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A Study on Quality Assessment of Antenatal Care Given at Anganwadi Centers of Jamnagar Municipal Corporation Area

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Abstract

Introduction: Antenatal care refers to pregnancy related health care provided by a doctor or a health worker in a medical facility or at home. Ideally antenatal Care should monitor a pregnancy for signs of complications detect and treat pre-existing and concurrent problems of pregnancy. It should also provide advice and counselling on preventive care, diet during pregnancy, delivery care, postnatal care and related issues. **Aims and objectives:** 1. To assess the quality of antenatal care given. 2. Effect of antenatal counselling on knowledge regarding different aspects during pregnancy. **Methodology:** A cross sectional, community based study was conducted in urban slums of the corporation area.450 subjects were selected from community by 30 clusters sampling method. SPSS version 20 was used to analyse the data. **Results:** Almost 90% women had received >3 ANC visits. Around 2/3rd women know about danger signs of pregnancy. Knowledge about diet is good. **Conclusion:** The quality of antenatal care given in the corporation area was good, but it should be improved in giving more appropriate counselling to pregnant women to increase their knowledge regarding different aspects of Antenatal care.

Keywords: Antenatal care; Danger signs of pregnancy; Early registration of pregnancy.

Introduction

As ANC should provide advice and counselling on preventive care, diet during pregnancy, delivery care, postnatal care and related issues and counselling on Birth preparedness which is useful to reduce the maternal, perinatal and neonatal mortality and also mitigate suffering because of maternal morbidity as well as ensure healthy outcomes in terms of healthy mother and healthy baby. [1]

The Millennium Summit commitments, and which have come to play a defining role in international development efforts. Goal 5 is a commitment to improve maternal health: the reduction of Maternal Mortality is an outcome chosen to assess progress in this regard.[2]

Antenatal care[2]: Systemic supervision (examination and advice) of a woman during pregnancy is called antenatal care.

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- AAntenatal care refers to pregnancy related health care provided by a doctor or a health worker in a medical facility or at home.
- Not only the coverage but quality of the ANC is also important as it is necessary for ensuring a healthy mother and baby at the end of gestation.

Aims and Objectives of ANC

- To screen the 'high risk' cases.
- To prevent or to detect and treat at the earliest any complications.
- To ensure continued medical surveillance and prophylaxis.
- To educate the mother about the physiology of pregnancy and labour by demonstrations, charts and diagrams ,so that fear removes and psychology improves.
- To discuss with the couple about the place, time and mode of delivery, provisionally and care of newborn.
- To motivate the couple about the need of family planning.

Methodology

A Cross sectional study was conducted in Urban slums of Jamnagar Municipal Corporation Area from August 2010 to December 2011. By using Cluster sampling technique 30 clusters were selected and 15 women from each cluster were interviewed who had delivered in last 1 year. The study was carried out by undertaking house to house visits of the area of each cluster. From a random direction in each cluster, study was started by asking the family if there was any woman who had delivered in last one year (1st September 2009 to 31st August 2010- women who delivered in that duration).

Prior approval from ethical committee was taken.

Sample size is calculated by formula n= 4pq/l2, Where,

n= required sample size

p=proportion or prevalence of interest

q=100-p

l=allowable error (10 – 20%)

An anticipated P value is taken as 50% as per WHO practical manual on sample size determination in health studies by Lwanga and Lemeshow.[3]

p is taken as 50%, so as q=50%. If L=10%,

Then, sample size would be…..

$$n = \frac{4x50x50}{5x5} = 400.$$

Non-response rate/loss of sample = 10% of sample size

So, total sample size comes out to be 440 for the study. To make round figure, 450 study subjects were chosen.

A pre-tested semi-structured Performa was used to collect the data through oral questionnaire by visiting them at their home. The data entry was done in Microsoft Office Excel 2007. Analysis was done by the use of Medcalc 10.4.8.0., SPSS version 20 and Microsoft office Excel 2007.

