

## Original Research Article

# Utilization of health services and its perceived barriers regarding infant care among tribal mothers in selected areas of West Bengal

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## ABSTRACT

**Background:** The tribal infant mortality rate in India was highest in the world among the indigenous populations. Utilization of child health services is poor in the tribal areas, due to presence of several barriers. The objective of the study was to assess the utilization of health services for infant, determining the perceived barriers of utilization of health services and finding the association between utilization of health services and selected socio-demographic characteristics.

**Methods:** 100 mothers were selected by using purposive sampling technique. Self-developed tool was used for data collection after establishing validity and reliability. Data regarding participants' profile was collected using a semi-structured interview schedule. To assess the utilization of health services, data were collected using record analysis proforma and semi structured interview schedule. A structured interview schedule was used to determine the perceived barriers of utilization of health services.

**Results:** All mothers under the study utilized Institutional delivery and Immunization service for their children according to age. 65% of the mothers' fully utilized health check-up service for their child during postnatal visit. Most of mothers (96%) received education for exclusive breast feeding for 6 months. Integrated Child Development Service was fully utilized by 74% mothers. Maximum (51%) of them fully utilized free treatment service for their children under JSSK. 63.46% mothers' fully utilized Referral services. The study findings also show the presence of barriers among them like lack of awareness, lack of support person, financial barrier etc.

**Conclusions:** Resolving the barriers to increase utilization of health services among tribal mothers is needed through improvement of their awareness.

**Keywords:** Utilization of health services, Perceived barriers, Infant care, Tribal mothers

## INTRODUCTION

Individuals and communities should have easy access to high quality, standard health services so that they can take care of their own health and the health of their family members. Skilled health workers to provide quality, people-centred care; and policy-makers committed to invest in universal health coverage are essential to bring 'health for all' in reality.<sup>1</sup>

The largest portion of tribal populations resides in India. According to the 2011 census, the tribal population in India was 104 million, which was 8.6 per cent of the country's population. The tribal population primarily resides in rural and remote areas and is one of the most vulnerable and marginalized section of the society. The Government of India gave definition of tribal region based on certain characteristics, which include (and are not limited to) economically backward communities living in a primitive condition, having some unique

customs, traditions and practices usually living a life of isolation. Tribal communities need special health programs for their sustainable development and easy access to basic health facilities. They are highly vulnerable to various diseases along with severe rate of malnutrition, morbidity and mortality.<sup>2</sup>

In India Infant Mortality Rate is 33 per 1000 live birth and in West Bengal 24 per 1000 live birth. Newborn Mortality Rate in India is 23 per 1000 live birth and in West Bengal 17 per 1000 live birth.<sup>3</sup> According to the National Family Health Survey 4 (NFHS-4) (2015-2016), the under-5 mortality among the tribal population was 57.2 per 1000 live births compared to 38.5 among others, and the infant mortality rate (IMR) 44.4 per 1000 live births versus others of 32.1. A child born to tribal community in India with 19 percent higher risk of dying in the neonatal period and 45 percent greater risk of dying in the post-neonatal period compared to other social classes.<sup>4</sup>

The tribal infant Mortality Rate in India was highest in the world among the indigenous populations, next only to the Federally Administered area of Pakistan.<sup>4</sup> People of tribal communities are vulnerable and highly disease prone. The Scheduled Tribe groups who keep isolated themselves from the wider community and who maintain a distinctive cultural identity have been categorized as primitive tribal groups. They are present with poverty, illiteracy, negligence of health, inappropriate environment, poor sanitation, lack of safe drinking water, and superstitions etc. Although Schedule Tribes are accorded special status under the fifth/sixth schedules of the Indian Constitution, their status on the whole, especially their health, remains unsatisfactory.<sup>5</sup>

Jose et al in their study among tribal women in Kerala, revealed that lack of transport facilities was a prime factor which contributed to under-utilization by tribal women coupled with lack of awareness and financial constraints.<sup>6</sup>

Pandey in her study found that the financial obstacles, lack of transportation, time constraints and not availability of health staff influence women's non-utilization of ANC and delivery services.<sup>7</sup>

So, the investigator felt the need to study the utilization of health services and to find out the barriers of utilization of health services regarding infant care among tribal mothers of West Bengal.

### ***Objective of the study***

To assess the utilization of health services regarding infant care among tribal mothers. To determine the perceived barriers of utilization of health services among tribal mothers. To find out the association between the utilization of health services regarding infant care and selected participants' profile.

