Original Article

Factors Influencing Non-utilization of Antenatal Care Services from Government Sector among Rural Pregnant Women — A Hospital-based, Cross-sectional Study in Vijayapura District of North Karnataka

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Background : Pregnancy is one of the most important events in the life of Indian women. Maternal care includes care, during pregnancy and should begin from the early stages of pregnancy.Maternal mortality and morbidity remain high even though National Programs exist for improving Maternal and Child Health in India. Among several factors related to it one is less or non-utilization of free maternal healthcare services, especially amongst rural women.

Objectives : To measure the utilization of free Maternal Healthcare services & to study the factors determining the utilization of free Maternal Healthcare services by Rural Women during pregnancy.

Methods : The study was conducted on the women admitted in postnatal ward after delivery, by using structured proforma containing questionnaire which included socio-demographic variables, details of present pregnancy, delivery & details of utilization and non-utilization of Antenatal Care Services given by their local Government Health Facility. Also, questions were asked about the reasons regarding their preference to the Private Hospital for delivery in spite of free delivery service at Government Hospitals.

Results : The early identification of risk factors during pregnancy will be possible by Ultrasonography and other investigations, which is the main reason for a greater number of visits to private hospitals during pregnancy compared to Government Health Facility.

Conclusion : Strengthening of Government Health Facility in terms of specialist Manpower and Material like Laboratory/Equipment's/Drugs to handle the complications effectively during pregnancy or delivery by the specialist is need of the hour.

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Key words **: Pregnancy, Free, Services, Utilization.**

Pregnancy is one of the most important events in the life of Indian women. Maternal care includes care during pregnancy and should begin from the early stages of pregnancy. Women can access Antenatal Care Services either by visiting a Health Center where such services are available or from Health Workers during their domiciliary visits[1].

Promotion of Maternal and Child Health has been one of the most important components of the Family Welfare Programme of the Government of India and the National Population Policy 2000[2].

According to the Guidelines from the Government of India, a minimum of four ANCs including early registration and first ANC in the first trimester along with physical examinations and abdominal examinations, investigation like Haemoglobin (Hb) estimation and Urine Routine, two doses of Tetanus Toxoid (TT) immunization and consumption of iron Folic Acid (IFA) tablets (6 months during ANC and PNC) are required[3].

Editor's Comment :

- Strengthening of Government Health Facilities in terms of specialists like Obstetrician, Anaesthetist, Neonatologist, Radiology expert and Material like Laboratory, Equipment, Drugs to handle the complications effectively during pregnancy or delivery.

Maternal mortality rate is only 9/lakh live birth in UK as compared to 167/lakh live births in India, where as in Karnataka it is 133/1000 live births. Maternal mortality and morbidity remain high even though National Programs exist for improving Maternal and Child Health in India[1]. Among several factors related to it one is less or non-utilization of Free Maternal Healthcare Services, especially amongst Rural & Urban Slum population due to lack of awareness or access to Healthcare Services[1,4].

So the study was planned to measure the utilization of free Maternal Healthcare services and also to find the factors determining the utilization of free Maternal Healthcare Services by Rural Women during Pregnancy.

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Material and Methods

A Cross sectional study was conducted in the Obstetric Ward in the month of July & August, 2019 on women delivered in Present Teaching Hospital.Women belongs to Rural Area were included in the study whereas women from Urban Area or belonging to Rural Area but residing in Urban/Semi-Urban area were excluded from the study.

By considering the admission of Rural Pregnant Women for delivery to the present Teaching Hospital 50% among all, the sample size calculated was 100 by using the formula $n=4pq/E^2$ whereas n=sample size, p=prevalence of Rural women admission to the hospital, q=no admission of Rural women to the hospital, E-allowable error of 10.

Sampling Method: The study was carried out by using structured proforma containing questionnaire. The women admitted in postnatal ward after delivery were interviewed after taking informed consent by using the proforma which included Socio-Demographic variables, details of present pregnancy, delivery & details of utilization and non-utilization Antenatal care services given by the Government Health Facility. Few questions were asked to find out the reasons regarding their preference to the Private hospital for delivery in spite of free delivery service at Government hospitals. The information's collected were entered in their respective proforma.

The study was started after taking clearance from Institutional Ethical Committee and permission from Head of the department of Obstetrics & Gynaecology. Data collected was entered in Excel sheet and analyzed for frequency distribution of variables. Association between variables was seen by applying tests of significance. P value less than 0.05 was considered statistically significant. Data was analyzed using SPSS v.17.

Results

Total 112 Rural women delivered in present Teaching Hospital were interviewed during the study period of two months.

According to Table 1, 88% of the participants were educated (45% below & 55% above college level), 37% belonging to lower class (IV & V) according to modified B G Prasad classification and 88% were Housewives. Mean age of women was 24±3.9 years with minimum age 19 years & maximum 37 years among all the participants.

According to Fig I, about 44% of the participants were Primiparas followed by 38% with Parity-2 where as women with Parity-3 & above (18%) were few among all.

