

## Original Research Article

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# Availing entitlements under Janani Shishu Suraksha Karyakram in Tamil Nadu: a reality

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## ABSTRACT

**Background:** Janani Shishu Suraksha Karyakram (JSSK) was launched in India to improve maternal and child healthcare, and to alleviate out of pocket expenditure on healthcare. The objective was to analyze the awareness and utilization of the JSSK entitlements among residents in Kancheepuram district of Tamil Nadu.

**Methods:** This cross sectional study was conducted in Thriuporur block, which was selected randomly from 13 blocks of Kancheepuram district. Two primary health care centers - Ezhichur and Thiruporur of Thriuporur block, were selected based on population proportion to size. A total of 80 mothers who had recently delivered a live child were selected randomly from these two PHCS. The data was collected through house to house visits by trained interviewers using a pretested, validated, structured questionnaire.

**Results:** Mean age of the participants was 24.58 ( $\pm 3.32$ ) years. Around fifty two participants were aware about the scheme. Better awareness was seen with higher literacy and higher socioeconomic status ( $p=-0.043, 0.032$ ). Cashless deliveries (100%) and free drugs (100%) were availed by all participants and among the neonates, free diagnostics (100%) and blood transfusions (100%) were availed by all. Transportation services to and from health institutions were utilized by 1.2% of the participants. Majority of the participants (98%) spent on conveyance to and from hospital.

**Conclusions:** Though the study revealed good awareness of the scheme among the participants, it showed insight into the existing gaps in utilization of these services. Further effort is required in providing additional information on JSSK and its services within institutions and at the community level.

**Keywords:** Pregnant women, Neonates, Beneficiaries of JSSK

## INTRODUCTION

Globally, on any given day, a staggering 830 women die from pregnancy and childbearing related causes. World Health Organization (WHO) estimates that of the overall maternal mortality burden, a staggering 99% is contributed by developing nations.<sup>1</sup> India, over the past 20 years has seen a gradual decline in maternal mortality ratio (MMR) and the figure stood at 174 maternal deaths per 100,000 live births in 2015.<sup>2</sup> IMR in the year 2015

was 32 deaths per 1000 live births worldwide and in India it was 38 per 1000 live births.<sup>3,4</sup> This decline is expected to take India to the target MMR of 100 deaths per 100,000 live births and IMR of 28 per 1000 live births as envisaged by the National Health Policy of India 2017.<sup>5</sup>

In order to decrease the MMR and IMR, and improve maternal and child health the Ministry of Health and Family Welfare, Government of India, implemented a scheme called Janani Shishu Suraksha Karyakaram (JSSK) in June 2011. The scheme entitles mothers and

sick infants to avail free and cashless treatment including deliveries, caesarian- sections, medications etc. in government institutions in both urban and rural areas. The main objectives of the scheme are to reduce MMR and IMR, bring about 100% institutional deliveries and reduce OOP expenditure on healthcare.<sup>6</sup>

According to the National Family Health Survey NFHS-4 conducted in 2015-2016, the average out of pocket expenditure (OOPE) on delivery in a public health facility in India was INR 3,198 and in one of its southern states, Tamil Nadu it was around INR 2,476.<sup>7</sup> This is a quite a financial burden for an average Indian family to bear.

In Tamil Nadu, the percentage of institutional deliveries in public facilities has increased from 48% in 2005 - 06 to 66.7% in 2015-16.<sup>7</sup> The boost in numbers could be attributed to many contributing factors, one including the introduction and utilization of the JSSK scheme. A study conducted on the utilization of JSSK scheme in Haryana found that there was a 2.7 times increase in the number of institutional deliveries post introduction of JSSK scheme.<sup>8</sup> There are however, no such similar studies to illustrate the utilization of the scheme in Tamil Nadu and determine the awareness of JSSK among beneficiaries. Thus, the purpose of this study is to determine the awareness and utilization of the JSSK scheme in public institutions in Tamil Nadu.

### **Objectives**

The objectives of the study were to evaluate the awareness and utilization of the JSSK and its services among residents in Kancheepuram district, Tamil Nadu.