## **METHODS**

Descriptive Survey research approach was selected for this study. Following institutional ethics committee approval, total 100 mothers' who has at least one infant, able to speak Bengali and willing to participate in this study with written consent were selected for the study. Tribal areas selected conveniently and purposive sampling technique was used to select subjects, excluding mothers' who were sick, unable to communicate and mothers whose baby was not present during data collection. Data were collected during 2nd January 2021 to 31st January 2021. The study was conducted at selected three blocks of Jharagram districts of West Bengal.

In this study, tribal means a group of community people who belong to Schedule tribe caste and mothers refer to tribal women having child within one year old. Infant care means measures taken by mother through Government health services regarding infant's health since birth to one year. Here utilization refers to use of Government health services regarding infant care by tribal mothers and perceived barriers refers to the obstacles to utilize health services regarding infant care. In the present study health services refer to the Government health services regarding infant care including institutional delivery, health check-up of child during postnatal visit, immunization, periodic health check-up for growth monitoring, iron folic acid supplementation from 06 months of age, health education service for initiation of breast feeding within one hour of delivery and for exclusive breast feeding, Integrated Child Development Services, health education service for appropriate complementary feeding practice along with continuation of breast feeding (after the age of 6months), attending Village Health and Nutrition Day, free treatment during sickness (if any) under Janani Shishu Suraksha Karyakram, free transport during sickness (if any) under Janani Shishu Suraksha Karyakram, primary health care service: Early detection and management of common childhood illness and referral services etc.

Semi-structured Interview Schedule was developed to collect data on participant's profile. Record analysis Performa was used to record service utilization on the basis of Mother and Child Protection Card. The services describe five health services (according to age) including institutional delivery, health check-up of child during postnatal visit, immunization, periodic health check-up for growth monitoring of the child and iron folic acid supplementation from 06 months of age. Semi-structured interview schedule was used to assess service utilization by the mothers for their infant. This service utilization schedule was prepared on the basis of WHO Guideline & Govt. of India's available health services for infant. This describes 09 health services as mentioned above. Structured interview schedule was prepared to identify Barrier of Utilization of health services. Validity and

reliability of the tool was established before final data collection. Content Validity Index (CVI) for participants' profile was .84 & reliability was 1 through test and retest method. Inter-rater reliability of record analysis proforma was 1 and CVI for service utilization interview schedule was 0.86 and reliability was 0.84. CVI for perceived barriers of utilization of health services was 0.92 and reliability of the tool was established by Kuder Richardson 20 for establishing internal consistency and value was 0.88.

### Data collection

List of the tribal mothers having infant (0-1 year) was prepared with the help of ANM and ASHA workers under guidance of BMOH and BPHN of selected three blocks. Information was given to mothers one day prior to home visit. According to their convenient time home visit was done. Data was collected by house to house visit with assistance taken from the ASHA workers. Self-introduction to the subjects was done. The purpose of the study and the rights of the subjects were explained to them. Informed consent from the participants was taken and the participants were assured for maintaining confidentiality of their responses. Wearing mask and physical distancing were maintained during data collection keeping in view the pandemic situation. Data was collected from 10am-3pm. Time taken to collect data from each individual was 30-45 minutes. Health education was given to the mothers regarding any health issue.

### Data analysis

Frequency and percentage distribution was done for describing the participants' profile, utilization of health services and perceived barriers of utilization of health services. Chi Square test computed to determine the association between utilization of health services and selected participants' profile. Modified Fisher's Exact test (Freeman-Halton extension) for those contingency tables where expected frequency is <5 in more than 20% of cells to determine the association between utilization of health services and selected participants' profile.<sup>8</sup> If necessary, collapsing the categories to make the Chi Square/ Fisher's exact test technically feasible. e.g., some categories like education of mother, education of husband etc. were dichotomized by merging two-three options into one. Statistical descriptions and test above were performed using Statistical package for social sciences (SPSS) version 20 and P value of less than 0.05 was considered significant.

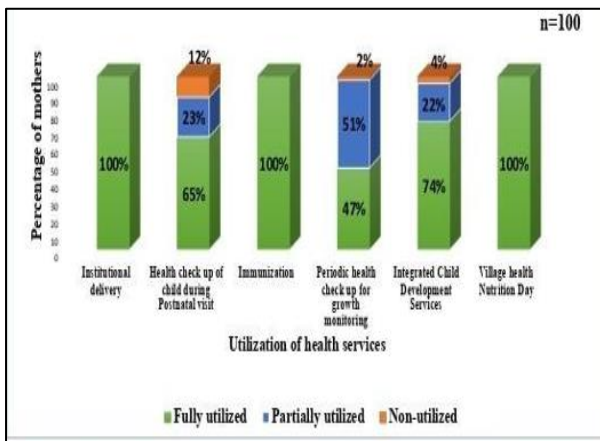
### RESULTS

Profile of participants: Maximum (56%) of the mothers belongs to 18-23 years age group. Maximum mother and their husband's educational qualification are up to secondary level. 82% of them are housewife and 75% of their husbands are daily labourer. 46% of the mothers have per capita monthly income of Rs. 1001-2000. 62% mothers have history of sickness after birth for 1-2 times. 80% of the mothers get information from health professional. Only 46% of them live within 1-6 km from health centre (Table 1).

