

## A cross sectional study on utilization of postnatal services in rural health training centre, Chandragiri, Andhra Pradesh

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### Abstract

**Introduction:** Majority of maternal deaths can be prevented through appropriate maternal health services. According to NHFS-3 postnatal care tends to be low at 36%, percentage of deliveries with a post natal checkup in India is 41.2% and in Andhra Pradesh it is 73.3%. Percentage of deliveries with a post natal checkup within 2 days of birth is 37.3% in India and 64.1% in Andhra Pradesh.<sup>1</sup> In developing countries like India; the utilization of basic health services has remained poor.

**Materials and Methods:** A community based cross sectional study conducted among 211 women at rural health training centre, Chandragiri. Women who had delivered more than six weeks ago (completed puerperal period) and within six months after delivery were included in the study.

**Results:** The mean age of study subjects was 23.1±2.1 years. Of the total study subjects, majority (90.1%) were aware about postnatal services and 186 (88.2%) utilized postnatal services.

**Conclusion:** Knowledge and utilization of post natal services are good in the present study area especially at peripheral level. Health education programmes should be implemented to further increase the utilization.

**Keywords:** Post natal care, Post natal services, Utilization, Maternal health.

### Introduction

Majority of maternal deaths can be prevented through appropriate maternal health services. According to NHFS-3 postnatal care tends to be low at 36%, percentage of deliveries with a post natal checkup in India is 41.2% and in Andhra Pradesh it is 73.3%. Percentage of deliveries with a post natal checkup within 2 days of birth is 37.3% in India and 64.1% in Andhra Pradesh.<sup>1</sup> In developing countries like India, the utilization of basic health services has remained poor. The reasons for non utilization of maternal health services could be due to various social, cultural, economic factors. Education, birth order and standard of living index also influences in utilization of health services.

Majority of these services are provided at the community level through peripheral health workers. They provide advice, information and basic health services for pregnant women and mothers. The post natal services provided at the community level include counseling on family planning, breast feeding practices, nutrition, early detection of post partum complications, information about existing health services etc. However the presence of health workers in the village, their ability to build on one-to-one relationship with the women in villages and the ability to make home visits give them an advantage over both the formal health care delivery system and traditional health care practices that are still prevalent in India.<sup>2</sup>

Many women who give birth in facilities, are discharged within hours after childbirth, without any indication about where they can obtain further care or support. However, as the utilization of maternal health care ultimately comes down to the community level in which women live, it is of key importance to pay attention to the perspective of the women themselves.<sup>3</sup> Hence,

understanding of these factors at the community level is required. If these factors are correctly identified, then the program efforts can be concentrated to increase the acceptance/utilization rates. Therefore, keeping this in view, this study was conducted to assess the utilization pattern of mothers, the facilitators and the barriers of utilization of services.

### Aim and Objectives

#### Aim

To study the utilization and factors affecting the utilization of postnatal services in Rural Health Training Centre area of Chandragiri.

#### Objectives

1. To assess the utilization of postnatal services.
2. To assess the utility of Janani Suraksha Yojana Programme.
3. To determine the socio demographic and health related factors influencing the utilization of postnatal services.

### Materials and Methods

The present study was a community based cross sectional study done at rural health training centre, Chandragiri which is a field practice area of Department of Community Medicine, Sri Venkateswara Medical College, Tirupathi. It has three subcentres namely Chandragiri, Narsingapuram, Dornakambala. Women who had delivered more than six weeks ago (completed puerperal period) and within six months after delivery were included in the study. Sample size was calculated considering the prevalence of utilization of postnatal services of 68%,<sup>4</sup> confidence interval 95% and non response rate of 10%. The obtained sample size was

189 and this study was done in 211 subjects. Multi stage sampling procedure was used to select the required sample.

Study was conducted for a period of 11 months from October 2014 to August 2015 after obtaining approval from institutional ethical committee and taking informed consent from the study subjects. A pre-designed and pre-tested questionnaire was used to collect data. Data was collected by interviewing the study population by door to door survey. The data was compiled and analyzed using Epi Info version 7.1.4.

