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Awareness and Uptake of Janani Shishu Suraksha Karyakram Scheme among the Women Attending a Tertiary Care Hospital - A Cross-Sectional Study

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ABSTRACT

Background

Maternal mortality continues to be a pressing issue in India, necessitating ongoing efforts to improve maternal health and reduce the Maternal Mortality Ratio (MMR). Launched in 2011, the Janani Shishu Suraksha Karyakram (JSSK) is a significant initiative by the Government of India aimed at providing free and cashless healthcare services to pregnant women and newborns.

Objective

This study examines the awareness and uptake of the JSSK scheme among women attending a tertiary care hospital in Udaipur.

Methodology

A hospital-based cross-sectional study was conducted at Pannadhay Zanana Hospital, MBGH, Udaipur, over six months. A total of 260 women meeting the inclusion criteria participated. Data were collected using a semi-structured questionnaire, assessing awareness and uptake of the JSSK scheme. Descriptive statistics and inferential analysis were performed using SPSS v21, with significance set at $P<0.05$.

Results

The majority of participants (70.8%) were aged 20-30 years. Literacy rates were high, with 79.2% of participants being literate. Most participants (93.1%) were unemployed, and 75.4% resided in rural areas. Socioeconomic analysis showed that 45.4% belonged to the lower middle class. Awareness of the JSSK scheme was nearly universal (99.6%), with high utilization rates (98.5%). Family members were the primary source of information about the scheme (71.0%).

Conclusion

The JSSK scheme has successfully reached a significant portion of its target population, demonstrating high awareness and utilization among women attending tertiary care in Udaipur.

Keywords: Maternal health, Janani Shishu Suraksha Karyakram, Awareness, Uptake, Maternal Mortality, Maternal and Child Healthcare

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INTRODUCTION

Maternal mortality has been an issue of concern in India for many years, and one of the country's endless endeavour has been to improve maternal health and bring down the Maternal Mortality Ratio (MMR).[1] MMR is the number of maternal deaths during a given time period per 100,000 live births during the same time period.[2] High rates of MMR and infant mortality highlight systemic issues that need urgent attention to improve healthcare outcomes. Various factors contribute to these elevated mortality rates, including inadequate access to quality healthcare, lack of proper nutrition, and insufficient educational resources for expectant mothers. Additionally, socioeconomic disparities and limited healthcare infrastructure further exacerbate the situation, making it challenging for many women and infants to receive the necessary care. Addressing these issues is critical to enhancing the overall health and well-being of mothers and children in these regions. To tackle these challenges, the United Nations Development Programme (UNDP) introduced the Sustainable Development Goals (SDGs) in 2015[3] which include specific targets aimed at reducing global maternal mortality and improving infant health. One of the primary objectives of the SDGs is to reduce the global maternal mortality ratio to less than 70 per 100,000 live births by 2030.[4] Achieving this target necessitates comprehensive strategies that encompass improved healthcare services, enhanced education and awareness, and robust policy frameworks that support maternal health. Furthermore, the SDGs aim to end preventable deaths of newborns and children under five years old, addressing issues such as malnutrition, infectious diseases and access to clean water and sanitation. These goals underscore the need for concerted global efforts and collaboration among governments, healthcare providers and international organizations to create sustainable and impactful changes.[5]

Background

Launched by the Government of India (GoI) in June 2011, the Janani Shishu Suraksha Karyakram (JSSK) is a pioneering initiative aimed at ensuring access to essential healthcare services for pregnant women and newborns across both rural and urban areas. At its core, JSSK seeks to remove financial barriers to maternal and child healthcare by providing completely free and cashless services in Government Health Institutions. This comprehensive scheme covers a wide range of Medical services including normal deliveries, cesarean operations and care for sick newborns up to one year of age. By offering these services free of charge, JSSK aims to promote institutional deliveries and ensure that every pregnant woman and newborn receives the necessary medical attention without facing financial constraints.[6]