**Table 1: Frequency distribution of participants' profile.**

S. No	Participants' profile	Frequency	S. No	Participants' profile	Frequency
1.	Age		8	Religion	
	<18	10		Hindu	100
	18-23	56			
	24-29	27			
	≥30	7			
2.	Education		9	Number of children	
	Illiterate	14		1	55
	Primary	24		2	33
	Secondary	46		>2	12
	Higher secondary	13			
	Graduation and above	3			
3.	Occupation		10	Support from family	
	Housewife	82		Yes	84
	Daily labour	18		No	16
4.	Husband's education		11	Support person (n= 84)	
	Illiterate	13		Support person (n=84)	
	Primary	27		Husband	28
	Secondary	36		In-laws	12
	Higher secondary	16		Both husband and in-laws	44
	Graduation and above	8			
5.	Husband's occupation		12	Number of times of Child's sickness after	

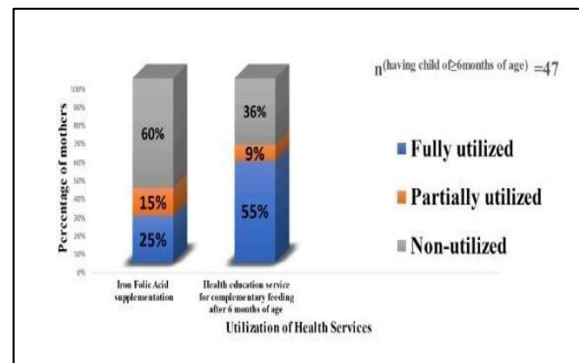
S. No	Participants' profile	Frequency	S. No	Participants' profile	Frequency
				birth	
	Daily labour	75		1-2 times	62
	Service	10		3-4 times	23
	Business	7		5-6 times	8
	Unemployed	8		None	7
6.	Per capita monthly income		13	Source of health-related information	
	>2000	23		Health professional	80
	1001-2000	46		Relatives /friends	20
	≤1000	31			
7.	Age of child		14	Distance between home and the nearest health centre	
	<1 month	2		<1 km	22
	1-6 months	51		1-6 km	46
	7-12 months	47		7-12 km	40
				>12 km	12



**Figure 1: Percentage distribution of utilization of health services (according to age).**

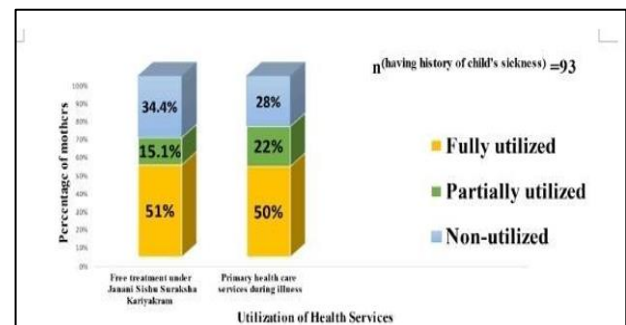
Utilization of health services: All mothers under the study utilized Institutional delivery and Immunization service for their children according to age. Majority (65%) of the mothers under the study fully utilized health check-up for child during postnatal visit. 47% mothers under the study fully utilized periodic health check-up for growth monitoring of the child. Integrated Child Development Service was fully utilized by majority (74%) of them. Village Health Nutrition Day was fully attended by 100% mothers under the study (Figure 1).

Most (92%) of the mothers under the study, received health education on initiation of breast feeding and they initiated breast feeding within one hour of delivery also. Table 2 also shows that four percent of mother partially utilized health education services and they stopped breast feeding before completion of 6months of the child (Table 2).