Descriptive analysis was done (relative frequency). Chi-square was conducted to study the influence of factors

on postnatal services. p value of <0.05 was considered as significant.

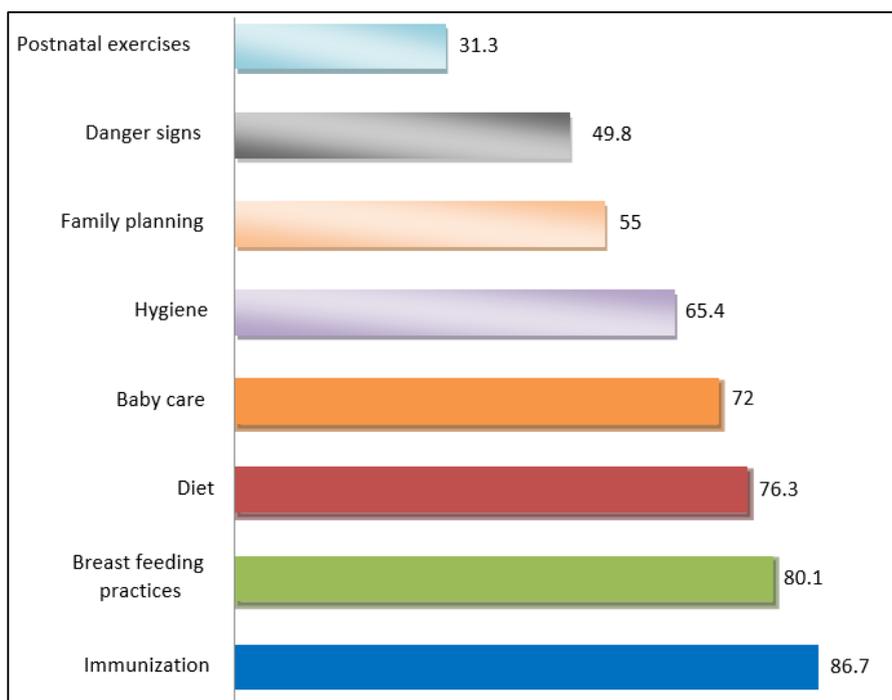
**Results**

Among the study subjects 59.7% of them were in the age group of 20-24 years followed by 25-29 years (27.5%). The mean age of study subjects was 23.1±2.1 years. Of the total study subjects, majority(90.1%) were aware about postnatal services and 186(88.2%) utilized postnatal services.

**Table 1:** Place of postnatal service utilization (n=211)

| Place of postnatal service            | Number of subjects (n) | Percentage |
|---------------------------------------|------------------------|------------|
| Service not utilized                  | 25                     | 11.8       |
| Govt. Hospital                        | 38                     | 18.0       |
| Private Hospital                      | 32                     | 15.2       |
| Home(visits by skilled health worker) | 116                    | 55.0       |
| Total                                 | 211                    | 100.0      |

Table 1 shows distribution of respondents according to source of postnatal service utilization. Majority of study subjects (62.4%) utilized postnatal services at home by skilled health worker followed by hospitals (Government and private hospitals) which is 37.6%. Of the study subjects 53.5% had less than 3 postnatal visits. Only 34.6% mothers had three or more than three postnatal visits.



**Fig. 1:** Distribution of study subjects regarding postnatal advise given by health worker(n=211)

In the study it was observed that 86.7% of mothers received advice regarding immunization 80.1% about breast feeding practices, 76.3% about nutrition and 72.0% about baby care. Counseling for hygiene was given to 65.4% of the mothers and advice on postpartum complications was given to 49.8% of mothers. Advice about postnatal exercises and family planning was given to 31.3% and 55% of the mothers respectively.