One of the key objectives of JSSK is to encourage pregnant women to opt for Institutional deliveries by alleviating concerns about the cost of medical care. By making all services under JSSK completely free and cashless, the Government aims to remove financial barriers that often deter women from seeking professional medical assistance during childbirth. This proactive approach not only promotes safer deliveries but also reduces the incidence of maternal and neonatal mortality by ensuring timely access to skilled Healthcare Professionals and essential medical interventions. Additionally, by extending the scheme to cover sick newborns up to one year of age, JSSK underscores the government's commitment to safeguarding the health and well-being of both mothers and infants during the critical postnatal period.[6] The implementation of JSSK represents a major step in strengthening maternal and child health services in India. By expanding access to skilled care and emergency support, the scheme enhances the capacity of public health facilities and builds trust in government institutions. Continued investment and effective monitoring will be key to sustaining its impact and ensuring alignment with national priorities and global targets such as the SDGs. The significance of this research lies in its potential to address critical gaps in maternal and child healthcare delivery in Udaipur District.

Objective

The objective of this study was to assess the awareness and uptake of the JSSK scheme among

women attending a tertiary care hospital.

METHODS

This hospital-based cross-sectional study was conducted at Pannadhay Zanana Hospital situated in Udaipur district, Rajasthan, over a six-month period from 1 January, 2024 to 30 June, 2024 following approval. The study focused on Antenatal and Postnatal women who met the inclusion criteria and were present in the Out-patient Department (OPD) at the Antenatal Care (ANC) Clinic and In-patient Department (IPD) Postnatal Care (PNC) Ward. The sample size, derived from Bhaskaran et al.[7] who reported 9.6% awareness of MCH benefit schemes, was 254, rounded to 260 participants after considering additional 10% for incompleteness of data and drop-out participants. The inclusion criteria encompassed all pregnant women attending the ANC, OPD and women admitted to the PNC Ward during the study period who gave consent to participate. Exclusion criteria included those unwilling to participate or who did not give consent. Primary data were gathered through in-depth personal interviews using a semi-structured validated questionnaire on awareness and uptake, while secondary data were obtained from hospital records. Study variables included age, occupation, education and socioeconomic status, with the latter assessed using the Modified B.G. Prasad socioeconomic classification, adjusted for the 2023 Consumer Price Index (CPI). If participants could tell the name and key benefits under each scheme, they were considered to be aware of the JSSK scheme. Uptake of the scheme was assessed based on the eligibility, registration among the eligible participants and uptake among the registered participants. Data analysis was performed using SPSS v21. Ethical clearance was secured from the Ethical Review Committee of RNT Medical College, Udaipur.

RESULTS

The study comprised 260 participants, with a focus on women attending the ANC, The majority of the 260 participants in the study were women aged 20–30 years (70.8%), unemployed (93.1%), and residing in rural areas (75.4%). Most belonged to the lower middle socioeconomic class (45.4%) and the OBC category (38.5%). Educational attainment varied, with the highest proportion having completed only secondary education (22.3%), 20.8% were illiterate, 21.2% had primary education, 16.2% senior secondary, and 19.6% were graduates. Additionally, more than half of the participants (57.3%) did not possess a ration card, and the majority (42.3%) had one previous live birth. (Table 1)