Results

Table 1 shows that almost half of the women (48.9%) were in the age group of 20-25 years. 34.66%, 12.44%, 2% and 2% women were in the age group of 25-30 years, 30-35 years and >35 years respectively. Mean age of the women in the study group was 24.84 years. Majority of the women were Hindu 335(77.34%) and almost half of them (47.78%) are studied up to primary education. Most of them were from lower socio economical class (72.45%).

Graph 1 shows that that majority 401(89.11%) of the women had availed >3 antenatal visits. One in every 10 women, 45(10%), had less than 3 antenatal visits during their pregnancy. Only 4(0.89%) women did not take any antenatal visit.

Table 1: Demographic features of the study subjects

Age (years)	Frequency (%)
<20	9(2)
20-25	220(48.90)
25-30	156(34.66)
30-35	56(12.44)
>35	9(2)
Total	450(100)
Mean age of women:	24.84 years
Religion	**Frequency (%)**
Hindu	348(77.34)
Muslim	102(22.66)
Total	450(100)
Education	**Frequency (%)**
Illiterate	143(31.77)
Primary	215(47.78)
Secondary	55(12.23)
Higher secondary	14(3.11)
Graduate and above	23(5.11)
Total	450(100)
Socio economical class	**Frequency (%)**
Upper	6(1.33)
Middle	118(26.22)
Lower	326(72.45)
Total	450(100)

Graph 1: Distribution of women according to ANC taken

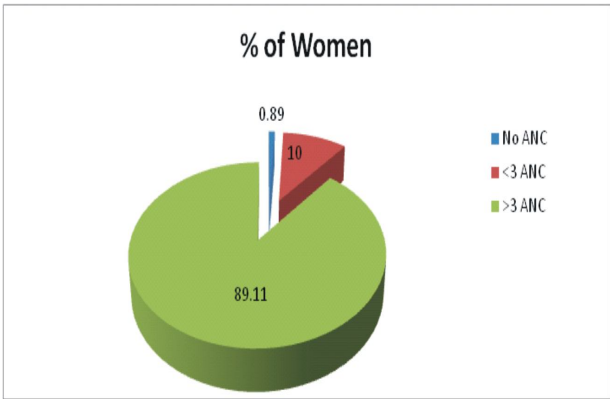


Table 2: Distribution of women according to Registration of pregnancy (n=446)

Registration of pregnancy	Frequency (%)
1st trimester	262(58.76)
2nd trimester	156(34.96)
3rd trimester	28(6.28)
Total	446(100)

Table 2 shows that from the 446 women who had taken antenatal visits, more than half, i.e.58.76% women had registered during their 1st trimester of pregnancy. 34.96% women registered during their 2nd trimester of pregnancy and 6.28% had registered in 3rd trimester.

Table 3 demonstrates that majority, i.e.59.11% of the women had consumed the IFA tablets for >100 days. 165(36.67%) women had consumed the IFA tablets for <100 days, While 19(4.22%) women did not receive IFA tablets.

Table 3: Distribution of women according to consumption of IFA tablets and Tetanus Toxoid injection taken during pregnancy

IFA Tablets		Frequency (%)
Not Received		19 (4.22)
Received	Consumed for >100 days	266 (59.11)
	Consumed for <100 days	165 (36.67)
Total		450 (100)
TT injection		
Not taken		4 (0.89)
1 dose		10 (2.22)
2 dose		436 (96.89)
Total		450 (100)

Table 4: Distribution of women according to various components of antenatal check ups (n=446)

Component of Antenatal check up	Frequency (%)
Wt measure	408 (91.47)
Blood pressure measured	374 (83.85)
Blood test	325 (72.86)

Table 5: Distribution of women according to type of various advices given during ANC (n=446)

Type of advice given	Frequency (%)
Family planning	312(70)
Breast feeding	302(67.71)
Special diet	288(64.57)
Danger signs of pregnancy	206(46.18)
Rest and exercise	180(40.35)

Table 6: Distribution of women according to their Knowledge of diet in pregnancy

Type of knowledge	Frequency (%)
Green leafy vegetables	327(72.67)
Milk	221(49.11)
Fruits	187(41.56)
Iron reach foods	130(28.89)
Pulses	83(18.44)

Majority of the women (96.89%) had taken 2 doses of TT injections. 2.22% women had taken only single dose of TT injection and only 4 women had not taken any TT injection.