## **METHODS**

### **Study design**

The study was a cross sectional conducted in villages in Kancheepuram district of Tamil Nadu State. The study was conducted from June 2016- August 2016.

### **Study population**

The study population comprised of mothers who recently delivered a live birth child. Inclusion criteria were mothers who delivered within past 1 year of study period and who availed services under public health facilities during antenatal and postnatal period. Mothers who availed ante natal & post natal services from private facilities and those cannot be approached even after 3 home visits were excluded.

### **Sampling**

According to population census of India 2011, there were 13 blocks/ municipalities in Kancheepuram district of Tamil Nadu state. Among the 13 blocks, Thiruporur

block was selected by simple random sampling using lottery method.

Based on the total number of pregnant women registered in the previous year, two primary health centres (PHCs)- Ezhichur and Thiruporur were selected on the basis of population proportion to size. These two PHCs cater health services to 50 villages in their territory. Total population catered by Ezhichur and Thiruporur are 1,373 and 13,666 respectively.<sup>9,10</sup>

### **Sample size**

List of registered pregnant women who delivered with in previous one year were obtained from the selected PHCs. There were around 182 registered pregnant women who delivered within past one year. Among these 168 live births, 92 deliveries were conducted in public health facility and 76 in private health facility. The present study included a total of 80 mothers who fulfilled the inclusion criteria (Figure 1).

### **Data collection procedure**

Data collection was done by house visits. After explaining about study intention, written informed consent was obtained. Data was collected using a pretested, validated, structured questionnaire in local vernacular language. Three trained investigators were involved in data collection process.

### **Study tool**

The study tool comprised of details including baseline characteristics of study participants, details of antenatal and post natal period, awareness about maternal and neonatal services under JSSK, services availed through JSSK and expenditure incurred towards conveyances, drugs, consumables, lab investigations and indirect costs.

### **Outcome variables**

The outcome variables were awareness about maternal and neonatal services provided under JSSK utilizing these services and expenditure occurred while availing these services. Those who were aware of any two services among entitlements for pregnant women and neonates provided under JSSK were considered to be aware of the scheme.

### **Statistical analysis**

Data was entered in Microsoft Excel Spread Sheet. Data checks were done at regular interval to look for missing data. Data was analyzed with Statistical Package for Social Sciences (SPSS) (IBM Corp. Released 2012. IBM SPSS Statistics for Windows, Version 21.0. Armonk, NY: IBM Corp.) The qualitative variables are described in the form of proportions and quantitative variables are described in the terms of mean and standard deviation.

Significance of difference in proportions was determined using Chi square test. A p value of <0.05 was considered to be significant.

#### Ethical consideration and confidentiality

Ethical permission was obtained from ethics committee of Tagore Medical College & Hospital, Chennai, Tamil Nadu. Written consent was obtained from study participants who were willing to participate in the study. Confidentiality of study participants was maintained in all the phases of the study.

#### RESULTS

##### Socio demographic profile

A total of 80 study participants were included in the study. The mean (SD) age of the mothers was 24.58 ( $\pm 3.32$ ) years. Eight (10%) study participants were illiterates and 23 (28.7%) were homemakers (Table 1).

**Table 1: Profile of the study participants (n=80).**

S No.	Baseline characteristics of study participants	N	%
<b>Education</b>			
1.	Illiterate	8	10
	Primary	10	12.5
	Secondary	43	53.8
	Graduate	18	22.5
	Post graduate	1	1.3
<b>Occupation</b>			
2.	Home maker	23	28.7
	Clerks	17	21.3
	Skilled worker	26	32.5
	Semiskilled worker	2	2.5
	Unskilled worker	12	15
<b>Socioeconomic class*</b>			
3.	Lower	4	5
	Upper lower	31	38.8
	Lower Middle	25	31.2
	Upper Middle	12	15
	Upper	8	10
<b>Religion</b>			
4.	Hindu	68	85.0
	Christian	8	10.0
	Islam	4	5.0
<b>Parity</b>			
5.	Primipara	38	47.5
	Multipara	42	52.5
<b>Mode of delivery</b>			
6.	Normal delivery	62	77.5
	Caesarean section	18	22.5

\*Modified BG Prasad scale classification- revised in 2016

#### Awareness about JSSK entitlements

Among the study participants, forty two (52.5%) reported of having heard of JSSK program services. None of the participants were aware about free drop back services from institutions to home after 48 hours. Only few were aware about the free referral services and exemption from user charges (Table 2).