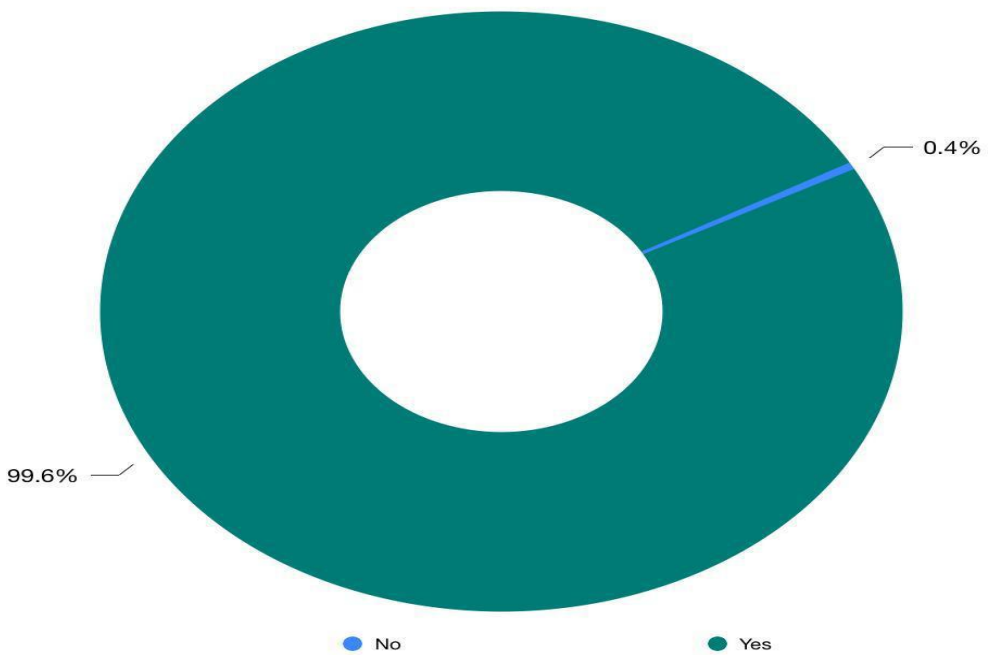
Table 1: Socio-Demographic profile and obstetric details of participants (n=260)

Variables		Total number	Percentage
Age (years)	<20	20	7.7
	20-30	184	70.8
	30-40	56	21.5
Education	Illiterate	54	20.8
	Primary	55	21.2
	Secondary	58	22.3
	Senior Secondary	42	16.2
	Graduate	51	19.6
Occupation	Employed	18	6.9
	Unemployed	242	93.1
Social Groups	General	51	19.6
	Other Backward Class	100	38.5
	Schedule Caste	32	12.3
	Schedule Tribe	77	29.6
Place of Residence	Rural	196	75.4
	Urban	64	24.6

Socio Economic Status	Lower Class	36	13.8
	Lower Middle Class	118	45.4
	Middle Class	59	22.7
	Upper Middle Class	36	13.8
	Upper Class	11	4.2
Ration Card	Above Poverty Line	88	33.8
	Below Poverty Line	23	8.9
	Not Available	149	57.3
Obstetric Status	Antenatal case	130	50
	Postnatal case	130	50
Live Birth	0	85	32.7
	1	110	42.3
	2	43	16.5
	>2	22	8.5
High Risk Pregnancy	Yes	72	27.7
	No	118	72.3

Nearly all participants, 99.6% (n=259), reported awareness and participation in the scheme, which aims to provide free and cashless services to pregnant women for delivery and newborn care. A negligible proportion, 0.4% (n=1), reported no awareness or participation in the scheme. The total number of participants was 260. This distribution indicates widespread awareness and utilization of the JSSK scheme among the study participants, highlighting its role in facilitating access to maternal and child healthcare services (Figure 1)

Figure 1. Distribution of study population according to knowledge of Scheme Name & Key Benefit (JSSK)



The trend in awareness among participants showed that most were aware of free delivery services and free drugs, a slightly lower proportion knew about free diagnostics and newborn care, while awareness was comparatively lower for free referral transport and free diet during hospital stay. (Flow chart 1)

Flow chart 1: Pathway of Awareness Generation and High Coverage in JSSK

Sources of Awareness:
- Family Members (71.1%)
- ASHA Workers (10.8%)
- Anganwadi Workers (1.9%)
- ANMs (1.9%)
- Others (14.3%)

↓

Dissemination of Information on JSSK Services:
- Free Delivery Services (94.2%)
- Free Drugs & Consumables (82.6%)
- Free Diagnostics (76.1%)
- Free Referral Transport (64.1%)
- Free Diet During Hospital Stay (59.8%)
- Free Newborn Care up to 30 Days (72.2%)

↓

Utilization of JSSK Services:
- 98.5% of participants utilized at least one benefit