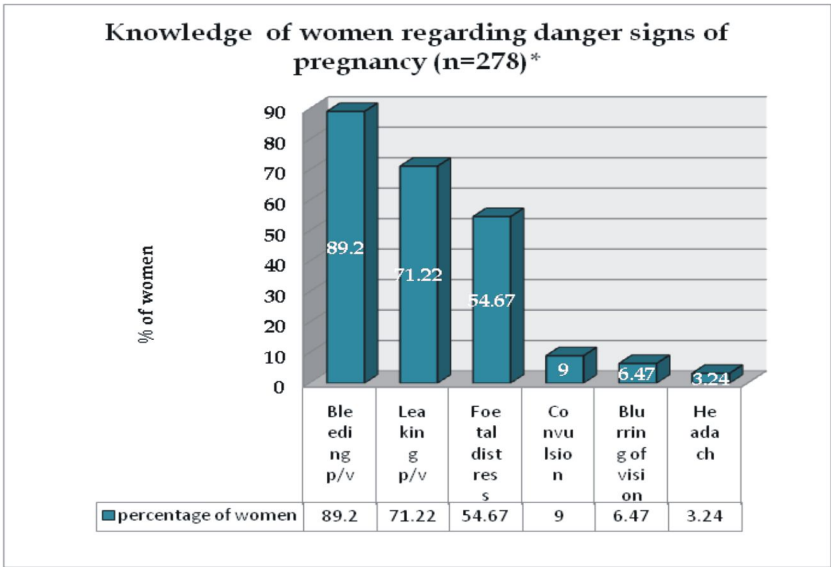
Table 4 shows that from 446 women who had received antenatal care, majority of the women (91.47%) got their weight measured. In 83.85% and 72.86% women blood pressure was measured and blood investigation was done.

Table 5 shows that from the women who had received antenatal care services, 70% women were given advices regarding family planning. 67.71% women were told about breast feeding practices like initiation of breast feeding, frequency of breast feeding, exclusive breast feeding etc. 64.57% women were given advices regarding diet during pregnancy and after childbirth.

Only 46.18% women were told about danger signs of pregnancy and 40.35% women were told to take rest and to do simple exercises like walking.

The present study revealed that, 72.67% women believe that green leafy vegetables are beneficial during pregnancy. Almost half i.e. 49.11% women said that milk is good during

Graph 2: Distribution of women according to their knowledge regarding danger signs of pregnancy



*multiple responses

Table 7: Association between ANC taken & other variables

Variables	Number of ANC taken			P value
	No ANC	<3	>3	
Education of women				
Illiterate	2(1.4)	29(20.3)	112(78.3)	0.001 df=8 x2=26.6
Primary	2(0.9)	12(5.6)	201(93.5)	
Secondary	0(0)	3(5.5)	52(94.5)	
Higher secondary	0	0	14(100)	
Graduate &above	0	1(4.3)	22(95.7)	
Socio economical class				
Lower	4(1.2)	40(12.3)	282(86.5)	0.071 df=4 x2=8.634
Middle	0	5(4.2)	113(95.8)	
Upper	0	45(10)	401(89.1)	
Knowledge about diet in pregnancy				<0.0001
Yes	2(0.7)	23(6.4)	340(92.9)	df=2
No	2(2.3)	22(25.9)	61(71.8)	x2= 32.50
Knowledge about danger signs of pregnancy				
No	4(2.4)	32(18.6)	136(79)	<0.0001 df=4 x2=30.313
Prompted	0	3(3.8)	75(96.2)	
Yes	0	10(5)	190(95)	
Institutional delivery				<0.0001
Yes	1(0.2)	18(4.8)	359(95)	df=2
No	3(4.1)	27(37.5)	42(58.4)	x2=

pregnancy.41.56% had knowledge that fruits should be eaten. While very few women named iron rich foods and pulses i.e. 28.89% and 18.44% as a beneficial food during pregnancy (Table 6).