**Figure 2: Percentage distribution of utilization of iron folic acid supplementation and health education service for complementary feeding (according to age).**

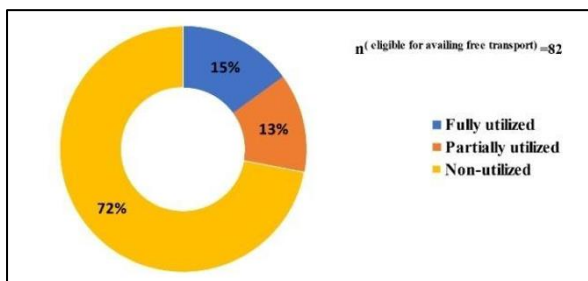
Figure 2 shows that only 25% mothers (having child of ≥6 months) under the study fully utilized Iron Folic Acid supplementation (from the age of 6months) for their children and majority (60%) of them did not utilize. 55% mothers (having child of ≥6 months) initiated complementary feeding after the age of 6months of their children.



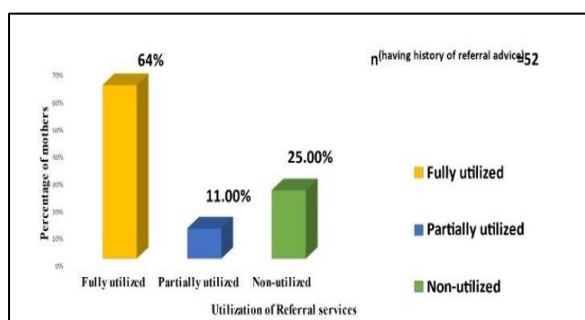
**Figure 3: Percentage distribution of utilization of free treatment under Janani sishu suraksha karyakram and primary health care services.**



Figure 3 shows that only 51% mothers (having history of child’s sickness) under the study fully utilized Free treatment under Janani Sishu Suraksha Karyakram. Only 50% mothers (having history of child’s sickness) fully utilized Primary health care services during illness of their children.



**Figure 4: Percentage distribution of utilization of free transport under Janani sishu suraksha karyakram.**



**Figure 5: Percentage distribution of utilization of referral services.**

Figure 4 shows that only 15% mothers (eligible to avail free transport for their children) under the study fully utilized Free transport under Janani Sishu Suraksha Karyakram and majority (72%) of the mothers did not utilize the service.

This study results revealed that majority (64%) of the mothers (having history of referral advice for their children) under the study fully utilized Referral services whereas 25% didn’t utilized referral services (Figure 5).

**Table 2: Frequency and percentage distribution of utilization of health education service for initiation of breast feeding and exclusive breast feeding.**

Service utilization	Frequency (%)
<b>Health education services for initiation of breast feeding within one (1) hour of delivery</b>	
Fully utilized	92
Non-utilized	8
<b>Health education services for exclusive breast feeding upto six (6) months of age</b>	
Fully utilized	96
Partially utilized	4

**Table 3: Frequency and percentage distribution of area-wise barriers of utilization of health services.**

Barriers	Frequency (%)
Lack of awareness	57
Lack of support person	16
Financial barrier	39
Time constraints	61
Barriers related to accessibility of health facility (Lack of transport and long distance)	79
Traditional and cultural practice related barrier (Following traditional practices)	34
Health system related barrier	50

Barriers of utilization: 57% of tribal mothers under the study have lack of awareness regarding existing health services for child. Traditional and cultural barriers are also present in 34% of the mothers like following traditional practices as alternative of health services. 50% of them have health system related barriers like unavailability of transport system under JSSK, poor cooperation of health care providers (Table 3).

Association between participants’ profile: Sources of information were significantly associated with utilization of periodic health check-up for growth monitoring, utilization of primary healthcare services and utilization of referral services. Utilization of health check-up during postnatal visit was associated with distance between home and nearest health centre and sources of information. Utilization of health education for complementary feeding practice was significantly associated with per capita monthly income & sources of information. Utilization of free treatment under Sishu Suraksha Karykram was significantly associated with mother’s education and sources of information. All other subjects characteristics are not significantly associated with utilization of any services.

**DISCUSSION**

In the present study, institutional delivery service was utilized by 100% mothers. Near to similar study conducted by Bhattacharjee et al revealed that the percentage of women who had institutional delivery was 73.5% in Tea Gardens of Darjeeling, India.<sup>9</sup> On the contrary, Mukhtar et al found that majority (72.6%) of the women gave birth at home and main reason behind home delivery was attitude (42.3%) of the study subjects and their spouses towards the institutional delivery and availability of the local trained Dai (35.5%).<sup>10</sup>

The current study revealed that 65% of the mothers fully utilized and 23% of them partially utilized the health check-up service for child during postnatal visit which is inconsistent with the study conducted by Sharma et al

where they found that 71.9% of mothers received postnatal check-up within 10 days of delivery among them 36.6% received one postnatal check-up, 18.5% received two, 14.7% received three and only 1.9% received four postnatal check-ups.<sup>11</sup> They also revealed that female education in tribal area, occupation of the mothers and their husbands were important contributing factor associated with utilization of postnatal care.

