

## Women Seeking Vaccination-opportunity to Assess Gaps in Post Natal Service Delivery in an Immunization Clinic in Middle Level City, Odisha, India

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### Abstract

**Introduction:** Continuum of care from adolescent girls till their child turns one year of age has now emerged as the mainstay of success of Maternal and Child Care in any country. In India, the frontline workers have turned around the dismal figures of infant and maternal mortality rate by strategic monitoring of pregnancy and institutional deliveries. Yet infant and maternal morbidity issues still plague us and in this light current study were planned among postnatal women visiting immunization clinic in a tertiary care hospital in a middle level city of India i.e. Bhubaneswar, to assess the postnatal services offered to them.

**Objectives:** To assess the postnatal services and gaps among women attending immunization clinic and to derive associations between social, health-seeking behaviour and other factors for the gaps in service delivery.

**Methodology:** It was a cross-sectional study done from July to Dec 2016, wherein women with six months and less children were interviewed after informed consent and clearance from Ethics committee. A predesigned semi structured questionnaire was used to gather socio-demographic, dietary and health seeking behaviour details.

**Results:** A total of 134 women were included in the study, mean age being 26.8 years, 91% Hindu, 23% from SC/ST class, 40.2% women were either illiterate or just literate and 24.2% were working. 46.4% were between 21-25 years of age during first conception, 13% not exclusively breast feeding and only 57% sought 4 antenatal visits. 66.7% were anaemic and only 62% confirmed any knowledge on iron supplementation. Increasing age of the mother and urban settings showed strong association with regular intake of iron supplements.

**Conclusion:** More emphasis should be on iron supplementation and counselling during post natal visits.

**Keywords:** Post natal care; Anemia; Iron supplementation; Health seeking behaviour

### Introduction

Post natal period is often dealt with complacency both by the delivering mothers as well as the health care givers. The postnatal period (the time just after delivery and through the first six months of life) is especially critical for new-borns and mothers, for which the WHO now recommends the 6-6-6-6 model [1-3].

In India which is still battling a very high Maternal Mortality Rate of 167 per one lakh live births (2011-2013) with a lot of state variations. The state in question i.e. Odisha now stands at a MMR of 222 per one lakh live births [4].

The national programme in every state on Maternal Health ensures with the help of state and region specific strategies, quality antenatal and postnatal care at the rural level through a cadre of frontline workers called ASHA i.e. Accredited Social Health Activists and AWW i.e. Aanganwadi workers. These workers are empowered with the help of trainings to improvise on various aspects of care of women and also address the social issues of illiteracy and underserved groups. Under the programme, they are to offer services during home visits besides facility based services.

However, policy makers have overlooked this critical period of post natal care by breaking the continuum of care cycle, more so in the urban context, where there is a lack of facility based and community actions to reach mothers and babies in the first days after birth.

Immunization is one unique opportunity wherein the women visit clinics for vaccinating their children. The current study was conceived to gather information regarding the postnatal services availed by the urban mothers when they come for vaccination of their children.

### Objectives

- To assess the postnatal services and gaps among women attending immunization clinic.
- To derive associations between social and other factors for the gaps in service delivery.

### Methodology

A cross-sectional study was done in Immunization clinic within the hospital of a private medical college of Bhubaneswar, Odisha from October 2016 till Dec 2016, after due clearance from the Institutional Ethics Committee.

The study population were all post natal women visiting Immunization Clinic of Kalinga Institute of Medical Sciences with the inclusion criteria being a woman whose child is less than 6 month of age irrespective of parity, and those who are willing to participate in the study and give an informed written consent. Those not willing to participate were excluded from the study.

Taking the gaps in post natal care reported in a study done in urban slum community 5 as 51%, and taking 95% CI and 10% as absolute error the optimum sample size was calculated as 96. Within 3 months; our sample size for the current study was 134.

The study tool was a predesigned pretested semi structured questionnaire which elicited information on socio-demographics of the women, menstrual, obstetric history, antenatal history and knowledge on post natal services with key emphasis to iron supplementation as this was currently being emphasized by the state health policy. The Data is entered into Microsoft excel 2007 spread sheet and analysed using SPSS 17 software.

## Results

Table 1 shows the women visiting the immunization clinic were predominantly Hindu 91%; 12.5% were from Below Poverty Line (BPL-a special category for underserved who are offered subsidies as per provisions) which could be ascertained from the card issued to them; mean age being 26.8 years with a SD of 3.64 and 24.2% were engaged in some work that helped them earn some income.