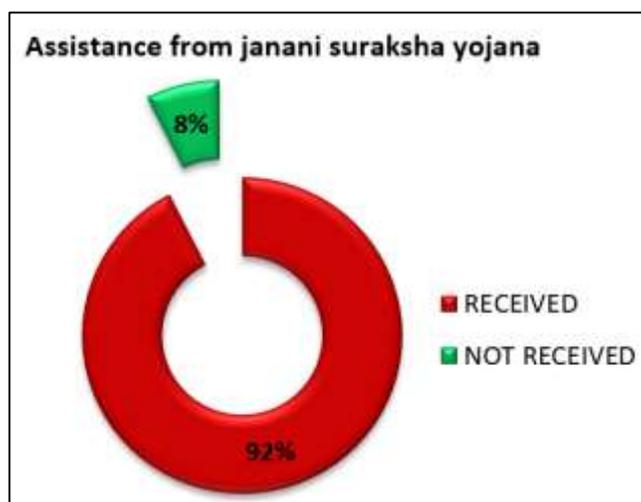
Role of ASHA worker in mediation of health worker and beneficiary was satisfactory and rapport among beneficiary and community found to be satisfactory.

**Table 2:** Utilization of postnatal services in relation to parity

| Parity    | Utilized postnatal services<br>n (%) | Not utilized<br>n (%) | Total<br>n (%) |
|-----------|--------------------------------------|-----------------------|----------------|
| Primipara | 139(92.1%)                           | 12(7.9%)              | 151(100.0%)    |
| Multipara | 47(78.3%)                            | 13(21.7%)             | 60(100.0%)     |
| Total     | 186(88.2%)                           | 25(11.8%)             | 211(100.0%)    |

$$\chi^2=7.74; df=1;p=0.005;S$$

As the birth order increases the probability of utilizing postnatal services was decreased.

**Fig. 2:** Percentage of mothers received assistance from Janani Suraksha Yojana

Out of 211 mothers only 134 were eligible for JSY. Of the total number of eligible women, 92% of mothers had utilized the scheme. Only 8% of mothers had not utilized the scheme.

**Table 3:** Utilization of postnatal services in relation to socio demographic factors(n=211)

| Variables                        | Postnatal services |                       | Total<br>n (%) | Statistical significance                        |
|----------------------------------|--------------------|-----------------------|----------------|---|
|                                  | Utilized<br>n (%)  | Not utilized<br>n (%) |                |   |
| <b>Age group (Years)</b>         |                    |                       |                |   |
| 15-19                            | 14(77.8)           | 4(22.2)               | 18(100.0)      | $\chi^2 = 2.4; df = 2; p\text{-value} = 0.30$   |
| 20-24                            | 111(88.1)          | 15(11.9)              | 126(100.0)     |   |
| 25 and above                     | 61(91.0)           | 6(9.0)                | 67(100.0)      |   |
| Total                            | 186(88.2)          | 25(11.8)              | 211(100.0)     |   |
| <b>Social class</b>              |                    |                       |                |   |
| Other caste                      | 65(89.0)           | 8(11.0)               | 73(100.0)      | $\chi^2 = 1.6; df = 2; p\text{-value} = 0.44$   |
| Backward caste                   | 62(91.2)           | 6(8.8)                | 68(100.0)      |   |
| Scheduled caste/ Scheduled tribe | 59(84.3)           | 11(15.7)              | 70(100.0)      |   |
| Total                            | 186(88.2)          | 25(11.8)              | 211(100.0)     |   |
| <b>Education of subject</b>      |                    |                       |                |   |
| Illiterates                      | 21(87.5)           | 3(12.5)               | 24(100.0)      | $\chi^2 = 1.37; df = 3; p\text{-value} = 0.71$  |
| Middle School                    | 27(87.1)           | 4(12.9)               | 31(100.0)      |   |
| High School                      | 58(92.1)           | 5(7.9)                | 63(100.0)      |   |
| College                          | 80(86.0)           | 13(14.0)              | 93(100.0)      |   |
| Total                            | 186(88.2)          | 25(11.8)              | 211(100.0)     |   |
| <b>Socio economic status</b>     |                    |                       |                |   |
| Below middle class               | 67(81.7)           | 15(18.3)              | 82(100.0)      | $\chi^2 = 5.33; df = 1; p\text{-value} = 0.021$ |
| middle class and above           | 119(92.2)          | 10(7.8)               | 129(100.0)     |   |
| Total                            | 186(88.2)          | 25(11.8)              | 211(100.0)     |   |