↓

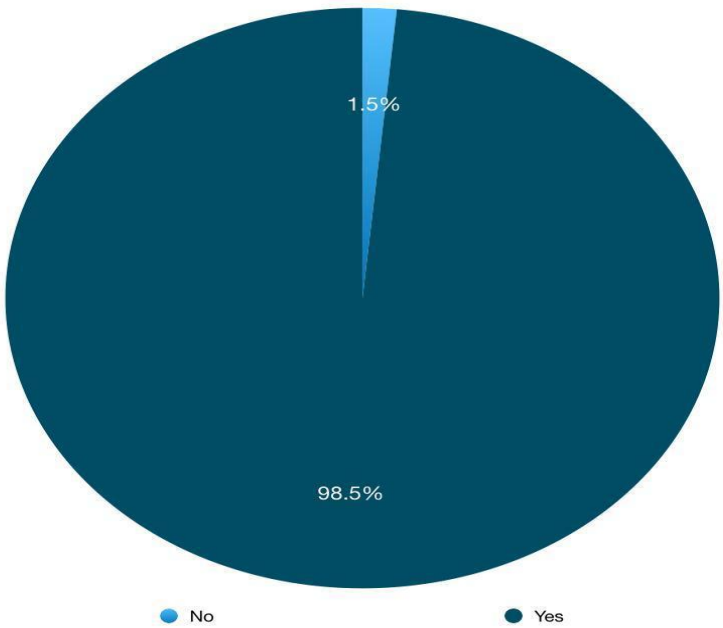
Positive Health-Seeking Behavior:
- Early registration during pregnancy
- Regular ANC/PNC visits
- Preference for institutional deliveries

↓

Community-Level Good Practices:
- Promotion through word-of-mouth
- Encouragement of other women to avail services
- Gradual increase in scheme uptake

The vast majority of participants, 98.5% (n=256), took advantage of the scheme, benefiting from its free and cashless services for delivery and newborn care. A small minority, 1.5% (n=4), did not avail themselves of the benefits offered by the scheme. The total number of participants was 260. This distribution indicates high utilization of the JSSK scheme among the study participants, highlighting its effectiveness in providing essential maternal and child healthcare **services (Figure 3).**

Figure 3. Distribution of study population according to advantage taken (JSSK)



DISCUSSION

Maternal and Child Health (MCH) schemes in India play a crucial role in addressing healthcare disparities and improving health outcomes among vulnerable populations. These schemes, initiated by both state and central governments, aim to reduce MMR and Infant Mortality Rate (IMR) through various interventions such as Janani Suraksha Yojana, Janani Shishu Suraksha Karyakram, Integrated Child Development Services and others. The effectiveness of these schemes hinges not only on their implementation but also on the awareness and perception among beneficiaries, which directly influence their uptake and utilization.