Characteristics		Percentage (%)
Religion		
Hindu		91 (SC and ST-23)
Muslim		7.5
Others		1.5
Social status	BPL	12.5
Husband literacy	Illiterate primary and	25.6
Woman's literacy		40.2
Current age		21-37 years (Mean age 26.8 years, SD 3.64)
Family type	Nuclear vs. Joint	28.3 : 70.7
Working women		24.2

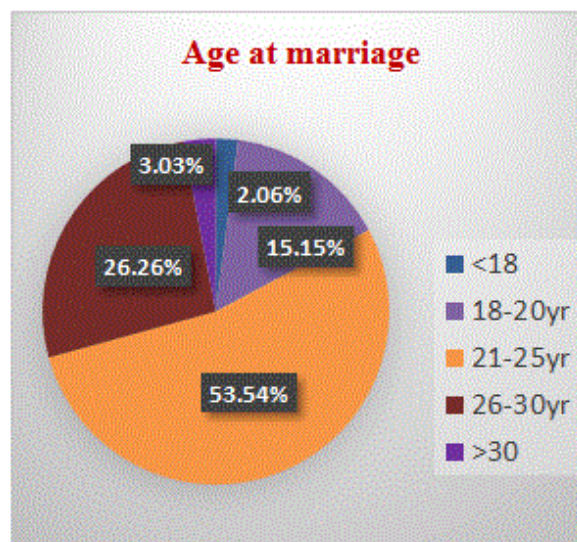
**Table 1:** Socio-demographics of current sample.

As seen in Figures 1 and 2, 53.5% of the sample is within age group 21-25 years, and it was noted that 2% were also less than 18% which were mostly from the BPL category.

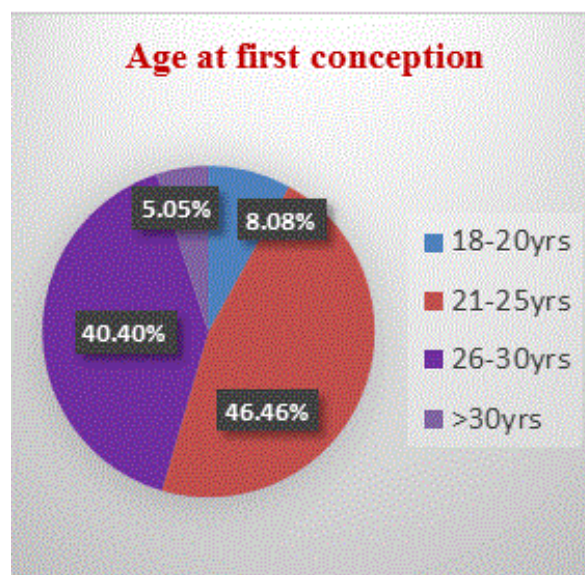
Corroborating with the marriage age was seen the age of first conception which was nearly 46.46% for the age group 21-25 years.

To add to it other findings were 19.9% had a history of abortion; range of menarche was 10-17 years; highest being at 14 yrs. (47.5%); nearly 92% women had regular menstrual cycles With regards to feeding practices 13% were not exclusively breast feeding (2% could

not answer suitably); caesarean was performed in 10% of sample and only 57.6% could state having 4 antenatal visits (Figure 1 and 2).



**Figure 1:** Ages of the sample for marriage.



**Figure 2:** Ages of the sample for first conception.

## Postnatal Care Status

As seen in Figure 3 only 22.3% of the sample had normal haemoglobin values, i.e. 12 mg/dl and above. There was no scope of getting the respondents tested for haemoglobin so the value was taken from the Maternal Child cards or from latest post-delivery records with the woman.

In 10% of the sample, no haemoglobin testing had been done in the last antenatal phase, which reflects the lacunas of our urban health system (Figure 3).

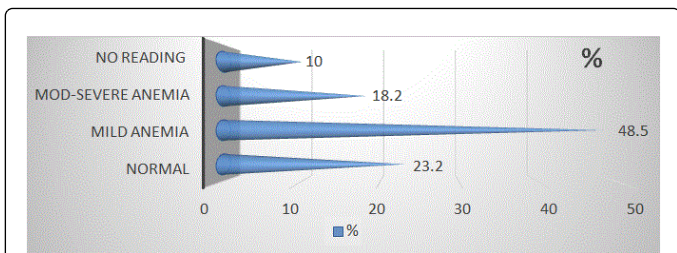


Figure 3: Gives anaemia prevalence in the sample.

Mild anaemia is seen in 48.5% while 18.2% had moderate to severe anaemia. Among those with mild anaemia iron supplementation was taken by only 15.7% of the women regularly.

Figure 4 shows that 10.10% women had severe anaemia but were not any definitive treatment and were not offered any advice for the same (Figure 4).

