PATTERN OF ANTENATAL CARE AMONG WOMEN UTILISING A TERTIARY CARE CENTRE IN GOVERNMENT SECTOR FOR DELIVERY

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ABSTRACT

BACKGROUND

The goal of antenatal care is to prevent, detect and alleviate or manage the health problems in pregnancy. Kerala had a Maternal Mortality Ratio of 61 in 2011-13 which is well below the target set in Millennium Development Goal. We studied the antenatal services utilised by the women. Aims-1. To look into the pattern of antenatal care and patient preferences in antenatal contacts. 2. To study the determinants of utilisation of government or private services.

MATERIALS AND METHODS

Study subjects - 200 antenatal women, after 36 weeks of pregnancy admitted for delivery. There were 276 women referred from outside hospitals. 76 women had serious maternal complications. Hence, they were excluded. So the sample size was 200.

Setting - Department of OBG in Govt. Medical College, Kozhikode.

Period - One month (March 2017).

Design - This was a cross sectional descriptive study.

Data collection - All the women were interviewed with a pre-structured questionnaire and information collected by trained doctors. The women who had antenatal check-ups at government institutions were considered under govt. sector and women who were seen by obstetricians at private clinics or hospitals were included in the private sector.

RESULTS

Out of 200 women, 68.5% belonged to 20-30 years. 6% were below 19 and 9% were aged >35. 61% resided in the same district where the hospital is situated. Regarding ANC, 98% registered early. All patients had more than 8 visits, consumed IFA tablets and took tetanus immunisation. 82 women had private antenatal visits. The family income and education were significantly higher in this group with a p value of 0.0012 and p value of 0.0003 respectively.

CONCLUSION

Our study showed that in Kerala, women are aware of antenatal services and utilised it efficiently. Women with higher income and education preferred private consultations but opted a well-equipped centre for delivery.

KEYWORDS

Antenatal Care, Government Maternal Health Services, Institutional Deliveries, Preference of Women.

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BACKGROUND

Antenatal care is the continuum of care given to a woman during pregnancy and childbirth. The goal of antenatal care is to prevent, detect and alleviate or manage the health problems in pregnancy. This can be of two types. 1. Complication of pregnancy itself. 2. Pre-existing conditions that worsen during pregnancy. An effective antenatal care package depends on competent health care providers in a functioning health system with timely referral services. Even now, 120 women die of causes associated with pregnancy, in a day, in India. However, the benefits of antenatal care are greater than mortality reduction alone. Grouping pregnant

women into low risk and high risk to determine the type of delivery services needed can reduce the morbidity to a great extent. Hence, a referral institution caters to high risk pregnancies and uncomplicated women in the nearby population. Globally only 85% of women have access to antenatal care of which only 58% receive at least 4 visits. In India, Maternal Mortality Ratio (MMR) was 178 in 2011-13.¹⁻³

The goal was to reduce it to 109. Kerala had a MMR of 61 in 2011-13 which was well below the target. This is achieved through maternal health programmes in Government and private sectors. The women view antenatal visits as a source of knowledge, information and clinical expertise and they generally appreciate the tests and advice they are offered.

In the present study, we tried to understand the antenatal services given, adherence to visits and selection of the delivery services.

Aims

1. To look into the pattern of antenatal care and patient preferences in antenatal contacts.
2. To study the determinants of utilisation of government or private services.

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MATERIALS AND METHODS

Study Subjects

Antenatal women, after 36 weeks of pregnancy who were referred to our hospital for delivery were included in the study.

Sample Size

There were 276 women in the study period. Seventy-six women had serious maternal complications and excluded. Hence, the sample size was 200.

Setting

Department of Obstetrics and Gynaecology in Govt. Medical College, Kozhikode. Period – one month (March 2017).

Design

A cross sectional descriptive study.

Data Collection

Antenatal women who had check-ups from other hospitals including government and private sector were included after obtaining willingness. Women who were seen at Government run community health centres, Taluk headquarters hospital and District hospital were included in the Government sector. Women who had antenatal check-ups at private clinics or hospitals were included in the private sector.

Exclusion Criteria

Women with serious medical or obstetric complications were excluded.

Method

A questionnaire was prepared and information collected by direct interview by trained doctors. Sociodemographic data like Age, Parity, Educational level and monthly income, Place of residence were noted. Details of first visit, and subsequent antenatal check-ups, usage of government or private services, were noted. Subjects were divided into 3 groups according to monthly income as –Rs 1802-8988 (L), Rs 8989 - 17998 (M) and >17999 as high income.⁴ The women were divided into 3 categories according to educational level as SSLC, HSE and above. Details of immunisation was collected. Awareness about blood investigations noted. The number and gestational age at which ultrasonogram was done was taken. Preferences in selecting the centre noted. Complications in the previous and present pregnancy were taken.