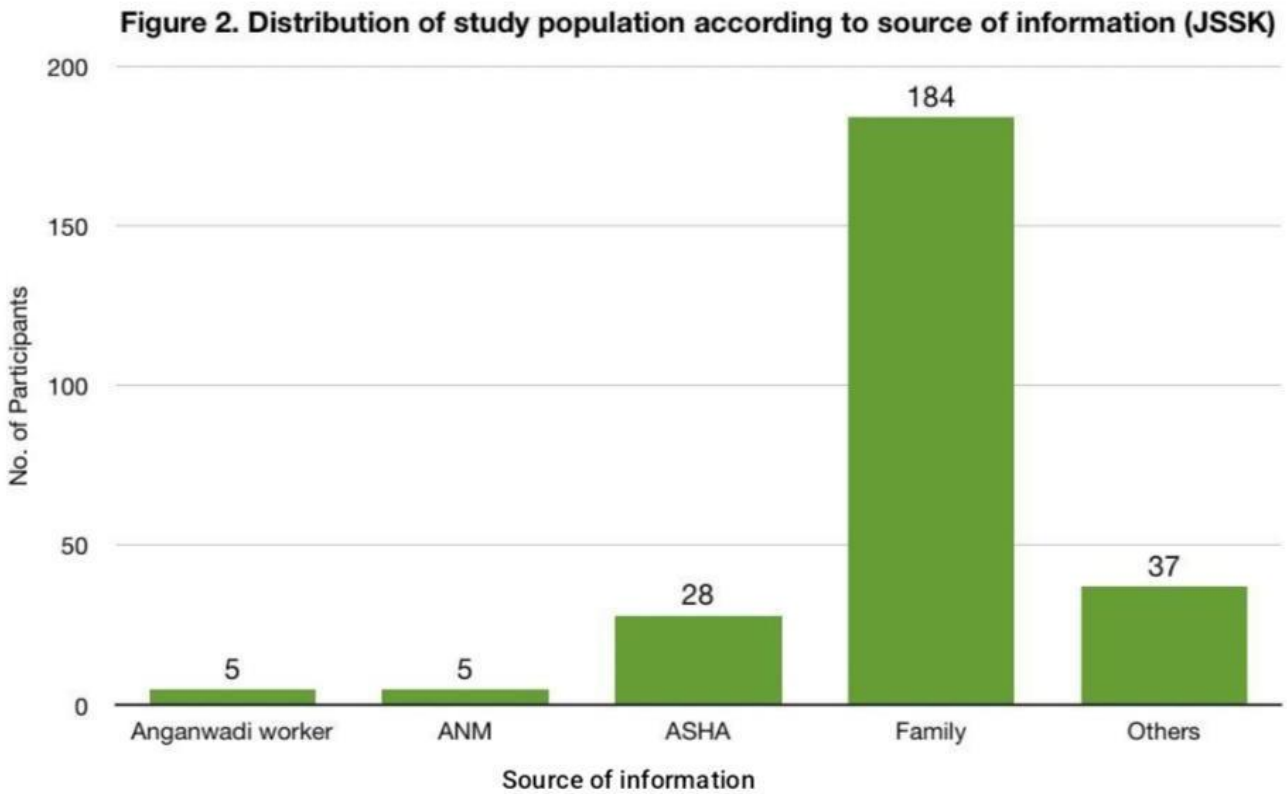
The present study was a hospital based cross-sectional study done to determine the level of awareness and its uptake among women attending the tertiary care hospital regarding the JSSK scheme. The study was conducted in Pannadhay Zanana Hospital, Udaipur, situated in the southern part of Rajasthan. A total of 260 female subjects participated in the study which were selected by a non-probability convenience sampling method. Maximum number of participants (70.8%) belonged to the 20-30 years age group in our study. In congruence with our study done by Bhaskaran Unnikrishnan et al (2020)[7] in Mangalore, Karnataka found that maximum numbers were seen in (81.2%) 20-30 years age group. This pattern aligns with demographic and reproductive trends in India, where the majority of pregnancies occur in women aged 20–30 years. According to the National Family Health Survey (NFHS-5, 2019–21)[8], the median age at first birth among Indian women is 22.1 years, and the highest fertility rates are observed in the 20–29 years age group, indicating greater utilization of maternal health services among this cohort.

Educational attainment varied in our study with 20.8% were illiterate, 21.2% had primary education, 22.3% had secondary education, 16.2% senior secondary, and 19.6% were graduates. The literacy rate in our study was above the national female average literacy rate i.e., 64.63% as per the reports of Ministry of Statistics and Programme Implementation based on census 2011[9] but contrary to the study of Bhaskaran Unnikrishnan et al (2020)[7] where 98.4% of participants were literate. Maximum participants (22.3%) in our study were educated up to secondary level which was in congruence with the study done in Karnataka by Bhaskaran Unnikrishnan et al (2020).[7] Differences