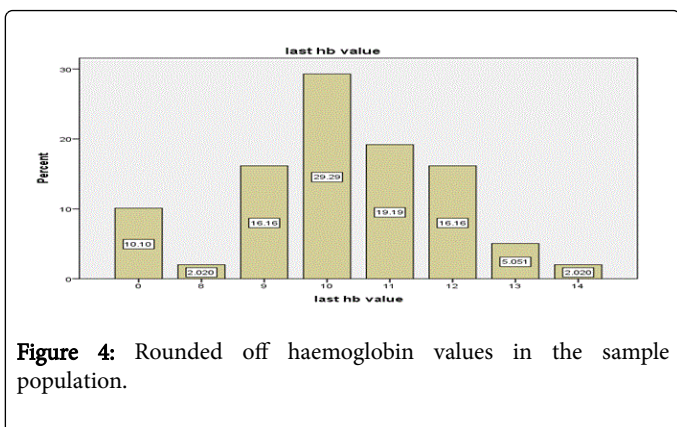


Figure 4: Rounded off haemoglobin values in the sample population.

Table 2 hints at the lack of awareness regarding iron rich foods which postnatal women are expected to know as it's a part their antenatal counselling.

94.9% could tell that non-vegetarian foods are rich in iron (Table 2).

	Frequency	Percent	Cumulative Percent
No answer	3	3	2
Fruits (apple)	1	1	3
Non veg	94	94.9	98
Nuts	2	2	100
Total	100	100	

Table 2: Awareness regarding Iron (Fe) supplementation and Fe rich foods.

In Table 3, awareness regarding anaemia and iron supplementation was taken as proxy for good post natal care and a logistic regression analysis was done among various factors to identify the other possible societal factors for the poor knowledge.

Urban residence (OR 1.3), increasing age of the women i.e. awareness at the ages 25 years and above (OR 4.66/6.17); joint family (OR 11.334); having more than 2 children (OR 3.26); 4 and more

antenatal visits (OR 3.286) are some of the factors which determined good knowledge.

In case of urban residence the women knowledge was 1.3 times better because of the higher educational status and access to mass media (Table 3).

Characteristics	Sig	OR	95% CI	
			Lower	Upper
Usual residence	Rural	1		
	Urban	0.043	1.379	0.868 2.19
	Mixed	0.021	1.95	0.8 4.752
Working status	Not working	1		
	Working	0.302	1.328	0.775 2.274
Age category	<18 years	1		
	18-20 years	0.115	1.574	0.896 2.765
	21-25 years	0	3.496	1.989 6.144
	26-30 years	0	4.699	2.556 8.638
	>30 years	0	6.174	2.976 12.809
Type of delivery	Normal	1		
	Caesarean	0.104	0.688	0.438 1.08
Type of family	Nuclear	1		
	Joint	0.037	11.334	1.151 111.564
No. of children	One	1		
	01-Feb	0.493	0.497	0.067 3.669
	>2	0	3.286	1.876 5.755
No. of antenatal visits	<3	1		
	4 and more	0	5.018	0.201 5.162
Veg	Yes	1		
	Non-veg	0.039	1.271	0.991 1.629

Table 3: Predictor factors awareness regarding anaemia and iron supplementation.

Increasing age of women primes knowledge regarding postnatal care due to more pregnancies as is shown in this study. In India, joint family wherein more than one generation stay together, also serves as a promoting factor for postnatal care as the elders in the family guide to would be mothers. In this study the odds of good knowledge regarding post natal care was highest, i.e. 11.334 times for those mothers who lived in joint families.

## Discussion

While there is not yet a standardized, evidence based PNC protocol, there is consensus on most key elements of essential care that should follow delivery to improve the health and survival of new-borns and mothers; which should also prioritize the health needs of the region. In

Odisha, the state where our study is conceived always had a problem of anaemia among post natal women. A study in 2006 reported that the States of Assam, Orissa and MP had anaemia prevalence of >90% in pregnancy as well as in lactation [5,6].

These States have lower marriage age, poor fertility indices and lower weight and height as compared to others States. Hence our focus is on anaemia and iron supplementation and the same study also reported Orissa had lower prevalence of severe anaemia as significantly more women were aware about anaemia and consumed IFAT (Iron Folic Acid Therapy) for 3 months as compared to Assam and MP.

In this study severe anemia is reported in 10.10% which is similar to ICMR 1989 (rural data- 1985-1986) having 22.7% pregnant women <8 g/dl and 10.4% <7.0 g/dl haemoglobin levels [7]. Thus showing no change in severity of anaemia in last 25 years which hints at an appalling situation.

The results also hint towards the poor health service access to urban poor or coming from nearby villages. These findings also support study done in Delhi in 2004 and Bengal [8,9].

The immunization sessions done for infants offer an excellent opportunity to counsel women regarding postnatal issues like anaemia, regular iron and calcium supplementation and referral for complications as was done in this study. Only then the continuum of care can be maintained. It also brings out the fact that knowledge of women regarding their health is better when they are educated or from joint families and has more than one child.

This means their knowledge is because of priming from their surroundings and their personal experience, not necessarily due to the health system they are exposed to. Thus the idea of Baby Friendly

clinics where comprehensive maternal and child health is emphasized should be reinforced. Due to paucity of time other important post natal issues like contraceptive advice and complications during pregnancy was beyond the scope of this study. A bigger community based study would yield more profound and reliable results.

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