**Table 2: Awareness about entitlements under JSSK. (n=80).**

S.No	Awareness about JSSK entitlements	N	%
<b>Entitlements for pregnant women*</b>			
1.	Free and cashless delivery	36	45
	Free C-Section	21	26.2
	Free drugs and consumables	34	42.5
	Free diagnostics	12	15
	Free diet during stay in the health institutions	23	28.7
	Free provision of blood	11	13.7
	Exemption from user charges	4	5
	Free transport from home to health institutions	34	42.5
	Free transport between facilities in case of referral	9	11.2
	Free drop back from Institutions to home after 48hrs stay	0	0
<b>Entitlements for newborn*</b>			
2.	Free treatment	38	47.5
	Free drugs and consumables	36	45
	Free diagnostics	34	42.5
	Free provision of blood	24	30
	Exemption from user charges	3	3.7
	Free Transport from Home to Health Institutions	21	26.2
	Free Transport between facilities in case of referral	21	26.2
	Free drop Back from Institutions to home	1	1.2

\* Multiple response.

Higher educational status and higher socioeconomic class was found to be associated with awareness of JSSK services. (P value-0.043, 0.032) Multipara women were found to be much more aware about JSSK services than primipara (p=0.047) (Table 3).

#### Entitlements utilization

Free and cashless delivery and free drugs and consumables were availed by all the participants. All the eight neonates who required blood investigations and blood transfusion availed it for free, however no free transport to and fro from health institutions was availed by them (Table 4).

**Table 3: Association between awareness about JSSK and other parameters.**

S. No.	Variables	Aware N=32 N (%)	Unaware N=48 N (%)	P value
1.	<b>Education</b>			
	Illiterate	0	8 (16.7)	
	Primary	3 (9.4)	7 (14.6)	
	Secondary	16 (50)	27 (56.2)	0.043
	Graduate	12 (37.5)	6 (13.5)	
2.	<b>Socioeconomic class</b>			
	Lower	1 (3.2)	3 (6.2)	
	Upper lower	8 (25)	23 (47.9)	
	Lower Middle	10 (31.2)	15 (31.3)	0.192
	Upper Middle	8 (25)	4 (8.4)	
3.	<b>Religion</b>			
	Hindu	28 (87.5)	40 (83.4)	
	Christian	3 (9.4)	5 (10.4)	
	Muslim	1 (3.1)	3 (6.2)	0.213
	<b>Parity</b>			
4.	Primipara	4 (12.5)	34 (71)	
	Multipara	28 (87.5)	14 (29)	0.047

\* Chi square test applied, p<0.05 is significant.

**Table 4: Entitlements utilization among the study participants (n=80).**

S.No.	Entitlements utilization	N	%
<b>Entitlements for pregnant women</b>			
1.	Free and cashless delivery	80	100
	Free C-Section (n=18)	18	100
	Free drugs and consumables	80	100
	Free diagnostics	72	90
	Free diet during stay in the health institutions	74	92.5
	Free provision of blood (n=11)	11	100
	Exemption from user charges	4	5
	Free transport from home to health institutions	36	55
	Free transport between facilities in case of referral (n=7)	7	100
	Free drop back from Institutions to home after 48hrs stay	0	0
<b>Entitlements for newborn</b>			
2.	Free treatment (n=41)	41	100
	Free drugs and consumables (n=41)	41	100
	Free diagnostics and blood (n=8)	8	100
	Free Transport to and fro health institutions (n = 8)	0	0

#### **Expenditure incurred towards healthcare**

Analysis of out of pocket expenditures (OOPE) for maternal services revealed that study participants were experiencing OOPE on conveyance, both home to hospital and vice versa, diagnostics and drugs, food and indirect costs. With conveyance charges from home to hospital, 41.3% (n=33) of the participants incurred charges ranging from 1 to >2000 rs, and 58.8% (n=47) incurring no out of pocket expenditures. Conveyance

from hospital to home, highlighted that 98.8% (n=79) of the participants experienced OOPE ranging from 1 to more than 2000 rs.