Table 1 — *Socio-Demographic Profile of the Participants*

Education status		Socio-Economic Status		Occupation	
Variable	No (%)	Variable	No (%)	Variable	No (%)
Illiterate	15 (13)	Class I	05 (4)	Housewife	98 (88)
Primary school	18 (16)	Class II	10 (9)	Labour	06 (5)
Higher school	32 (29)	Class III	56 (50)	Tailor	03 (3)
College	11 (10)	Class IV	28 (25)	Teacher	05 (4)
Graduate	32 (29)	Class V	13 (12)		
Postgraduate	04 (3)				
Total	112(100%)	Total 112 (100%)		Total 112 (100%)	

Among all the participants 70% of them told that Primary Health Center is located in their village whereas only 30% women belongs to the village having Sub centers.Average distance which was travelled by the participants to reach Primary Health Center was 4.13±4.08 km with minimum distance of 1km to maximum 15km to avail the services.

About 97% of the participants did registration of their pregnancy at Primary Health center catering their village where as only 3% had not registered. The reason mentioned for not registering was that the Mothers House is in the place where the present institute is located and they had plan to deliver baby in private hospital.

Among the participants 58% informed that the health workers visited their home during pregnancy to give advices regarding Ante Natal Care (ANC), Delivery and Nutrition Supplementation whereas 42% had no home visit by the Health Workers of their area Health Centre. About 57% of the participants had Mother Health Card regarding the service utilization of ANC from the Primary health center whereas 43% not having or not received Mother Health Card.

On interview regarding the important ANC are service to be taken during pregnancy showed following observations,among all 90% had taken two doses of Tetanus Toxoid (TT) injection followed by 10% with either one or three doses of TT. Out of total participants 52% had taken TT injection at Private specilalist hospitals (during confirmation of pregnancy by USG) whereas 48% in Government Health Centres.

About 55% have purchased the IFA tablets from private medical shops (prescribed by Private

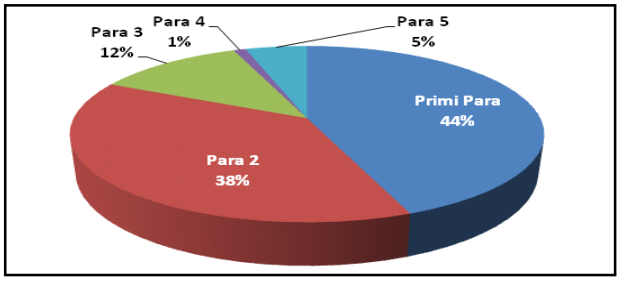

Fig 1 — Percentage Distribution of Participants According to Parity

Practitioners) whereas 45% taken from the Government Health Facilities (low purchasing capacity of participants).

About 95% had underwent Ultrasound scaning for their pregnancy at Private Scaning Centers due to non avalability of scaning sevice at Government set up whereas only 5% had undergone scaning at Government Setups. Majority of the participants had undergone Ultrasound scanning 3 to 4 times (69%) whereas 22% had undergone about 2 times followed by 3% only 1 time during their entire pregnancy.

About 97% of the participants were visited Private Obstetrician's Hospital for ANC services, like routine ANC Checkup, Investigations, Ultrasound scanning or for taking treatment for complications. Among all only 3% had never visited the Private Hospital for ANC Services.

The main reason for Private Hospital visit was Ultrasound scanning (97%) followed by routine ANC checkup (88%) from the specialist (Obstetricians) whereas other reasons were routine Investigations related to pregnancy (78%) & to take treatment for pregnancy related complications like Pregnancy induced Hypertension, Gestational Diabetes, Pre-eclampsia, Oligohydramnios etc.

Among all the participants of the study around 37% were not planned to deliver in Government Health setup on beforehand only whereas remaining 63% were either referred here by Government Doctors for complications during delivery or changed their mind to Private Setup Delivery.

According to the figure II, the most common reason to undergo delivery in Private Teaching Hospital found was the complication (60%) due to pregnancy and delivery including twins (one case). Lack of facility, Poor service & non availability of specialist doctors to handle complications (17%) were the reasons for not delivering in Government Set up. Around 23% delivered in Private hospital due to family pressure, family member working in the hospital or mothers native place was near to it.

Fig 3 shows, comparison between number of visits among Government Health Centers & Private hospitals of Obstetric specialty during pregnancy according to which there was decreasing trend seen with increase in number of visits in Government Health Centers compared to Private hospitals where there was increasing trend observed with increase in number of visits. This difference in trends was found statistically significant (χ^2=63.49, p<0.0001).