Data Analysis

Data was analysed by Epi info software. Data was expressed by frequency and percentages. Statistical analysis was done using chi-square test. A two-tailed p value <0.05 was considered to indicate statistical significance.

RESULTS

Age is shown in Table 1.

Age in Years	Number	%
<19	12	6
20-24	66	33

25-29	71	35.5
30-34	33	16.5
> 35	18	9

Table 1. Shows Age in Different Groups

All the women were below 40 years. Parity – There were 75 primigravidae and 125 multigravidae. Place of residence- Kozhikode- 122 (61%), Malappuram- 58 (29%), Wayanad -10 (5%), Kannur -4 (2%), Palakkad – 4 (2%), Kollam -2 (1%)

Education of women - Among the women, 104 (52%) had studied up to SSLC. 76 (38%) had higher secondary education and 20 (10%) completed diploma or degree.

Income- The study subjects were divided in three groups according to the income. Low income group constituted the majority with 118 (59%). Middle income women were 71 (35.5%) and a small group (5.5%) had high income.

Antenatal check-ups – All women (100%) had regular antenatal visits. Average number was 8. The number of women who had consultation in Government institutions were 118 (59%) and in private centres were 82 (41%).

Period of gestation at first visit- 99% of women were seen by a consultant in the first trimester. Only 2 (1%) had their first ANC in the second trimester.

Immunisation – 100% of women were fully immunised against tetanus.

Investigations – Blood investigations were done along with check-ups. Haemoglobin Group & Rh Type, Urine –RE, Screening tests for VDRL, HIV, HBsAg and Diabetes.

Ultrasonogram – 198 (99%) women were seen in the first trimester and ultrasonogram was taken for confirmation and dating of pregnancy.

Two patients had first visit at early 2nd trimester. Second trimester and third trimester USG was done by all (100%) patients.

Iron and Folic acid therapy – 124 (62%) women consumed the government supplied tablets, and 76 (38%) bought tablets from medical shops.

We took Age, Parity, education and Income as variables to determine the utilisation of government versus private sector. The results are shown in Tables 2, 3, 4 and 5.

Age	Govt.	Private	Total
<19	8 (66.7%)	4 (33.3%)	12 (100%)
20-24	33 (50%)	33 (50%)	66 (100%)
25-29	43 (60.6%)	28 (39.4%)	71 (100%)
30-35	20 (60.7%)	13 (39.3%)	33 (100%)
>35	14 (77.7%)	4 (22.3%)	18 (100%)
Total	118 (59%)	82 (41%)	200 (100%)

Table 2. Age, Compared in Government and Private Sector

In Table 2, age of the patient in government and private sectors is shown. There was no statistically significant difference between age groups since p value was 0.264.

Parity	Govt.	Private	Total
Primi	40 (53.3%)	35 (46, 7%)	75 (100%)
Multi	75 (62.5%)	45 (37.5%)	120 (100%)
Grand multi	3 (60%)	2 (40%)	5 (100%)
Total	118 (59%)	82 (41%)	200 (100%)

Table 3. Parity, Compared in Government and Private

Sector

In Table 3, comparison is done with parity. The results showed no significant relation as p value = 0.448, was not significant.

Studied Up to	Govt.	Private	Total
SSLC	71 (68.2%)	33 (31.7%)	104 (100%)
12 th std.	43 (56.6%)	33 (43.4%)	76 (100%)
Degree	4 (20%)	16 (80%)	20 (100%)
Total	118 (59%)	82 (41%)	200 (100%)

Table 4. Educational Level in Government and Private Sector

Table. 4 shows the education in two groups. It was seen that there was difference in selection of hospital. P value was 0.0003 which was statistically significant and showed that educated women preferred private health care facility.

Group	Govt.	Private	Total
High	1 (9%)	10 (91%)	11 (100%)
Middle	40 (56.3%)	31 (43.7%)	71 (100%)
Low	77 (65.2%)	41 (34.8%)	118 (100%)
Total	118 (59%)	82 (41%)	200 (100%)

Table 5. Income Groups Compared in Government and Private Sector

Women with high income utilised private sector services more in comparison with others with a p value of 0.0012 which was statistically significant. This is shown in Table. 5.

DISCUSSION

This study was done in the state of Kerala. The state has a very good network of maternal and child health services both in the government and private. We selected 200 antenatal women. All were married and above 19 years. Maximum age was 40 years.