In present study 100% mothers have fully utilized immunization service for their children which is consistent with the findings of the study conducted by Chandwani et al where they found that 91% of the children, irrespective of their gender, completed their primary immunization coverage.<sup>12</sup>

Current study assesses that 92% mothers received Health Education service regarding early initiation of breast feeding and they also initiated breast feeding within one hour of delivery. 96% mothers received Health Education for exclusive Breast feeding and continued exclusive breast feeding and 55% mothers initiated complementary feeding after the age of 6 months of their children. Supported study conducted by Pushti et al where they found that complementary feeding was started in around 63% of children at  $\geq 6$  months of age.<sup>13</sup>

On contrary, Mondal et al found in their study that 48.33% babies breast feeding was initiated within one hour of birth, only 46.15% babies were exclusively breastfed and in 46.67% cases complementary foods were correctly introduced.<sup>14</sup> Reasons for these differences may be the literacy rate of mothers. Socioeconomic condition of the families may also have influence on this.

In present study 74% mothers fully utilized Integrated Child Development Service for their child. This study findings are almost consistent with the study conducted by Rajpal et al here they found 66.1% of the tribal mothers utilized ICDS facilities.<sup>15</sup>

Current study shows that Village Health Nutrition Day service is fully utilized by 100% mothers. This finding is not fully supported by another study of Barua et al where they revealed that 86% of the respondents had awareness regarding VHND but 77% of them fully attended the day for their infants.<sup>16</sup>

In current study, 51% mothers fully utilized Free treatment service for their children under Janani Sishu Suraksha Karyakram and Only 15% mothers fully utilized Free transport service for their children under Janani Sishu Suraksha Karyakram. On the contrary, Nath et al found that 93% of the postnatal mothers had good utilization of the service.<sup>17</sup> Possible explanations for this inconsistency are lack of awareness of the mothers and distance between home and health centre facility.

Primary health care services were fully utilized during illness of their children by 50% mothers in present study.

This study finding is supported by another study of Sule et al where they found that 44% availed primary health care services during their illness whereas others used self-medication.<sup>18</sup>

This study shows 64% mothers fully utilized referral service for their children. This finding is consistent with the study conducted by Pushti et al where they revealed that 62.22% took medical attention from higher Government facility during their children's illness.<sup>13</sup>

Current study reveals that 57% of the mothers have lack of awareness, 21% of the mothers have social barriers like no involvement of the husband in availing health services for child. Financial barrier is also present among 39% of the mothers. 61% of them have time constraints like long waiting time and having problem with time schedule in availability of health services. Most of them (79%) have physical barriers like long distance between home and health centre facility, lack of transport in village. Traditional and cultural barriers are present in 34% and 50% of the mothers have health system related barriers including poor cooperation of health care providers, lack of infrastructure. These findings are supported by another studies in which majority of the mothers had lack of awareness regarding existence of health services, problems regarding distance, unaffordability regarding medicines and transport, which were responsible for non-utilization of health services.<sup>19,20</sup>

Concerning the association between utilization of health services regarding infant care among tribal mothers and selected participant's profile, the result reveals that utilization of many services has significant association with selected health and health system related behaviour like source of health-related information that is who all are received health information from health personnel are likely to better utilize available health services than who received information from relatives /friends. This is the common psychological phenomenon that if we know the availability of health services properly then we try to utilize that. Utilization of health check-up during postnatal visit was associated with distance between home and nearest health centre which is supported by the Kim et al study.<sup>21</sup> Utilization of free treatment under Sishu Suraksha Karyakram was significantly associated with mother's education which is supported by study Yangala et al study.<sup>22</sup>

This study was conducted in rural tribal community; it was possible to find out the actual barriers of utilization of health services among tribal mothers and high response rate in the study reflects true representativeness of data but due to less sample size generalization of the findings is not possible.

## CONCLUSION

All the mothers under the study had barriers to utilize the health services for their children. The available health

care services for infant health were not fully utilized by the mothers. They were also following traditional practices as alternatives of health services for their children. It can be concluded that presence of barriers among tribal mothers has effect on utilization of health services for their children. So, resolving the barriers is very much essential to increase the utilization of health services among tribal mothers. Indirectly, it will help in prevention and early detection of disease and promotion of health of the children.

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