In terms of diagnostics and drugs, food and indirect costs 2.8% (n=2), 12.5% (n=10) and 17.5% (n=14) of the participants suffered OOPE respectively.

Of the 41 participants who required services for neonates 100% (n=41) incurred out of pocket expenditures ranging

from 1 to 2000rs on conveyance from home to hospital and vice versa.

## DISCUSSION

JSSK scheme was introduced to provide free, cashless deliveries, diagnostics and treatments for mothers and infants. Our study showed that the JSSK scheme, in general, was well known among the community in Tamil Nadu (52.5%), as compared to other states such as West Bengal (31.25%) and Maharashtra (47.2%); where lower awareness levels were reported, however as per awareness criteria of our study, the awareness about JSSK in our study was 40%.<sup>11,12</sup> Awareness levels were found to be higher among mothers who were multipara and who had higher educational status. This could be attributed to previous experience and literacy. JSSK, having completed five years since the inception of program, the awareness level could have been better.

In regards to maternal and infants benefits, majority of the respondents were aware of the main services of the scheme such as cashless deliveries (45%), free drugs and consumables for mothers and newborns (42.5% and 45% respectively), free transport from home to institutions for mothers and children (42.5%, 26.2% respectively), and free treatment for newborns (47.5%). The services that respondents were less aware of are free diagnostics (15%), free provision of blood (13.7%) and exemption from user charges (5%) among maternal benefits. Awareness about free diagnostics and drugs varied among studies with a report from West Bengal having an awareness level of 18.7% and 10.4% respectively<sup>(11)</sup>. Among entitlements for newborns, exemption from user charges (3.7%) and free drop back services to home (1.2%) were the services less known. These findings are significantly better when compared to other studies, such as the one conducted in West Bengal, where only 18.75% of the women were informed about free normal deliveries and none were aware of free caesarian sections.

Most significant finding was poor response in awareness and usage of transportation services. This service was never availed by any family members when they had come for confinement or for treatment of their newborns. In comparison, other studies also reflected poor awareness. However, our current study had the lowest level of awareness and utilization of transportation back home. In Maharashtra only 9.9% were aware of free transport back home, and in West Bengal 35.4%.<sup>9,12</sup> Additionally, another study conducted to specifically assess the awareness and usage of transportation services under JSSK in Maharashtra, it was reported that only 18% were aware of such a service provided, and amongst the 18% majority were unable to avail the service when needed.<sup>13</sup>

In terms of utilization of the services provided for pregnant women, all services such as free deliveries, free caesarian sections, free blood, free drugs and

consumables, and free transport between facilities in case of referrals (100%) were entirely used by the respondents. The infrequently used services were free transport from home to institution (55%) and exemption from user charges (5%). Utilization of services catered for infants was also used to the fullest, except for transportation services back home.

This poor utilization also reflected negatively on out of pocket expenditure on transportation from institution to home, with expenditures ranging from 1000 to 2000 INR. In a study conducted in New Delhi it was found that the majority of expenditure incurred among JSSK users was due to diagnostics and medications whilst expenditure on transport was the least, Given that one of the major objectives of the scheme was to reduce OOP expenditure on health, this finding possibly impedes the progress of the scheme.<sup>14</sup>

## CONCLUSION

It is evident that findings in this study showcase the level of awareness and utilization of the scheme among public in Tamil Nadu. Though many of the services were availed free of cost, few services were not availed for free. Further steps would be a mandate to improve awareness of the scheme among the public, which can be achieved by increasing promotional efforts by displaying and providing more information regarding the scheme at health care delivery centers. Furthermore, it would be effective if information or health education campaigns about the scheme were provided by health workers at the field level. This could improve the chances of JSSK service utilization and thus improve overall healthcare of community.

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*Ethical approval: The study was approved by the Institutional Ethics Committee of Tagore Medical College & Hospital, Chennai, Tamil Nadu*

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