Graph 2 shows that in the present study, total 278 (66.78%) women had knowledge regarding danger signs of pregnancy, out of which 200 women gave answer spontaneously, while 78 women gave response after they were prompted by leading questions.

While almost 4 in every 10 women, 172 (38.22%) women had no idea regarding danger signs of pregnancy. Amongst the women who had knowledge regarding danger signs of pregnancy, only 7(2.5%) women had knowledge regarding all the danger signs. Majority of the women had knowledge about Bleeding per vagina 248(89.20%), Leaking P/V (PRM) (71.22%) and Foetal distress (54.67%).While very few women had knowledge regarding convulsion (9%), Blurring of vision (6.47%) and Headache (3.24%)

Table 7 shows that on applying the chi square test, we found that those who are educated have taken ANCs more regularly & more in number (p=0.001). Socio economical class does not have any effect in taking ANCs (p=0.071).

Number of ANC visits taken have positive impact on knowledge regarding diet in pregnancy (p<0.0001) and also on knowledge about danger signs of pregnancy (p<0.0001). Those who have taken ANCs, institutional deliveries were more amongst them as compare to those who have not. (p<0.0001)

Discussion

Poor quality of antenatal care is likely to reduce its utilization. Policy and program interventions to improve the quality of care of antenatal care, especially for the poor and other disadvantaged population groups, more so in north India, are essential to improve maternal health outcomes. The India's National Rural Health Mission (NRHM), launched in 2005,

should lay greater emphasis on improving the quality of antenatal care, among other things, to increase utilization of antenatal care and achieve better maternal health outcomes.[4]

Antenatal care allows for the management of pregnancy, detection and treatment of complications, and promotion of good health. However, women rarely perceive childbearing as problematic and therefore do not seek care. This affects the utilization of maternal health services in regions of the country where poverty and illiteracy are widespread. But the possibility of complications occurring is there and routine checks are highly desirable.[5] In our study majority (89.11%) women had availed more than 3 antenatal visits during their pregnancy.

According to NFHS-III (2005-2006) of India, mothers who had at least 3 antenatal visits for their last birth, was 73.8% for urban areas and 81.5% for Gujarat state.[6]

In a study of Pradhan A. (2005) 62% of the respondents made ANC visits for 4 or more than 4 times.[7]

The current study has higher percentage of women who had taken >3 ANC visits than all the above studies. The difference may be due to good quality of care provided in this corporation area.

Critical in resource poor settings is the opportunity that antenatal care providers have in transmitting information to pregnant women which enables them to recognize problems when they occur, decide when to seek help, and identify where to go for the attention they might need. How women themselves perceive the risks during pregnancy is an important question.

Perception about complications that could occur during pregnancy was significantly higher in women who had antenatal care services than in those who did not have it ($p<0.0001$). However, what was lacking was increased awareness about problems that required immediate medical aid like bleeding, increase in blood pressure, convulsions, and loss of fetal movements. Even though a strong association was observed between increased knowledge and awareness with antenatal care services, it is difficult to comment whether it led them to access antenatal care services or vice versa.

The current study subjects had less knowledge regarding danger signs as compared to a study of Agarwal and Sidhharth (2010) in which awareness of the mothers about at least one danger-sign of pregnancy, being 79.2%.[8]

Less institutional deliveries than the present study were found in NFHS-3 (2005-06) and DLHS-3 (2007-2008), i.e.54.60% and 69.3% respectively. In a study conducted by Pradhan A. (2005), 66% of the deliveries were hospital deliveries assisted by the doctors. However, 34% of deliveries occurred at home.[7] And Agarwal and Sidhharth in 2010 shows that nearly three-fourths of the deliveries took place in the home.[8]

Conclusion

The quality of antenatal care given in the corporation area was good, but it should be improved in giving more appropriate counselling to pregnant women to increase their knowledge regarding different aspects of Antenatal care.

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