In the study by Srilatha et al in Thiruvananthapuram in 2002, 80% of pregnant women belonged to 20-30 years, 12.4% were < 19 and 7.2% were >30 years⁵. In our study, younger women were less and older were more. This showed that age of marriage has gone up in the last 15 years. As the assisted reproductive treatments increase we are more likely to get elderly women with pregnancy.

Studies from other states show similar data. RK Gupta from Kashmir had shown a mean age of 26 years.⁶ BB Patel gave a mean age of 24.2 years,⁷ MP Roy from Lucknow reported that 50% of patients were 26 years.⁸ Adolescent pregnancies, tend to have more complications. V Kumar reported an incidence of 8.3-24% in India, and said more than 10% did not receive antenatal care.⁹ Seneesh from Gujarat showed an incidence of 2.8%.¹⁰ PK Singh reported an incidence of 16.4% illiterates among adolescents.¹¹ Our results were comparable to others in the incidence. But we did not have any woman less than 19 years.

Srilatha had given an equal number of primigravidae and multigravidae.⁵ We had less number of primigravidae. In the multigravidae, 40% had complication in the previous pregnancy. Navaneetham reported a higher incidence of complications in the previous pregnancy in multigravidae who selected higher institutions for delivery.¹²

The institution is a tertiary centre for 4 districts including remote hilly areas. Majority of the patients belonged to the same district indicating the preference of the patients to the nearby government facility even though many private hospitals are available.

In our study, 59% belonged to the low income group. This is quite understandable since this is a government institution. A small group (5.5%) belonged to high income status. This may be patients with high risk pregnancy who needed multidisciplinary team work. Such facilities are available round the clock which made them opt this hospital. MP Roy reported that 79.3% deliveries occurred in Government hospitals in Lucknow.⁸ Those women belonged to low socioeconomic status and were late registrants.

All our patients were educated at least to the school level. Navaneetham has reported in his study that illiterates were 10% in Kerala in 2002. PK Singh had shown 16.4% illiterates in South India.¹¹ The illiteracy rate was 17.5% in Kashmir and as high as 63.6% in rural Lucknow.

V Kumar showed that in India 10.3% of pregnant women had no ANC.⁹ In Kerala it was 0.8%. Navaneetham had seen that in Kerala 91% women had at least 4 antenatal visits of which 71% in the first trimester.¹² A study done by S. Udayan showed that 61% had poor awareness regarding antenatal investigations.¹³ Our results were comparable to V Kumar. In 2002, a previous study showed that 42.2% registered in the first trimester and 7.2% in the 5th month.⁵ In Tamilnadu, Elaverasan reported early antenatal registration of 69% women regular intake of IFA by 79%.¹⁴ In our study, 41% women had a private consultation ensuring that continuous care is taken from same doctor. Consultants were obstetricians. Convenient timing, presence of Laboratory facilities and individual attention were the reasons for private ANC.

V Kumar found out that unimmunised women were 6.6% in India and 5.2% in Kerala.⁹ But in our study all patients were fully immunised. Previous study also showed 100% immunisation for tetanus toxoid. Majority used primary health centres for that service.

Iron Folic Acid Tablets (IFA) – According to V Kumar, 9% did not take IFA in India. In Kerala, it was 4.9%. S. Sumithra also has shown a 98% intake of IFA. Our study is comparable to this.¹⁵ In a study from Tamil Nadu it was shown that IFA was taken by 79% of women.

To achieve the second objective, we used 4 variables. 1. Age. 2. Parity. 3. Income. 4. Education.

Age of the patient -The distribution of patients in the different age groups were analysed. This was done to see whether young or older women preferred private care. We got a p value of 0.0264 which was not statistically significant.

Parity- Parity was studied to know whether it influenced the choice. Since the p value was 0.0448 it was not significant.

Income- The important decision is taken regarding the institution of delivery as per the family income. Our study showed that high income groups preferred private hospitals. The favourable factors were convenient timing and individual attention. P value =0.0012 was statistically significant.

Education- Women who had higher education opted for private care as shown in Table 5. The p value was 0.0003 and statistically significant. This was due to the fact that educated women had jobs contributing to the family income and their opinion mattered in decision making. So they opted for

private care. This is comparable to the study by MP Roy who reported that a significant relationship was found with age, income, early registration and regular ANC.⁸ Gupta also showed that regular ANC was significantly associated with literacy and SES.⁶

CONCLUSION

The women view antenatal care as a source of knowledge, information and clinical expertise. The importance of early registration and regular antenatal visits is well understood. The selection of institution for delivery is taken considering the factors like reachability, complication in the previous and present pregnancy, and available resources.

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