Most important reason for low utilization of services during pregnancy and delivery at Government Healthcare set ups was complications arising due to pregnancy/delivery and no specialists care service

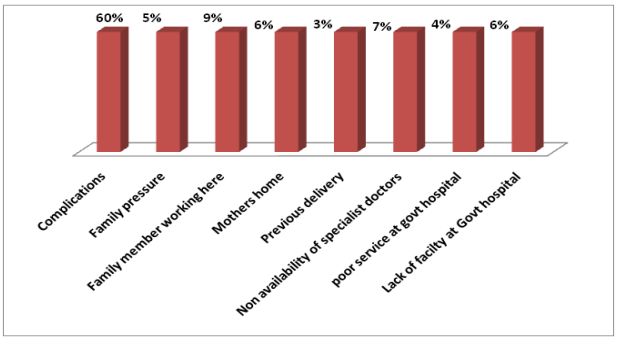

Fig 2 — Percentage Distribution of Reasons for Delivery at Private Teaching Hospital

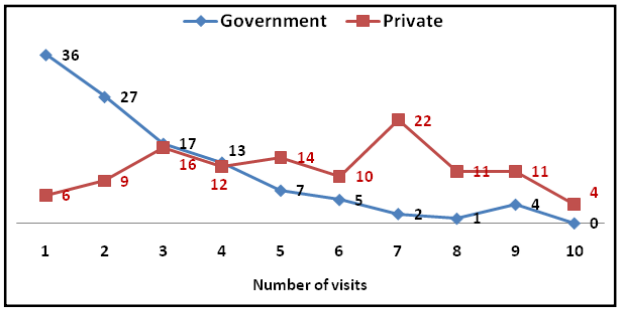

Fig 3 — Comparison of Number Visits by Participants in Govt & Private Health Facility

available to handle it to save mother and baby as shown in Table 2.

Discussion

Among the women delivered included in study majority (88%) are educated, 2/3rd belongs to middle & upper class and 88% are Housewives. About 70% of participants are staying in village containing Primary Health centers where Normal Delivery Services are available. Maximum distance to be traveled is 15 kms from their village to avail Antenatal care services from PHC.

Mumtaz S *et al*[5], studied status and determinants of Maternal Healthcare utilization in Afghanistan according to them overall 17.8% of women attended four or more ANC visits, about 53.6% utilized a Skilled Birth Attendant and 3.4% of women gave birth through Cesarean Section. Women's Education, Wealth Status, Autonomy, Urbanity and availability of their own transport were found to be the major determinants of service utilization.

Deepak C *et al*[6] re-emphasized that utilization of maternal Healthcare services is affected by Multiple Socio-demographic Factors like maternal education, religion and parity of women. Education increases awareness about health, availability and accessibility of services which help develop the confidence.

Lalit KR *et al*[7] studied the utilization of ANC, Institutional delivery and PNC was 59%, 28% and 26% respectively. There was also a large significant variation

Table 2 — *Factors Affected for Utilization of Maternal Health Services by Participants at Government Health Facility*

Services provided by Government health facility	Utilization rate	Factors affected
Registration at Primary Health Center	97%	Local PHC/SC available
Health workers visit to home during pregnancy	58%	Visiting private hospital for care during pregnancy
Mother card for service utilization of ANC care	57%	Visiting private hospital for care during pregnancy
TT injection	48%	TT injection taken in private hospital during visit
IFA tablets	45%	Belief of poor-quality drugs supplied free of cost
Ultrasound scanning	05%	No scanning service available
Delivery at Government hospital	00%	No specialist doctor available to handle complications due to pregnancy & during delivery

in utilization of services of ANC and delivery in between Rural and Urban settings. Households' Socio-economic status, Mother's education, Religion and Birth order was the most-important determinants associated with the use of any ANC and institutional delivery.

Among those who visited private hospital, the most common reason is for Ultrasound scanning (97%) followed by routine investigations (78%) & ANC checkup (68%). About 36% of the women visited Private Hospital for complications occurred due to pregnancy like Pregnancy Induced Hypertension, Gestational Diabetes, Oligohydramnios, Pre-eclampsia etc.

Singh R *et al*[8] found in their study, 83 % of women had ANC of them, 61% reported three or more ANC visits. Although 68% of women delivered in a health facility, 29% stayed for at least 48 hours. In the adjusted analysis, women with increasing number of contacts with the health worker during the period of pregnancy, exposed to mass-media were more likely to have at least three ANC visits during pregnancy.

In Rushender *et al*[9] study 60.2% of selected households are located beyond 5kms. 85.5% of respondents were aware of the PHC. 71.2% of respondents had satisfactory opinion about the Health Services. 81.65% of the ANC mothers had utilized the PHC, 77.98% for TT immunization, 75.24% for delivery, 75.76% for Postnatal Care and 79% for Immunizing their children.

Chauhan BG *et al*[10], findings show use of Maternal Healthcare services in India higher among women of Urban area than Rural area. Lower utilization by Rural population may be due to several barriers like cost of transportation, cost of care and low awareness about health-promoting behavior.

Conclusion

The early identification of risk factors during pregnancy will be possible by Ultrasonography and other investigations, which is the main reason for more number of visits to Private Hospitals during pregnancy compared to government Health Facility. The most important reason for opting Private Hospital for delivery by pregnant women herself or by family is non availability of specialist doctors or facility to handle complications due to pregnancy or delivery in the Government Health Facility.

Strengthening of Government Health Facility in terms of specialist Manpower like Obstetrician, Anesthetist, Neonatologist, Radiology expert and Material like Laboratory/Equipment's/Drugs to handle the complications effectively during pregnancy or delivery by the specialist.

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