## Discussion

Among the study population 88.2% of the mothers received postnatal service and 11.8% mothers didn't receive the postnatal service. Similarly a study done by Paudel et al., in Belgam<sup>5</sup> found that 79% mothers had utilized the postnatal service. The present study findings were in disagreement with a study done by Rudramma<sup>6</sup> in Belgaum of Karnataka in which 46.7% mothers did not receive postnatal care service. Another study conducted by Swapna et al.,<sup>7</sup> found that 15% mothers did not receive any postnatal service.

In the present study 62.4% subjects utilized postnatal services at home by skilled health worker, 20.4% respondents utilized postnatal services at government institution, 17.2% respondents utilized postnatal services at private institution. While in a study done by Srivastava et al.,<sup>8</sup> found that 53.2% respondents availed postnatal services at government hospital, 24.5% from private hospital and 22.3% at home by health worker. Study done in Andhra Pradesh<sup>7</sup> revealed 39.3% availed postnatal services from government hospital and 46% from private hospital.

In the study it was observed that 80.1% of the mothers had received advice regarding breast feeding practices, 72.0% about baby care, 86.7% received regarding immunization and 76.3% about nutrition. Counseling for hygiene was given to 65.4% of the mothers and advice on postpartum complications was given to 49.8% of mothers. Advice about postnatal exercises and family planning was given to 31.3% and 55% of the mothers respectively.

Study done by Paudel, et al.,<sup>5</sup> found that 92.5% received advise about breast feeding, 67.9% about postnatal exercise, 89.0% nutrition education, 71.7% were told about family planning, 84.9% had received advise on postnatal complication.

Agarwal et al.,<sup>9</sup> study reported that advice regarding family planning, breast feeding and baby care was provided in 29.8%, 71% and 59% respectively. The present study findings were similar to above study with regard to breast feeding.

Maximum utilization of postnatal services was observed among mothers in age group of 25 years and above (91.0%), mothers (91.2%) from backward caste, mothers who had completed high school education (92.1) and middle class and above socio economic status women (92.2%). While a study done by Paudel,<sup>5</sup> et al found that postnatal service utilization was more likely among mothers in age group of 20-35 years(79.1%), those who had some schooling(80%), whose income is less than 3000(87.4%) and Bhaire et al.,<sup>10</sup> study in Maharashtra revealed that (81.2%) mothers, who utilized PNC services were literates.(p>0.05), were from lower socio economic class.(p < 0.05)

Sharma et al.,<sup>11</sup> study observed that, education of mothers (p=0.003) was important contributing factor with utilization of postnatal care (OR=2.545; 95% CI:1.375-4.714). Mothers who belonged to other caste utilized PNC 3.421 times more (95% CI:1.691-6.921) (p=0.000). The study also showed mothers aged 15-24 years (p=0.064), mothers from lower socio economic class (p=0.094) were

more likely to utilize postnatal services. Level of education showed strong statistical association with postnatal care service utilization in a study done in Ethiopia.<sup>12</sup> Mothers who attended secondary school were about 4 times (AOR=4.16, 95% CL:(2.48, 8.71) more likely to utilize postnatal care service than illiterate women.

## Conclusion

Knowledge and utilization of post natal services are good in the present study especially at peripheral level. They were influenced by Parity, literacy and socio economic status of postnatal women. Health education programmes should be implemented to further increase the utilization at all levels.

## Source of Funding

None.

## Conflict of Interest

None.

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