in literacy levels between studies have been observed in the literature and are often associated with variations in urbanization and accessibility to educational facilities, as documented in national reports on education and development.[10,11] In the present study, the overall literacy rate among participants was 79.2%, which is higher than the national female average literacy rate of 64.63% (Census 2011).[9] Literacy levels were categorized into five groups: primary (21.2%), secondary (22.3%), senior secondary (16.2%), and graduate level (19.6%), with 20.8% of participants being illiterate. Among those who were aware of the JSSK scheme, participants with secondary (22.3%) and graduate-level education (19.6%) demonstrated a better understanding of the scheme's full range of benefits compared to those with only primary education or no formal education. This indicates that higher educational attainment is positively associated with greater awareness and comprehension of healthcare schemes. Participants who had completed secondary education or above were more likely to correctly identify services like free referral transport, diagnostics, drugs, and newborn care provisions under JSSK. This finding is consistent with other studies that report a direct correlation between education level and health scheme awareness (Bhaskaran Unnikrishnan et al., 2020).[7] Improved literacy enables better communication with healthcare providers, greater access to health information, and more active engagement in maternal and child health programs. In the present study, a higher proportion of participants (93.1%) were unemployed, typically homemakers or engaged in informal domestic responsibilities. Only 6.9% reported employment, which included agricultural labor, shop assistants, and clerical work. This finding was in line with the study done by Bhaskaran Unnikrishnan et al (2020)[7] where the majority of participants were homemakers and were not engaged in paid employment. In another study by Navinkumar Angadi et al. (2016)[12] shows that maximum participants (77%) were homemakers. Similar patterns of low female workforce participation in India have been documented in national surveys, including the Periodic Labour Force Survey (PLFS 2019–20)[13], which reported that only 20.3% of women aged 15–59 years were employed, reflecting socio-cultural norms, household responsibilities, and limited access to employment opportunities. The majority of participants (75.4%) belonged to rural areas. This was similar to the study by Bhaskaran Unnikrishnan et al (2020)[7] where the maximum number of participants (69.2%) were from rural areas. National surveys also report that rural populations rely more on higher-level health facilities due to limited availability of primary healthcare services locally. National Health Profile (NHP, 2023)[14] indicates that rural areas in Rajasthan have fewer functional health facilities per capita compared to urban areas, which leads to greater utilization of tertiary care hospitals by rural residents. Socio-economic status is one of the important determinants of health and well being. In our study, a majority (45.4%) of participants belonged to the lower middle class based on the Modified BG Prasad classification of Socioeconomic status while in a study conducted by Bhaskaran Unnikrishnan et al (2020)[7] majority of the participants (82.4%) belonged to lower class and just 6% were in the lower middle class. In another study by Navinkumar Angadi et al. (2016)[12] 38% belonged to the lower middle class. The higher proportion of participants from the lower middle class may be influenced by the socio-economic landscape of the region, where many families fall into this category due to limited economic opportunities and moderate-income levels. This distribution could also reflect the demographics of those seeking care at the tertiary care hospital, which may attract more individuals from the lower middle class due to its accessibility and affordability compared to other healthcare options. Out of 260 participants, 130 (50%) were antenatal and 130 (50%) were postnatal, showing an equal distribution. In a study by Bhaskaran Unnikrishnan et al. (2020)[7], 57.2% were antenatal and the rest were postnatal. In both studies, the majority of participants had one live birth (42.7% in the present study and 49.6% in the comparative study). Another similarity was observed at the time of registration, where most participants registered in the first trimester (67.3% in our study and 93.3% in the comparative study). The equal distribution of antenatal and postnatal participants in our study was attributed to the hospital's balanced focus on providing comprehensive care to both groups, ensuring

services are equally accessible. Evidence tells that continuity of care from ANC through PNC improves maternal and neonatal outcomes significantly.[15] his might reflect effective outreach and service provision strategies that encourage both antenatal and postnatal women to seek care. The similarity in the number of live births and the timing of registration in the first trimester indicates a common pattern in maternal health-seeking behaviour and adherence to recommended prenatal care practices in both studies. In our study, of all the participants, 27.7% of the females are in high risk pregnancy while other studies, Narayana Murthy MR et al. (2016)[16] reported 34%, Bhaskaran Unnikrishnan et al (2020)[7] reported 26.8%. The high incidence of high-risk pregnancies can be attributed to the setting of the study in a tertiary care hospital, which often handles more complex and referred cases, thereby increasing the proportion of high-risk pregnancies observed. Additional factors such as socioeconomic conditions, limited access to consistent prenatal care and prevalent underlying health issues within the population could also contribute to the higher incidence. The hospital's good practices—such as routine risk screening, specialist care, emergency services, NICU support, and referral transport under JSSK—support effective management of high-risk pregnancies. Our study showed that overall awareness for JSSK was 99.6% (figure 1). According to a study conducted by Johnson et al. (2015)[17], the awareness for JSSK was 0%. A study conducted by Suman Chatterjee et al. (2015)[18] on good awareness for JSSK was reported among 31.25%. The awareness increases with regular interaction with healthcare workers (ASHAs, ANMs, etc) & Anganwadi workers. Mothers who visit healthcare facilities more frequently are likely to receive more information about MCH schemes. Possible reasons for the varying levels of awareness observed in our study, compared to other studies, could include differences in the demographic characteristics, socio-economic status, and educational levels of the study populations. Additionally, the effectiveness of local health campaigns, accessibility to information, and the role of healthcare providers in disseminating information about these schemes might differ across regions. The high awareness of JSSK (99.6%) in our study is attributed to targeted awareness programs along with advertisements of schemes in our study area.

