Rural	112	44.8%
3	Caste	General	112	44.8%
		O.B.C.	73	29.2%
		S.C.	38	15.2%
		S.T.	27	10.8%
4	Religion	Hindu	196	78.4%
		Muslim	40	16%
		Christian	02	0.8%
		Other	00	00%
5	Education	Illiterate	24	09.6%
		Primary	64	25.6%
		Secondary	111	44.4%
		Higher secondary	51	20.4%
6	Occupation	House wife	190	76%
		Un-skilled work	56	22.4%
		Skilled work	4	1.6%
		Service	0	0%
7	Type of Family	Joint	124	49.6%
		Nuclear	68	27.2%
		Three generation	58	23.2%
8	Socio economic class (modified B.J Prasad)	Class -1	42	16.8%
		Class -2	42	16.8%
		Class -3	60	24%
		Class -4	58	23.2%
		Class -5	48	19.2%

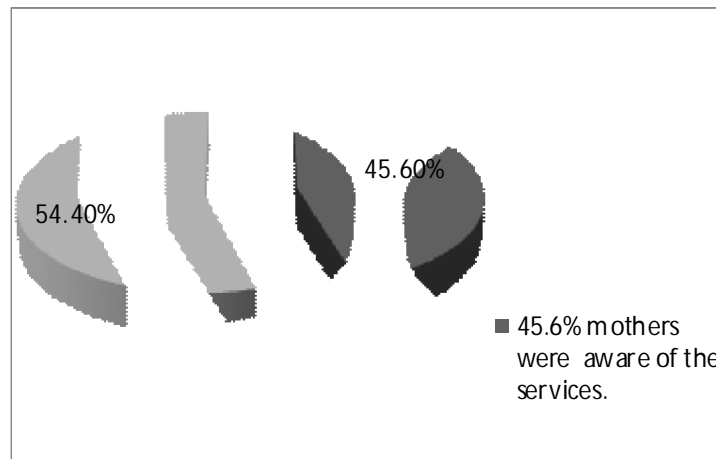


Fig-1

**Distribution of mothers according to awareness about free transport service available under JSSK**

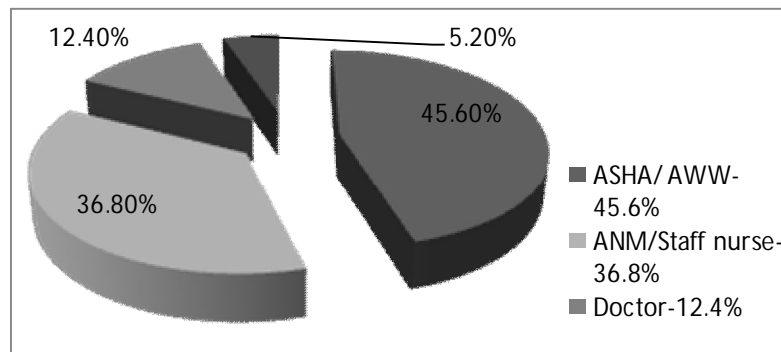


Fig-2

**Source of information to mothers about availability of free transport services available under JSSK**

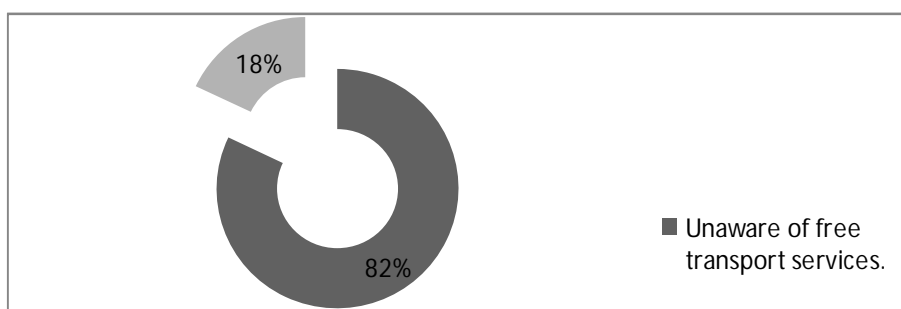


Fig-3

**Reasons as stated by mothers for not using free transport service available under JSSK**

Table-2

**Urban -Rural distribution of mothers who were aware of free transport service available under JSSK.**

Urban/ Rural	Mothers who were aware of free transport.		Mothers who were not aware of this service.		Total		p – value
	Number	%	Number	%	Number	%	
Urban	34	24.6%	104	75.4%	<b>138</b>	100%	<0.01
Rural	80	71.4%	32	28.6%	<b>112</b>	100%	
<b>Total</b>	<b>114</b>	<b>45.6%</b>	<b>136</b>	<b>54.4%</b>	<b>250</b>	<b>100%</b>	

(df= 1, chi square=54.6,p= &lt;0.01)

Table -3

**Socio-demographic factors (Education, SEC, Category) of study participants and awareness free transport service available under JSSK.**

Component	Mothers who were aware		Mothers who were not aware		TOTAL		X <sup>2</sup> , d.f., p-value
	Number	%	Number	%	Number	%	
<b>EDUCATION</b>							X <sup>2</sup> = 29.2, df= 3, p-value <0.01
Illiterate	4	16.7%	20	83.3%	<b>24</b>	100	
Primary	16	25%	48	75%	<b>64</b>	100	
Secondary	65	58.6%	46	41.4%	<b>111</b>	100	
H.S.C. & above	29	56.9%	22	43.1%	<b>51</b>	100	
<b>Total</b>	<b>114</b>	<b>45.6%</b>	<b>136</b>	<b>54.4%</b>	<b>250</b>	<b>100</b>	
<b>S.E. CLASS</b>							X <sup>2</sup> =3.08, df= 4, p-value (0.544) > 0.05
I	15	35.7%	27	64.3%	<b>42</b>	100	
II	22	52.4%	20	47.6%	<b>42</b>	100	
III	29	48.3%	31	51.7%	<b>60</b>	100	
IV	28	48.3%	30	51.7%	<b>58</b>	100	
V	20	41.7%	28	58.3%	<b>48</b>	100	
<b>Total</b>	<b>114</b>	<b>45.6%</b>	<b>136</b>	<b>54.4%</b>	<b>250</b>	<b>100</b>	
<b>CATEGORY</b>							X <sup>2</sup> =9.90, df=3, p-value (0.019) <0.05
General	56	50%	56	50%	<b>112</b>	100	
OBC	39	53.4%	34	46.6%	<b>73</b>	100	
S.C.	12	31.6%	26	68.4%	<b>38</b>	100	
S.T	07	25.9%	20	74.1%	<b>27</b>	100	
<b>Total</b>	<b>114</b>	<b>45.6%</b>	<b>136</b>	<b>54.4%</b>	<b>250</b>	<b>100</b>	