Furthermore, while many participants were aware of the scheme names, a significant number lacked detailed knowledge about the benefits offered, or vice versa. This partial awareness suggests that communication strategies need to be improved to ensure comprehensive understanding among the target population. The variation in results compared to other studies, such as Johnson et al. (2015)[17], Uttekar et al. (2007)[19], and Parul Sharma et al. (2012)[20], highlights the impact of contextual factors and the necessity of continuous, tailored public health education efforts to bridge these gaps in awareness and understanding. Our study showed that the main source of information varies from scheme to scheme. Family members were main source of information for JSSK (71.1%) (figure 2), whereas in a study conducted by Johnson et al. (2015)[17], in Ramnagara, health personnel (20.93%) followed by friends (18.47%) and family (7.3%) were the most common sources; in contrast, none of the women reported that radio/TV/newspaper had contributed as the source of information. In a study conducted by Uttekar et al. (2007)[19], in Rajasthan, it was observed that ANMs were the main source of information (71%), followed by ASHA (24.2%). Though Internet/social media is being widely used in this era, their contribution as a source of information was low.



The variation in the main sources of information across different schemes highlights the diverse roles and reach of various community health workers and family influences in disseminating information about health schemes. Family members being the primary source indicates the significant role of familial advice and support in health-related decision-making within these communities. Comparative studies show regional differences in the reliance on health personnel and family, suggesting that cultural, social, and logistical factors influence information dissemination. The low contribution of internet and social media, despite their widespread use, underscores a digital divide or a preference for personal interactions over virtual ones in these communities. In the study setting, the eligibility for availing of certain schemes was to possess a Mamta card, Bank Diary and Janaadhar card; however, JSSK were given to all. Our study showed that the scheme benefit taken was maximum for JSSK (98.5%) (figure 3); since the study was conducted in a tertiary care hospital, almost all the women had availed of the benefits. It was 66.6% in a study conducted by Revathi S Julakatti et al. (2016)[21] and only 25.5 percent mothers received cash benefits according to a study conducted by Randhir Kumar et al.(2016)[22] in Haryana. According to a study conducted by Murthy et al. (2016)[16] in Mysore, 65.5 percent of mothers received the benefits. The discrepancies in uptake rates when compared to other studies highlight the role of regional differences in implementation, awareness programs, and local healthcare infrastructure, which can significantly impact the effectiveness and reach of these health schemes. While awareness and uptake are commendable, the depth of knowledge remains limited in some groups. Future research could explore barriers to accessing specific services (e.g., transport drop-back, diagnostics), differences in awareness depth across literacy and social groups, role of digital communication in rural maternal health awareness.

CONCLUSION

This study reveals that maternal health services are primarily utilized by rural women in their

reproductive years. Despite high literacy, most were unemployed, reflecting socio-cultural barriers. Notably, awareness of the JSSK scheme was very high (96%), driven by strong family and community networks. However, gaps remain in service quality, continuity of care, and full utilization—especially among high-risk pregnancies. Key strategies include strengthening ASHA-led follow-up, improving healthcare provider training, and enhancing emergency transport systems. Promoting male involvement, peer support, and birth preparedness at the household level can further improve outcomes. Moving forward, the focus must shift from awareness to empowerment—ensuring every woman receives respectful, complete, and timely maternal care.

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